4th International Forum on Big Data for Sustainable Development Goals

FBAS 2024

6-8 September, 2024 Beijing China

Programme

Host:

Organize:

CONTENT

01 Hosted by / Organized by/Supported by/ International Partners/ Co-organizers / 02

02 Welcome Message / 07

03 Organization / 09

04 Keynote Speakers / 17

05 Programme at a Glance / 27

- Programme on September 6th, 2024 / 28
- Programme on September 7th, 2024 / 50
- Programme on September 8th, 2024 / 70

06 Session Information / 81

07 General Information / 260

08 Introduction to Organizers of FBAS 2024 / 261

09 Basic Convention Information / 265

1

Hosted by / Organized by / Supported by / International Partners / Co-organizers

Hosted by

Chinese Academy of Sciences (CAS)

Organized by

International Research Center of Big Data for Sustainable Development Goals (CBAS)

Aerospace Information Research Institute (AIR), CAS

Supported by

The United Nations Development Programme

Food and Agriculture Organization of the United Nations

The United Nations Human Settlements Programme

The United Nations Environment Programme

United Nations Convention to Combat Desertification

The World Academy of Sciences for the advancement of science in developing countries

International Partners

(Listed in no particular order)

United Nations Office for South-South Cooperation

United Nations Satellite Center

Committee on Data of the International Science Council

Panafrican Agency of the Great Green Wall

International Center for Integrated Mountain Development

The Alliance of National and International Science Organizations for the Belt and Road Regions

International Society for Digital Earth

Integrated Research on Disaster Risk

International Centre on Space Technologies for Natural and Cultural Heritage under the auspices of UNESCO

Digital Belt and Road Program

CAS-TWAS Centre of Excellence on Space Technology for Disaster Mitigation

Co-Organizers

Tsinghua University

The University of Hong Kong

National Satellite Meteorological Center

The Scientific research Institute of Irrigation and water problems, Tashkent, Uzbekistan

Keio University

China Sustainability Tribune

Nanjing University

East China Normal University

Wuhan University

Nankai University

CAST-UN Consultative Committee on Disaster Risk Reduction

Institute of Geographic Sciences and Natural Resources Research, CAS

Sun Yat-Sen University

Institute of Agricultural Resources and Regional Planning, CAAS

College of Marine Science and Engineering, Nanjing Normal University

China University of Petroleum

Institute of Tibetan Plateau Research, CAS

Computer Network Information Center, CAS

China University of Geoscience (Wuhan)

China Population and Development Research Center

Institute of Oceanology, CAS

Chinese Academy of Surveying & Mapping

South Eastern Kenya University

South Dakota State University

China Association for International Science and Technology Cooperation

Laboratory of Target Microwave Properties

State Key Laboratory Remote Sensing Science

China Association for Science and Technology-United Nations Consultative Office

Beijing University of Civil Engineering and Architecture, China

Institute of Mountain Hazards and Environment, Chinese Academy of Sciences

Southwest Jiaotong University

Fujian Normal University

Zhejiang University of Technology

CAST-UN Consultative Committee on Disaster Risk Reduction

2

Welcome Message

Next 7 Years: Big Data Driving Transformative Actions to Achieve SDGs

The UN 2030 Agenda is currently midway through its implementationto improve pace of efforts to ensure the Sustainability Goals are achieved. With the UN's Summit of the Future to be held this year in 2024, there is a strong consensus and desire to reinforce UN as well as other governance structure and renew commitments to advance SDGs by 2030. At this crucial juncture, world faces escalating challenges, from persistent poverty and hunger to the alarming repercussions of climate change, creating enormous challenges that need to be addressed to implement Sustainable Development. In 2023, the United Nations pointed out that out of nearly 140 assessable Sustainable Development Goals (SDGs), half of them had moderate or severe deviations from expectations, with over 30% of the targets showing no progress or even regressing compared to the 2015 benchmark. Therefore, there is an urgent need for the world to unite and take transformative actions and to develop multilateral solutions to address the complex, interconnected, and dynamic challenges.

Big data as backbone of the rapidly advancing and transforming digital landscape emerges as a valuable resource, offering macroscopic, dynamic, and objective monitoring capabilities of complex and interconnect processes. In recent years, big data has showcased its potential to drive progress across the SDGs, facilitating multidimensional analysis, identifying key barriers to sustainable development, fostering innovative solutions and clarifying the direction for future development.

We are excited to convene the 4th International Forum on Big Data for Sustainable Development Goals (FBAS 2024) in Beijing, China, from September 6 to 8, 2024, to foster collaboration and consensus in leveraging big data for sustainable development. The forum will organize dialogue and exchange activities under the theme of "Future 7 Years: Big Data Driving Transformative Actions to Achieve SDGs". Throughout the forum, we will explore sustainable development goals including zero hunger, clean water and sanitation, clean energy, sustainable cities and communities, climate action, life below water, life on land, and collaborative partnerships focused on advancing towards SDGs. The agenda includes in-depth discussions on the latest big data and AI technologies, comprehensive solutions, application demonstrations, and regional sustainable development experiences.

On behalf of the FBAS 2024, and during this critical moment in time when all parties in the world need to regain confidence and explore opportunities, I extend our heartfelt invitation to experts, professionals, practioners, and scholars from around the globe—representing science, engineering, education, management, enterprises, and social organizations to converge in Beijing and share with us latest achievements and practical insights in the realm of big data for sustainable development, fostering collaboration and charting the course for the "second half" of the 2030 Agenda for Sustainable Development.

Chair of the 4th International Forum
on Big Data for Sustainable Development Goals

3

Organization

Chair

GUO Huadong
Director General of the International Research Center of Big Data for Sustainable Development Goals (CBAS)

Scientific Committee

Co-Chairs

XU Guanhua
Former Minister of Ministry of Science and Technology of the People’ s Republic of China

Csaba Kőrösi
President of the 77th United Nations General Assembly

Members

(Alphabetical order by last name)

Quarraisha Abdool Karim	The World Academy of Sciences
Alessandro Annoni	International Society for Digital Earth
Thomas Blaschke	University of Salzburg
Irina Bokova	International Science Council’ s Global Commission on Science Missions for Sustainability
Valery Bondur	Russian Academy of Sciences
Deliang CHEN	Royal Swedish Academy of Sciences
CHEN Ge	Ocean University of China
Jay Famiglietti	Arizona State University
Hiromichi Fukui	Chubu University
Gregory Giuliani	University of Geneva
GONG Jianya	Wuhan University

GONG Ke	Nankai Univerisity
GONG Peng	The University of Hong Kong
Matthew Hansen	University of Maryland, College Park
HE Changchui	Digital China Research Institute
Simon Hodson	Committee on Data of the International Science Council
Natarajan Ishwaran	International Union of Geological Sciences
Christopher Justice	University of Maryland
Gretchen Kalonji	Sichuan University
Markku Kulmala	University of Helsinki
LI Deren	Wuhan University
LI Yuanyuan	International Water Resources Association
LIN Hui	Jiangxi Normal University
LIU Congqiang	Tianjin University
Vanessa Mcbride	International Science Council
MENG XIAOFENG	Renmin University of China
Graciela Metternicht	Western Sydney University
Szabolcs Mihaly	Hungarian Society of Surveying, Mapping and Remote Sensing
Stefano Nativi	Consiglio Nazionale delleRicerche
Barbara Ryan	World Geospatial IndustryCouncil
Igor Savin	RUDN University
Monthip Sriratana	National Research Council of Thailand
Jens-Christian Svenning	Aarhus University
TONG Qingxi	Aerospace Information Research Institute, China Academy of Science
WANG Hao	China Institute of Water Resources and Hydropower Research
WANG Jian	Alibaba Group
WANG Qiao	Satellite Application Center for Ecology and Environment, MEE
WU Guoxiong	Institute of Atmospheric Physics, China Academy of Sciences
WU Yirong	Aerospace Information Research Institute, China Academy of Science
XIA Jun	Wuhan University
ZHANG Bing	Aerospace Information Research Institute, China Academy of Science
ZHANG Renhe	Fudan University

Organizing Committee

	Chair
CHEN Fang	International Research Center of Big Data for Sustainable Development Goals
	Vice-Chairs
YAN Dongmei	International Research Center of Big Data for Sustainable Development Goals
LIU Jie	International Research Center of Big Data for Sustainable Development Goals
LU Shanlong	International Research Center of Big Data for Sustainable Development Goals
	Members (Alphabetical order by last name)
BAI Shibiao	Nanjing Normal University
BAI Yuqi	Tsinghua University
Birendra Bajracharya	International Centre for Integrated Mountain Development
Marion Barthelemy	United Nations Satellite Centre
Tobias Bolch	Graz University ofTechnology,Austria
Elizabeth Heger Boyle	University of Minnesota
Maria Antonia Brovelli	Polytechnic University of Milan
CHEN Jingming	Fujian Normal University
CHEN Kunshan	Nanjing University
CHEN Xi	Zhejiang University of Technology
CHEN Yu	International Research Center of Big Data for Sustainable Development Goals
CHENG Xiao	Sun Yat-Sen University
Francis P. Crawley	Committee on Data of the International Science Council
Ashraf Dewancurtin	University, Australia
DING Haifeng	International Research Center of Big Data for Sustainable Development Goals
DOU Changyong	International Research Center of Big Data for Sustainable Development Goals
DU Xiaoping	International Research Center of Big Data for Sustainable Development Goals
Micheal Dunford	University of Sussex, UK
Therese El Gemayel	United Nations Environment Programme

Andy Haines	London School of Hygiene & Tropical Medicine
HAN Mengyao	Chinese Academy of Sciences
HAN Qunli	Integrated Research on Disaster Risk (IRDR)
HE Dan	China Population and Development Research Center
HUANG Lei	International Research Center of Big Data for Sustainable Development Goals
Thorsten Jelinek	University of Cambridge
JIA Gensuo	International Research Center of Big Data for Sustainable Development Goals
JIA Mingming	Northeast Institute of geography and Agroecology, CAS
JIANG Jie	Beijing University of Civil Engineering and Architecture
Rosa Lasaponara	The Institute of Methodologies for Environmental Analysis
LI Jianhui	Computer Network Information Center, CAS
LI Congrong	Institute of Geographic Sciences and Natural Resources Research, CAS
LI Junsheng	International Research Center of Big Data for Sustainable Development Goals
LI Xiaofeng	Institute of Oceanology, CAS
LI Xiaosong	International Research Center of Big Data for Sustainable Development Goals
LI Xin	Institute of Tibetan Plateau Research, CAS
LI Xinwu	International Research Center of Big Data for Sustainable Development Goals
LIAO Xiaohan	International Research Center of Big Data for Sustainable Development Goals
LIU Min	East China Normal University
LIU Xinjie	International Research Center of Big Data for Sustainable Development Goals
LIU Zhengjun	Chinese Academy of Surveying & Mapping
LU Linlin	International Research Center of Big Data for Sustainable Development Goals
LUO Lei	International Research Center of Big Data for Sustainable Development Goals
MEI Linlu	International Research Center of Big Data for Sustainable Development Goals
Anil Mishra	Tulane University, USA
Tshiamo Motshegwa	University of Botswana

Basharat Muhammad	University of Azad Jammu and Kashmir
Robert Ndugwa	United Nations Human Settlements Programme
NIE Sheng	International Research Center of Big Data for Sustainable Development Goals
NIE Xiaowei	Institute of Tibetan Plateau Research, CAS
Gilles Amadou Ouédraogo	United Nations Convention to Combat Desertification
PENG Dailiang	International Research Center of Big Data for Sustainable Development Goals
QIU Yubao	Digital Belt and Road
SARFRAZ Ahmed	Northeast Normal University; Northeast Institute of geography and Agroecology, CAS
Mohammed Shokr	Environment and Climate Change Canada
Ai Sugiura	The World Academy of Sciences for the advancement of science in developing countries
SUN Genyun	China University of Petroleum
SUN Zhongchang	International Research Center of Big Data for Sustainable Development Goals
WANG Changlin	The International Society for Digital Earth
WANG Chao	International Research Center of Big Data for Sustainable Development Goals
WANG Fan	Institute of Oceanology, CAS
WANG Juanle	Institute of Geographic Sciences and Natural Resources Research, CAS
WANG Lei	International Research Center of Big Data for Sustainable Development Goals
WANG lizhe	China University of Geosciences (Wuhan)
WANG Qinjun	International Research Center of Big Data for Sustainable Development Goals
Marie Weiss	National Research Institute for Agriculture, Food and the Environment (INRAe), France
WU Wenbin	Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences, China
YANG Saini	Integrated Research on Disaster Risk International Programme Office
YANG Xiaofeng	Aerospace Information Research Institute, CAS
YU Bo	International Research Center of Big Data for Sustainable Development Goals

YU Le	Tsinghua University
YU Zhihong	China Sustainability Tribune
YUE peng	Wuhan University
ZENG Jiangyuan	Aerospace Information Research Institute, CAS
ZHANG fangfang	International Research Center of Big Data for Sustainable Development Goals
Hankui ZHANG	South Dakota State University
ZHANG Li	International Research Center of Big Data for Sustainable Development Goals
ZHANG Lu	International Research Center of Big Data for Sustainable Development Goals
ZHAO Wei	Institute of Mountain Hazards and Environment, CAS
ZHENG Yi	Tsinghua University
ZUO Lijun	Aerospace Information Research Institute, CAS

Secretariat

Secretary-General

LU Shanlong

Members (Alphabetical order by last name)

SHEN Qian / MEI Linlu / JIA Huicong / YANG Aqiang / WANG Shuo / KONG Chuiyu / LI Yuntan / TAN Murong

4

Keynote Speakers

Keynote Speakers

Irina Bokova

Co-chair of the International Science Council's Global Commission on Science Missions for Sustainability, Former Director-General of UNESCO

Irina Bokova, born in Sofia (Bulgaria), has been two terms Director-General of UNESCO from 2009 to 2017. As Director-General of UNESCO, Irina Bokova was actively engaged in the adoption of UN Agenda 2030 for Sustainable Development, particularly on "inclusive and equitable quality education and life-long learning for all", promoting the critical role of culture and science for development, as well as the protection of the world's cultural heritage. From 2013 to 2017 she chaired the Scientific Advisory Board with the UN Secretary General, entrusted to analyse and give recommendations to the science-policy interface within the Sustainable Development Agenda. She has received state distinctions from more than 40 countries and is Doctor honoris causa of leading universities across the world, such as King's College, Durham University and University of Edinburgh, UK, Paris-Saclay, France, Boston University, US, Catholic University of Milan, Italy, Tonji University, China, among others. In 2016 Irina Bokova was on the Forbes list of the most influential women. In 2020, she was elected International Honorary Member of the American Academy of Arts and Sciences and in 2021 - Honorary Fellow of the World Academy of Arts and Sciences (WAAS). In 2022 Irina Bokova was elected Patron of the International Science Council (ISC). Currently, Bokova is a Member of "Ban Ki Moon Centre for Global Citizens", Chair of the Board of Governors of the UN University of Peace, Costa Rica, Member of the Global Advisory Board of the Tsinghua School of Public Policy and Management (SPPM), Member of the Concordia Leadership Council, New York, Member of the Leadership Council of the Sustainable Development Solutions Network (SDSN), among others.

Deliang Chen

Member of the Royal Swedish Academy of Sciences

Chen, currently the August Röhss Chair Professor at the University of Gothenburg, is an internationally renowned climatologist who has made significant achievements in the areas of the relationship between regional climate and atmospheric circulation, climate dynamics and climate change. His primary work involves climate and environmental changes over the Third Pole (Tibetan Plateau) region and their impacts on ecosystems and water resources. Chen is an ISC (International Science Council) Fellow and a member of the Royal Swedish Academy of Sciences, the European Academy of Sciences and Arts, the Royal Academy of Arts and Sciences of Gothenburg, the Academy of Sciences for Developing Countries, and a foreign member of the Chinese Academy of Sciences and the Norwegian Academy of Sciences and Letters. He has been active in the international scientific community for many years, particularly in Sweden and China. From 2009 to 2012, he served as Executive Director of the International Council for Science (ICSU), making significant contributions to global scientific research leadership, coordination and collaboration. Chen previously served as the Science Director of the National Climate Center at the China Meteorological Administration and the Center for Atmospheric Sciences in Gothenburg, Sweden. He has served as a scientific advisor and reviewer to many governments, intergovernmental and international non-governmental organizations and national research funding agencies, and on scientific steering committees and councils of internationally renowned research centres and programs. He has also served as a judge of international awards such as the Volvo Environment Prize and Olav Thon Award, a member of the Project Evaluation Committee of the Institute of Humanities and Nature Research in Japan, a member of the expert group of the National Major Scientific Research Program on Global Change Research of the Ministry of Science and Technology of China and the Board of the Stockholm Resilience Centre, Chair of the Scientific Advisory Committee of the Swedish Environment and Climate Data Centre, Chair of the Nomination Committee for the Stockholm Water Prize, and Chair of the Division of Geosciences of the Royal Swedish Academy of Sciences. He also served as a contributing, lead, and coordinating lead author for the Working Group I of three IPCC assessment reports, and as editor of several international scientific journals. and he won the 2016 International Science and Technology Cooperation Award from the Chinese Academy of Sciences and the 2017 International Science and Technology Cooperation Award from the People's Republic of China. Recently, he was listed in the @Reuters Hot List of top climate scientists in the world and was awarded the H. M. the Swedish King's Medal for his outstanding contributions to Swedish and international climate research.

GUO Huadong

Director General of the International Research Center of Big Data for Sustainable Development Goals (CBAS)

GUO Huadong is the Director General of the International Research Center of Big Data for Sustainable Development Goals (CBAS), an Academician of Chinese Academy of Sciences (CAS), a Foreign Member of the Russian Academy of Sciences, a Foreign Member of the Finnish Society of Sciences and Letters, and a Fellow of TWAS. He presently serves as Honorary President of the International Society for Digital Earth (ISDE), Director of the International Center on Space Technologies for Natural and Cultural Heritage under the Auspices of UNESCO, Chair of the Digital Belt and Road Program, and Editor-in-Chief of the International Journal of Digital Earth and the journal of Big Earth Data. He served as a member of the UN 10-Member Group to support the Technology Facilitation Mechanism for SDGs (2018-2021), Chairman of the International Committee of Remote Sensing of Environment (2017-2020), President of ISDE (2015-2019), and ICSU Committee on Data for Science and Technology (CODATA) (2010-2014). He specializes in remote sensing, radar for Earth observation, and Digital Earth science. He is the Principal Investigator of Moon-based Earth Observation Research Project of National Natural Science Foundation of China and the Chief Scientist of the Big Earth Data Science Engineering Project of CAS. He has published more than 500 papers and 24 books, and is the awardee of 18 domestic and international prizes.

Matthew Hansen

Principal Investigator of Global Land Analysis and Discovery Laboratory of University of Maryland

Matthew Hansen is a remote sensing scientist with a research specialization in large area land cover and land use change mapping. His research is focused on developing improved algorithms, data inputs and thematic outputs which enable the mapping of land cover change at regional, continental and global scales. Such maps enable better informed approaches to natural resource management, including deforestation and biodiversity monitoring and can also be used by other scientists as inputs to carbon, climate and hydrological modeling studies. Hansen's work as an Associate Team Member of NASA's MODIS Land Science Team included the algorithmic development and product delivery of the MODIS Vegetation Continuous Field land cover layers. His current research includes taking the global processing model for MODIS and applying it to the Landsat archive. Exhausting mining of the Landsat archive has been used to map forest disturbance in the Congo Basin, Indonesia, European Russia, Mexico, Quebec and the United States. The methods developed in these efforts will be used to test global-scale disturbance mapping with Landsat data. Other current research efforts focus on improving global cropland monitoring capabilities, for example global soybean cultivated area estimation using MODIS, Landsat and RapidEye data sets.

Dwikorita Karnawati

Director of The Indonesian Agency for Meteorology, Climatology and Geophysics

Karnawati is the Director of the Indonesian Agency for Meteorology, Climatology and Geophysics. Previously, she was the first female President of Universitas Gadjah Mada and Professor in Environmental Geology and Disaster Mitigation. She is an internationally recognized expert on disaster risk reduction and early warning, with a PhD in Earth Sciences and post-doctoral research on hydro-meteorological disaster prediction. She has served as Vice-President of the International Consortium on Landslides since 2015 and chairs the Inter-governmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System. Prof. Karnawati has actively promoted integration of social concerns in technical systems for disaster risk reduction, leading to the adoption of an international standard for community-based landslide early warning (ISO 22327). She also led efforts for the establishment of the Multi-Hazard Early Warning System in Indonesia. In her current role, she drives innovation on early warning technology and impact-based forecasting systems, powered by big data, artificial intelligence and the Internet of Things.

Csaba Kőrösi

77th President of the UN General Assembly

Csaba Kőrösi, born in Szeged (Hungary), is the 77th President of the UN General Assembly. As a career diplomat, he have spent entire professional life in public service, combining national duties with assignments received from various international communities.

He has held several high-ranking positions, including Deputy State Secretary in charge of security policy, multilateral diplomacy and human rights; Vice-President of the UN General Assembly (2011-12); Co-chair of the UN Open Working Group on SDGs ; State Secretary for Environmental Sustainability, Office of the President of Hungary (2015-2022) ; etc.

As Director (State Secretary) of the Office of the President of Hungary, he had the duty and privilege to work alongside the President of the Republic in discharging his functions as a member of the High-level Panel on Water, co-convened by the Secretary-General and the President of the World Bank Group. He performed a similar role in the framework of the Water and Climate Leaders panel, co-convened by the Secretary-General of the World Meteorological Organization and the President of UN-Water.

During his tenure as President of the UN General Assembly, he was the co-chair of the intergovernmental process (Open Working Group of the General Assembly on Sustainable Development Goals) tasked with producing the 2030 Agenda for Sustainable Development and the Sustainable Development Goals at its heart.

He is a founding member of the Hungarian Scientific Panel on Climate Change and a permanent invitee to the Presidential Committee on Sustainable Development at the Hungarian Academy of Sciences and the National Council on Sustainable Development at the Hungarian National Assembly.

Abbas Rajabifard

Chair of the United Nations Global Geospatial Information Management (UN-GGIM) Academic Network

Abbas Rajabifard is the Chair of the United Nations Global Geospatial Information Management (UN-GGIM) Academic Network, the Professor and the Director of the Smart and Sustainable Development and Discipline Leader of the Geomatics Department of Infrastructure Engineering in the Faculty of Engineering and IT at the University of Melbourne, Australia. He is also the Director of the Center for Spatial Data Infrastructures and Land Administration (CSDILA). He is a proud Surveyor and Int. recognized Scholar and Geospatial Engineer, with +30 years experiences in surveying, land and geospatial policies, land and geospatial modernization systems, and geospatial technologies, conducted projects in Asia-Pacific, Africa, Europe, Middle East, North America, and Latin America regions (in particular, Australia, Iran, Singapore, Malaysia, Indonesia, UAE, Chile, Colombia, India, Solomon Islands, Saudi Arabia), 1988-2022.

José Ramón López-Portillo Romano

Former Member of the Group of 10 experts on the Technology Facilitation Mechanism of the United Nations

José Ramón López-Portillo Romano is an academic, entrepreneur, diplomat, consultant and public servant. An economist by origin, he has a PhD in Political Science from the University of Oxford, where he co-founded and coordinated the Center for Mexican Studies. He was Undersecretary of State and Permanent Representative of Mexico to the UN organisations in Rome, Italy, and Independent Chairman of the FAO Council.

He has a multifaceted professional experience, which he has applied to address, from different angles, the impact of accelerated scientific-technological change. He has written articles and a book on the subject and advises the Mexican government on science and innovation diplomacy. He is a representative of Mexican industrial confederations in the U.K. and Nordic countries and has co-founded several think tanks and companies. The UN Secretary-General re-nominated him as a member of the Group of 10 experts on the Technology Facilitation Mechanism (2018-).

Jeffery Sachs

Director of the Center for Sustainable Development at Columbia University

Jeffrey Sachs is a world-renowned economics professor, bestselling author, innovative educator, and global leader in sustainable development. He is widely recognized for bold and effective strategies to address complex challenges including debt crises, hyperinflations, the transition from central planning to market economies, the control of AIDS, malaria, and other diseases, the escape from extreme poverty, and the battle against human-induced climate change.

Sachs serves as the Director of the Center for Sustainable Development at Columbia University, where he holds the rank of University Professor, the university's highest academic rank. Sachs held the position of Director of the Earth Institute at Columbia University from 2002 to 2016. He is President of the UN Sustainable Development Solutions Network, a commissioner of the UN Broadband Commission for Development, and an SDG Advocate for UN Secretary General Antonio Guterres. From 2001-18, Sachs served as Special Advisor to UN Secretaries-General Kofi Annan (2001-7), Ban Ki-moon (2008-16), and António Guterres (2017-18).

5

Programme at a Glance

Programme at a Glance

	September 6th	September 7th	September 8th
AM	Opening Ceremony	Plenary Session	Plenary Session
	Break	Break	Break
	Plenary Session	Parallel Sessions	Parallel Sessions
	Lunch	Lunch	Lunch
PM	Parallel Sessions	Parallel Sessions	Parallel Sessions
	Break	Break	Break
	Parallel Sessions	Parallel Sessions	Closing Ceremony

Programme on September 6th, 2024

Time/Site	Conference Room 1
	AM
9:00-10:30	**Opening Ceremony**
10:30-11:00	**Plenary Session 1: Csaba Kőrösi** **(Topic: Measuring Sustainability Transformation – Lessons Learned For Impactful Actions)**
11:00-11:30	**Plenary Session 2: GUO Huadong** **(Topic: Digital Technologies Accelerating the Progress Towards SDGs)**
11:30-12:30	**High Level Panel Discussion**

Time/Site	Room 305					Room 307
	PM					PM
	A	B	C	D	E	
13:00-14:30	Shaping Future Cities through Innovation and Collaboration	Artificial Intelligence Methods for Advancing Deep-Sea Exploration	Open Science Infrastructures Advancing Science for Achieving the SDGs in Africa	Artificial Intelligence and Big Data in Engineering	Intelligent Remote Sensing and Planetary Health	The 4th Forum on Earth Observation for Sustainable Development Goals (13:00-16:00)
14:45-16:15	Monitoring and Assessment Technology for Urban Sustainable Development Goals based on Spatiotemporal Big Data	Digital Technology for Disaster Risk Reduction and SDGs	Water Resources Survey, Monitoring and Sustainable Development	Big SAR Data: Unleashing SAR technology for SDGs		
16:30-18:00	Spatio-temporal Big Data and AI Accelerates Sustainable High-Quality Development of Digital Smart Cities	Big Data and AI solutions for SDG 13 Climate Mitigation and Adaption	Scientific Data on Resources and Environment in the BRI Region	Digital Techniques Support Mountain Eco-Environmental Researches	Big Data on Population and Health Helps Achieve the Sustainable Development Goals	Poles and High Mountains of the Earth: Challenges for Sustainable Development in a Fragile Environment (16:00-18:30)

September 6th, 2024

6th

Opening Ceremony 9:00-10:30

Plenary Session 10:30-11:30

Moderator:

Irina Bokova

Co-chair of the International Science Council’ s Global Commission on Science Missions for Sustainability、Former Director-General of UNESCO

Keynote Speech 1: (10:30-11:00)

"Measuring Sustainability Transformation – Lessons Learned For Impactful Actions"

Csaba Kőrösi

77th President of the UN General Assembly

Keynote Speech 2: (11:00-11:30)

Digital Technologies Accelerating the Progress Towards SDGs

GUO Huadong

Director General of the International Research Center of Big Data for Sustainable Development Goals (CBAS)

High Level Panel Discussion 11:30-12:30

Parallel Sessions

Time: 13:00-14:30, September 6th, 2024 Room: 305A

Session	**Shaping Future Cities through Digital Innovation and Cooperation**
Co-Chairs	**Sun Zhongchang** (International Research Center of Big Data for Sustainable Development Goals, China) **Robert Ndugwa** (United Nations Human Settlements Programme(UN-Habitat), Kenya) **Zhao Mingxiao** (Institute of New Economic Development, China)

Event 1: Opening Remarks

Progress of Big Earth Data for SDG 11 Evaluation and New Digital Trends in Urban Development
Robert Ndugwa (United Nations Human Settlements Programme(UN-Habitat), Kenya)

Sun Zhongchang (International Research Center of Big Data for Sustainable Development Goals, China)

Green Innovation Empowers Sustainable Urban Development
Chen Ling (School of Public Policy & Management, Tsinghua University-Center for Industrial Development and Environmental Governance (CIDEG), Tsinghua University, China)

Monitoring and Evaluating Sustainable Human Settlement with Spatiotemporal Big Data
Du Shihong (College of Urban and Environmental Sciences, Peking University, China)

Event 2: Keynote Presentations “Resilient Cities”

New Quality Cities——the Evidence from China's Urbanization
Sun Liqun (Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences, China)

Remote Sensing of Coastal Urban Environments
Zhang Hongsheng (Department of Geography, The University of Hong Kong, China)

Event 3: Keynote Presentations “Connected Cities”

Exploring Global Urban Characterization and Variation via a Local Morphological Prototype Perspective
Chen Jie (Department of Geoinformatics, Central South University, China)

Event 4: Keynote Presentations "Vibrant Cities" and NexTus Youth Talk Special Session

Innovation Paradigm of Science and Technology Enabling the Chinese Culture Revitalization
Sun Yi (Social Value Innovation Research Center, Tencent Research Institute-Tencent Cultural and Technological Innovation Project Tanyuan Initiative, China)

Future Urban Mobility Ecosystem Driven by New Quality Productivity
Zeng Hui (Policy and Strategy Research for Autonomous Delivery Department, Meituan, China)

Event 5: Publication Plan

Introduction for the Third Future Cities and New Economy Publication Initiative
Zhao Mingxiao (Institute of New Economic Development, China)

Time: 13:00-14:30, September 6th, 2024 Room: 305B

Session	**Artificial Intelligence Methods for Advancing Deep-Sea Exploration**
Co-Chairs	**LI Xiaofeng** (Institute of Oceanology, Chinese Academy of Sciences, China) **WANG Fan** (Institute of Oceanology, Chinese Academy of Sciences, China)

Ocean Big Data and Spatial Intelligence
DU Zhenhong (Zhejiang University, China)

Daily Reconstructed Sea Surface Temperature and Ocean Color Data for the South China Sea
TANG Shilin (South China Sea Institute of Oceanology, Chinese Academy of Sciences, China)

Deep Learning Based Reconstruction of 3-D Temperature and Salinity Field in the South China Sea
XU Qing (Ocean University of China, China)

IAPv4 Ocean Temperature and Ocean Heat Content Gridded Dataset
CHENG Lijing (Institute of Atmospheric Physics, Chinese Academy of Sciences, China)

Refined Remote Sensing of Complex Marine Environments with Spaceborne Microwave Radiometers
YIN Xiaobin (Ocean University of China, China)

OceanY-eddy: Deep Learning Scheme for Oceanic Eddy Identification, Tracking, and Prediction
HUANG Baoxiang (Qingdao University, China)

Time: 13:00-14:30, September 6th, 2024 Room: 305C

Session

Open Science Infrastructures Advancing Science for Achieving the SDGs in Africa

Co-Chairs

LI Jianhui (International Research Center of Big Data for Sustainable Development Goals,Computer Network Information Center, CAS, China)

HAN Qunli (International Research Center of Big Data for Sustainable Development Goals,Integrated Research on Disaster Risk, China)

ZHANG Lili (Computer Network Information Center, CAS, China)

Tshiamo Motshegwa (African Open Science Platform, National Research Foundation, South Africa)

Joseph Muliaro Wafula (African Open Science Platform, Eastern African Node, Kenya)

Francis. P. Crawley (CODATA International Data Policy Committee, Belgium)

Event 1: Keynote Presentations

- **IRDR’ s Efforts on Open Science and SDGs Research (10 minutes)**
HAN Qunli (International Research Center of Big Data for Sustainable Development Goals, Integrated Research on Disaster Risk, China)
- **Legal and Ethical Consideration of Cross-border Data Transfer and Sharing (10 minutes)**
Paul F. Uhlir (Consultant, United States)
- **The UNDRR/lSC Hazard Information Profiles StandardzedHazard Definition and Information to Support Hazard Understanding and Data Analytics (10 minutes)**
Virginia Murray (Public Health England, United Kingdom)
- **AOSP Advances Open Science and SDGs Progress**
Tshiamo Motshegwa (African Open Science Platform, National Research Foundation, South Africa)

● Safeguards for Creating Trusted Research Environment (TRE) on Open Science Infrastructure (OSI) Data-sharing Platforms for SDGs (10 minutes)

Joseph Muliaro Wafula (African Open Science Platform, Eastern African Node, Kenya)

● Open Data-Driven Future Projection of Rainfall and High-Temperature Extremes: understanding its Impacts on SDG Achievements in Africa(10 minutes)

Dike Victor Nnamdi (Institute of Atmospheric Physics, Chinese Academy of Sciences, China)

● Co-building the GOSC Initiative: Highlights & Future Plan (10 minutes)

LI Jianhui (International Research Center of Big Data for Sustainable Development Goals, Computer Network Information Center, CAS, China)
ZHANG Lili (Computer Network Information Center, CAS, China)
LI Xueting (Computer Network Information Center, CAS, China)

Event 2: Panel Discussion

Topic:

1) Pathways towards Interoperable and Interconnected OSI in the Future-led Open Science World.

Panel Speakers:

LI Jianhui (International Research Center of Big Data for Sustainable Development Goals, Computer Network Information Center, CAS, China)

HAN Qunli (International Research Center of Big Data for Sustainable Development Goals, Integrated Research on Disaster Risk, China)

Paul F. Uhlir (Consultant, United States)

Tshiamo Motshegwa (African Open Science Platform, National Research Foundation, South Africa)

Joseph Muliaro Wafula (African Open Science Platform, Eastern African Node, Kenya)

Dike Victor Nnamdi (Institute of Atmospheric Physics, Chinese Academy of Sciences, China)

Virginia Murray (Public Health England, United Kingdom)

Francis. P. Crawley (CODATA International Data Policy Committee, Belgium)

ZHANG Lili (Computer Network Information Center, CAS, China)

LI Xueting (Computer Network Information Center, CAS, China)

Time: 13:00-14:30, September 6th, 2024 Room: 305D

Session	**Artificial Intelligence and Big Data in Engineering**
Co-Chairs	**Gretchen Kalonji** (International Center for Big Data for the Sustainable Development Goals, China) **GONG Ke** (Chinese Institute of New Generation Artificial Intelligence Development Strategies, China)

Event 1: Opening Remarks by the Co-Chair of the Session

Gretchen Kalonji (International Center for Big Data for the Sustainable Development Goals, China)

Event 2: Keynote Presentations

Host:
Gretchen Kalonji (International Center for Big Data for the Sustainable Development Goals, China)

- **Global Alliance on Artificial Intelligence for Industry and Manufacturing (AIM-Global)**
  Ana Paula Nishio de Sousa (Digital Transformation and AI Strategies of UNIDO,UN)
- **AI and Big Data for Water Security**
  Anil Mishra (Hydrological Systems, Climate Change and Adaptation Section of UNESCO, UN)
- **Research and Application of Artificial Intelligence in Enhancing the Toughness of Highway Tunnels**
  DING Hao (Tunnel and Underground Engineering Research Institute of China Merchants Transportation Research & Design Institute, China)
- **Application and Practice of AI Empowering the Steel Industry**
  PENG Yanhua (MCC Capital Engineering & Research Incorporation Limited (Chongqing), China)
- **Opportunities and Challenges of AI Technology in Industrial Applications**
  CAO Bin (Fitt (Tianjin) Testing Technology Co., Ltd. China)

Event 3: Panel Discussion

Topic:
How to Better Promote the Application of Artificial Intelligence and Big Data in the Industrial Sector?

Host:
GONG Ke (Chinese Institute of New Generation Artificial Intelligence Development Strategies, China)

Panel Speakers:
Ana Paula Nishio de Sousa (Digital Transformation and AI Strategies of UNIDO, UN)
Anil Mishra (Hydrological Systems, Climate Change and Adaptation Section of UNESCO, UN)
DING Hao (Tunnel and Underground Engineering Research Institute of China Merchants Transportation Research & Design Institute,China)
PENG Yanhua (MCC Capital Engineering & Research Incorporation Limited (Chongqing), China)
CAO Bin (Fitt (Tianjin) Testing Technology Co., Ltd. China)

Event 4: Closing Remarks by the Co-Chair of the Session

GONG Ke (Chinese Institute of New Generation Artificial Intelligence Development Strategies,China)

Time: 13:00-16:15, September 6th, 2024 Room: 305E

Session	**Intelligent Remote Sensing and Planetary Health**
Co-Chairs	**GONG Peng** (The University of Hong Kong, China)
	Andy Haines (London School of Hygiene and Tropical Medicine, UK)
	ZHANG Xiaoling (The University ofHong Kong, China)

Event 1: Keynote Presentations

Food System in Planetary Health
ZHU Yongguan (Chinese Academy of Sciences, China)

Ecosystem Modeling and Planetary Health
Nils Christian Stenseth (University of Oslo, Norway)

The Health Risks of High-impact Weather
ZHU Tong (Peking University, China)

Planet Health and Environmental Benefits
TAO Shu (Chinese Academy of Sciences, China)

Intelligent Remote Sensing for Planetary Health
GONG Peng (The University of Hong Kong, China)

Earth Breathing and Health
HUANG Jianping (Lanzhou University, China)

The ‘Last Mile’ for Sustainability Science: Climate Change Impacts and Planetary Health
ZHANG Xiaoling (The University of Hong Kong, China)

The Lancet Countdown China Report: From Science to Policy
CAI Wenjia (Tsinghua University, China)

Planetary Health and Ways Forward
Andy Haines (London School of Hygiene and Tropical Medicine)

Global Urban Challenges and Sustainable Development
XU Bing (Tsinghua University, China)

Urban Remote Sensing and Environment Health
CHEN Bin (The University of Hong Kong, China)

Event 2: Panel Discussion

Topic:
Intelligent Remote Sensing and Planetary Health

Host:
GONG Peng (The University of Hong Kong, China)
Andy Haines (London School of Hygiene and Tropical Medicine, UK)

Panel Speakers:
ZHU Yongguan (Chinese Academy of Sciences, China)
Nils Christian Stenseth (University of Oslo, Norway)
TAO Shu (Chinese Academy of Sciences, China)
ZHU Tong (Peking University, China)
HUANG Jianping (Lanzhou University, China)
ZHANG Xiaoling (The University of Hong Kong, China)
CAI Wenjia (Tsinghua University, China)
XU Bing (Tsinghua University, China)
CHEN Bin (The University of Hong Kong, China)

Time: 13:00-16:00, September 6th, 2024 Room: 307

Session	**The 4th Forum on Earth Observation for Sustainable Development Goals**
Co-Chairs	**SHI Jiancheng** (National Space Science Center, Chinese Academy of Sciences, China)
	TANG Shihao (United Nations Satellite Centre, China)

Event 1: Opening Remarks

GUO Huadong (International Research Center of Big Data for Sustainable Development Goals, China)

Marion Barthélemy (UN Institute for Training and Research, UN)

WANG Yu (Bureau of Major Science and Technology Programs, Chinese Academy of Sciences, China)

Event 2: ASSA Achievements Launch Ceremony

Event 3: Keynote Presentations

UNOSAT Facilitating SDGs in the Second Half
Samir Belabbes (United Nations Satellite Centre, UN)

Earth Observation for the Sustainable Development and the Early Warnings for All Initiative
Natalia Donoho (World Meteorological Organization, UN)

Feng Yun's Actions for SDGs
WANG Jinsong (National Satellite Meteorological Center, China)

Huanjing Satellite Series Facilitating SDGs in the Second Half
GAO Jixi (Satellite Application Center for Ecology and Environment, MEE, China)

Ziyuan Satellite Series Facilitating SDGs in the Second Half
LU Shuning (China Centre for Resources Satellite Data and Application, China)

Haiyang Satellite Series Facilitating SDGs in the Second Half
QI Ping (National Satellite Ocean Application Service, China)

SDGSAT-1 Open Science Program Facilitating SDGs in the Second Half
DOU Changyong (International Research Center of Big Data for Sustainable Development Goals, China)

Event 4: High Level Dialogue

Topics:

1) Best Practices of Earth Observation Data in Sustainable Development
2) Key Aspects of Establishing and Applying Disaster Monitoring System
3) Opportunities and Challenges in Data Access, Processing, and Sharing
4) The Role of Technological Innovation and Data Science in Sustainable Development
5) The Essentials of Effective Collaboration in Sustainable Development

Panel Speakers:

Samir Belabbes (United Nations Satellite Centre, UN)
Natalia Donoho (World Meteorological Organization, UN)
Hanif Ur Rehman (Space & Upper Atmosphere Research Commission, Pakistan)
Awad Ali Alowtheri (Institute of Consulting and Business Solutions, Saudi Arabia)
TANG Xinming (Land Satellite Remote Sensing Application Center, MNR, China)
CHEN Fang (International Research Center of Big Data for Sustainable Development Goals, China)

Time: 14:45-16:15, September 6th, 2024 Room: 305A

Session	**Monitoring and Assessment Technology for Urban Sustainable Development Goals based on Spatiotemporal Big Data**
Co-Chairs	**LI Songnian** (Toronto Metropolitan University, Canada) **LU Linlin** (Aerospace Information Research Institute, Chinese Academy of Sciences, China) **Ashraf Dewan** (Curtin University, Australia) **CAO Shisong** (Beijing University of Civil Engineering and Architecture, China)
	Spatial Monitoring Methods for United Nations Sustainable Development Goals CAO Shisong (Beijing University of Civil Engineering and Architecture, China)
	Application of Micro Remote Sensing Technology in Monitoring the Mural in Beijing Fahai Temple HUANG Yuqin (China Academy of Cultural Heritage, China)
	SustainAI: An Integrated Environment for Boosting Applications of Artificial Intelligence for SDGs LV Yanjie (International Research Center of Big Data for Sustainable DevelopmentGoals, China)
	Research on Urban Transportation Physical Examination Evaluation Platform for High-quality Development: The Case Study of Tianjin HU Pei (Tianjin Urban Planning and Design Institute Co., Ltd., China)
	Investigation of the Relationship between the Urban Wind-Heat Environment and Urban Development Elements in High-Density Urban Areas LI Jiaxuan (Ministry of Natural Resources, China)
	Investigating urban heat-related health risks related to local climate zones Muhammad Fahad Baqa (International Research Center of Big Data for Sustainable Development Goals, China)
	Comprehensive Assessment of Urban Resilience Based on CRITIC-TOPSIS Model: A Case Study of Guilin DOU Liduo(Aerospace Information Research Institute, Chinese Academy of Sciences, China)
	The Importance of Supporting Ecosystem in smart City Implementation: The Development of Tangerang Live Application Forina Lestari (Indonesian Institute of Technology, Indonesia)

Time: 14:45-16:15, September 6th, 2024 Room: 305B

Session	**Digital Technology for Disaster Risk Reduction and SDGs**
Co-Chairs	**WANG Lizhe** (China University of Geosciences, Wuhan, China) **CHEN Fang** (International Research Center of Big Data for Sustainable Development Goals, China)

Event 1: Keynote Presentations

Current Disaster Situation and Considerations for Preventive Measures
YANG Siquan (National Institute of Natural Hazards, China)

Earth observation data-based flood risk assessment
YANG Saini (International Programme Office for Integrated Research on Disaster Risk, China)

Space-based Earth Observation Applications for SFDRR Indicators Monitoring
LI Suju (National Disaster Reduction Center of China, China)

Empowering Flash Flood Disaster Prevention with Big Data: China's Practices and Progress
PENG Jing (China Institute of Water Resources and Hydropower Research, China)

Event 2: Panel Discussion

Topics:
Digital Technology for Disaster Risk Reduction and SDGs

Panel Speakers:
WANG Lizhe (China University of Geosciences, Wuhan, China)
YANG Saini (International Programme Office for Integrated Research on Disaster Risk, China)
YANG Siquan (National Institute of Natural Hazards, China)
LI Suju (National Disaster Reduction Center of China, China)
PENG Jing (China Institute of Water Resources and Hydropower Research, China)
CHEN Fang (International Research Center of Big Data for Sustainable Development Goals, China)
Tonni Agustiono Kurniawan (Ministry of Health, Indonesia)
Kangbeni Dimobe (Daniel Ouezzin Coulibaly University, Burkina Faso)
Tasrina Rabia Choudhury (Bangladesh Atomic Energy Commission, Bangladesh)
Barbara Kabai Burmen (Botswana UPenn partnership, Kenya)

Time: 14:45-16:15, September 6th, 2024 Room: 305C

Session	**Water Resources Survey, Monitoring and Sustainable Development**
Co-Chairs	**LIU Zhengjun** (Chinese Academy of Surveying & Mapping, China) **ZHU Liping** (Institute of Tibetan Plateau Research, Chinese Academy of Sciences, China)

The Role of Tibetan Plateau Lakes in Water Circulation of Asian Water Tower under Global Changes
ZHU Liping (Institute of Tibetan Plateau Research, Chinese Academy of Sciences, China)

AI Based Joint Inversion of Lake Quality and Quantity: A Case Study of Lugu Lake
MA Ronghua (Nanjing Institute of Geography and Limnology of the Chinese Academy of Sciences, China)

National Underwater Topographic Surveying and Mapping for Sustainable Water Resources Management
LIU Zhengjun (Chinese Academy of Surveying & Mapping, China)

The Causal Impact of Urbanization on Surface Water Based on Multi-Source Remote Sensing Data
SHA Te (Capital Normal University, China)

Time: 14:45-16:15, September 6th, 2024 Room: 305D

Session	**Big SAR Data: Unleashing SAR technology for SDGs**
Co-Chairs	**WANG Chao** (International Research Center of Big Data for Sustainable Development Goals, China)
	Soo Chin Liew (National University of Singapore, Singapore)
	Interferometric and Polarimetric Synthetic Aperture Radar for Observations of Land Surface Change Soo Chin Liew (Centre for Remote Imaging, Sensing and Processing, National University of Singapore)
	Monitoring ground subsidence over the whole China territory using SAR big data. ZHANG Yonghong (Chinese Academy of Surveying and Mapping, China)
	An Easy-to-use Cloud-Based Computing System For Comprehensive InSAR Time Series Analysis LI Yongsheng (National Institute of Natural Hazards, Ministry of Emergency Management of China, China)
	Land Surface Deformation Dynamics Monitored with Satellite InSAR Technology Over China TANG Yixian (International Research Center of Big Data for Sustainable Development Goals, China)
	Global Soil Moisture Prediction Based On a Long Short-Term Memory (LSTM) Deep Learning Model Using Multi-Source Remote Sensing Data CHEN Yonghui (School of Surveying and Geo-Informatics, Shandong Jianzhu University, China)

Time: 16:00-18:30, September 6th, 2024 Room: 307

Session	**Poles and High Mountains of the Earth: Challenges for Sustainable Development in a Fragile Environment**
Co-Chairs	**LI Xin** (Institute of Tibetan Plateau Research, Chinese Academy of Sciences, China)
	Mishra Anil (Intergovernmental Hydrological Programme (IHP), Division of Water Sciences, UNESCO, France)

Event 1: Opening Remarks

GUO Huadong (International Research Center of Big Data for Sustainable Development Goals, China)

Event 2: Book Release

LI Xin (Institute of Tibetan Plateau Research, Chinese Academy of Sciences, China)

Event 3: Keynote Presentations

TBD
HUANG Jianping (Lanzhou University, China)

Changes in the Cryosphere and International Year of Glaciers Preservation -2025
Mishra Anil (Intergovernmental Hydrological Programme (IHP), Division of Water Sciences, UNESCO, France)

Big Data,SDG and Publications
XUE Bing (Nature Communications, UK)

Towards Automated Remote Sensing-based Monitoring of Glaciers on the Third Pole to Support Planning of Sustainable Water Consumption
Tobias Bolch (Institute of Geodesy, Graz University of Technology, Austria)

Event 4: Panel Discussion

Topics:

1) Discussing the Bottleneck Effects and Significant Challenges Faced by Sustainable Development in the Poles and High Mountains and Exploring Future Research Directions.
2) Evaluating Existing SDGs and Indicators, and Proposing New Indicators Tailored to the Polar Regions to Establish an Appropriate Indicator System for Polar Regions.
3) Enhancing Big Data Analysis Capabilities, Sharing Experiences in Constructing Big Data Platforms, and Fostering Data Cooperation and Sharing for Polar Regions.

4) Providing a Robust Data Foundation for Research in the Poles and High Mountains, Encouraging More Individuals to Engage in Sustainable Development Research in These Regions.

Panel Speakers:

GUO Huadong (International Research Center of Big Data for Sustainable Development Goals, China)
HUANG Jianping (Lanzhou University, China)
Tobias Bolch (Institute of Geodesy, Graz University of Technology, Austria)
Mishra Anil (Intergovernmental Hydrological Programme (IHP), Division of Water Sciences, UNESCO, France)
LI Xin (Institute of Tibetan Plateau Research, Chinese Academy of Sciences, China)
Erin Scott (Nature Reviews Earth & Environment, UK)

Time 16:30-18:00, September 6th, 2024 Room: 305A

Session	**Spatio-temporal Big Data and AI Accelerates Sustainable High-Quality Development of Digital Smart Cities**
Co-Chairs	**LIU Min** (East China Normal University, China)
	LIN Zhaohui (CAS-TWAS center of excellence for climate and environment sciences, Institute of Atmospheric Physics, Chinese Academy of Sciences, China)
	Chinese High-temporal-resolution Meteorological Monitoring from Geostationary Orbit LU Feng (National Satellite Meteorological Centre, China)
	Intelligent Generation of Cloud-Free Remote Sensing Data HUANG Bo (Urban Systems Institute, The University of Hong Kong, China)
	A Computable City in the Age of AI and Big Data: Challenges and Opportunities LIU Yan (School of the Environment, The University of Queensland, Australia)
	Integrating Spatial Intelligence and Big Data to Empower Smart City Development LI Xiang (East China Normal University, China)

Time: 16:30-18:00, September 6th, 2024 Room: 305B

Session	**Big Data and AI solutions for SDG 13 Climate Mitigation and Adaption**
Co-Chairs	**HUANG Lei** (International Research Center of Big Data for Sustainable Development Goals, China) **Tobias Bolch** (Graz University of Technology, Austria)

Event 1: Background

How to Promote SDG 13 Climate Action Using Digital Technology
HUANG Lei (International Research Center of Big Data for Sustainable Development Goals)

Event 2: Keynote Presentations

Using multi-source data and deep learning to improve the identification and understanding of the response of glaciers and rock glaciers to climate change
Tobias Bolch (Graz University of Technology, Austria)

Merging ground observation and satellite remote sensing and its' application in agriculture drought and water-logging
FANG Shibo (Chinese Academy of Meteorological Sciences)

Analysis of Global Drought Spatiotemporal Changes and Their Impact
ZHANG Anzhi (Institute of Atmospheric Physics, Chinese Academy of Sciences, China)

Flood Inundation Range Forecasting using Multimodal Data Fusion and AI
LIU Chang (Aerospace Information Research Institute, Chinese Academy of Sciences)

Time: 16:30-18:00, September 6th, 2024 Room: 305C

Session	**Scientific Data on Resources and Environment in the BRI Region**
Co-Chairs	**WANG Juanle** (Institute of Geographic Sciences and Natural Resources Research, CAS, China)
	LI Congrong (Institute of Geographic Sciences and Natural Resources Research, CAS, China)
	GIES Methodology and Technology in Supporting FAO OCOP Flagship LIU Chuang (Institute of Geographical Sciences and Natural Resources Research, CAS, China)
	An Intelligent Computing Framework for the EcologicalBarrier Sustainable Development of Mongolian Plateau WANG Juanle (Institute of Geographic Sciences and Natural Resources Research, CAS, China)
	Overcoming Resource Curse to Achieve Sustainable Development: Digital Twinning Large Scale Mining Areas in Sulawesi, Indonesia Agung Mahesa Himawan, DORODJATOEN (Urban Affairs, Indonesia Ministry of National Development Planning)
	Analysis on the Relationship and Driving Forces between Ivestock Industry Changes and Grass Landed Gradation/Restoration in Mongolia LI Pengfei (College of Geomatics, Xi’ an University of Science and Technology, china)
	Will the Typical Soums in the Selenge River Basin of Mongolia become more Overgrazed in the Future? XU Zengrang (cInstitute of Geographic Sciences and Natural Resources Research, China)
	Comprehensive Assessment of Future Agricultural Meteorological Disaster Risks in the Heilongjiang Basin under Climate Change LI congrong (Institute of Geographic Sciences and Natural Resources Research)
	The Assessment of Urban Development Status along Transportation Corridors in the Mongolian Plateau Based onSDGSAT-1 Nighttime Light Data SUN Zhichen (Institute of Geographic Sciences and Natural Resources Research, CAS, China)

Time: 16:30-18:00, September 6th, 2024 Room: 305D

Session	**Digital Techniques Support Mountain Eco-Environmental Researches**
Co-Chairs	**CHEN Xiaoqing** (Institute of Mountain Hazards and Environment, CAS, China)
	ZHAO Wei (Institute of Mountain Hazards and Environment, CAS, China)
	YIN Gaofei (Southwest Jiaotong University, China)
	Integrating Geospatial Analysis and Local Expertise to Track Rangeland Changes in Bhutan Using GEE Kabir Uddin (International Centre for Integrated Mountain Development, Nepal)
	Spatial Heterogeneity of Greenness and Greening in the Tibetan Plateau YAN Kan(BeiJing Normal University, China)
	A Nearly Complete Ancient Landslide Inventory of the Qinghai-Tibet Plateau Mountains and Its Application Significance TANG Chenxiao(Institute of Mountain Hazards and Environment, CAS, China)
	Long-Term High-Resolution Leaf Area Index Estimation and Vegetation Recovery Monitoring in National Parks ZHANG Guodong(Southwest Jiaotong University, China)
	Forest Terrain and Canopy Height Estimation Using Stereo Images and Spaceborne LiDAR Data From GF-7 Satellite DU Liming (Institute of Forest Resource Information Techniques, CAF, China)
	Seasonal Patterns of Multi-Drought Types and Their Potential Impact on Vegetation in Nepal WU Jiujiang(Institute of Mountain Hazards and Environment, CAS, China)

Time: 16:30-18:00, September 6th, 2024 Room: 305E

Session	**Big Data on Population and Health Helps Achieve the Sustainable Development Goals**
Co-Chairs	**HE Dan** (China Population and Development Research Center, China)
	ZHANG Xuying (China Population and Development Research Center, China)
	IPUMS Population and Health Data: Driving Sustainable Development Goal Measurement and Solutions Elizabeth Heger Boyle (University of Minnesota, America) Lara Cleveland (University of Minnesota, America)
	Sustainability Indicators for Regional Population - Population Reproduction Index Considering the Impact of Migration Yohei Maruyama (Sapporo City University, Japan)
	Integrated Systems Models for Sustainable Development Planning Igor Oliveira (Millennium Institute, America)
	“Mobile Signaling+”Multi-source Big Data, Serving Social Governance and Economic Operation ZHAO Hua (SmartSteps Data Technology Co., Ltd, China)
	Data-Driven Tsinghua Urban Health Index (TUHI) and its Applications for SDGs in China LI Dong (Tsinghua University, China)
	The Role of Marriage and Educational Attainment in Recent Provincial Fertility Dynamics in China: Both from Period and Cohort Perspectives ZHANG Cuiling (China Population and Development Research Center, China)

Programme on September 7th, 2024

(Combine of Online and Offline)

Time/Site	Room 307
	AM
08:30-09:00	**Plenary Session 3 : Irina Bokova** **(Topic: The SDG Goals and Big Data: From Science to Implementation)**
09:00-09:30	**Plenary Session 4: Matthew Hansen** **(Topic: Towards operational global land monitoring)**
09:30-10:00	**Plenary Session 5: Dwikorita Karnawati**
10:00-10:30	**Plenary Session 6: Abbas Rajabifard** **(Topic: Harnessing Big Data for Climate Action - Pathways for Sustainable Urban Future)**

Time/Site	Room 305					Room 307
	A	B	C	D	E	
10:40-12:10	Big Data for the SDGs (Online)	Digital Techniques in Vegetation and Climate Research	Advancing analysis-readiness, accessibility, and applicability for big earth data	Big Earth Data for Heritage Conservation and Sustainable Development	Digital Technologies for Advancing Sustainable Development Goals - Youth Action	Global Sustainable Development: Reliable Assessment Based on Big Earth Data
Time/Site	PM					PM
13:00-14:30		Data Services for the Green Development of the Belt and Road Regions	Digital Technology in the Service of Historic Building Conservation	Earth Obervation for SDGs	Digital Technologies for Advancing Sustainable Development Goals - Youth Action	Digital Sciences for Sustainable Development
14:45-16:15		Digital Technologies to Empower Sustainable Agriculture	Earth Observation Systems in Geology Mass Identification, Investigation and Inventory Mapping	Open Geographic Information Standards and Services		
16:30-18:00		Remote Sensing Big Data and Land System Science	Big Earth Data Services for Polar Science	Data Infrastructure Technologies and Systems	Earth Big Data in Support of Coastal Sustainable Development	

September 7th, 2024

7th

Plenary Session 8:30-10:30

Moderator:

Simon Redfern

Nanyang Technological University, Singapore

Keynote Speech 1: (8:30-9:00)

The SDG Goals and Big Data: From Science to Implementation

Irina Bokova

Co-chair of the International Science Council' s Global Commission on Science Missions for Sustainability, Former Director-General of UNESCO

Keynote Speech 2: (9:00-9:30)

Towards operational global land monitoring

Matthew Hansen

Principal Investigator of Global Land Analysis and Discovery Laboratory of University of Maryland

Keynote Speech 3: (9:30-10:00)

TBD:

Dwikorita Karnawati

Director of The Indonesian Agency for Meteorology, Climatology and Geophysics

Keynote Speech 4: (10:00-10:30)

Harnessing Big Data for Climate Action - Pathways for Sustainable Urban Future

Abbas Rajabifard

Chair of the United Nations Global Geospatial Information Management (UN-GGIM) Academic Network

Parallel Sessions

Time: 10:40-12:10, September 7th, 2024 Room: 305A Online

Zoom Number: 937 4108 1351 Code: 240907

Session	**Big Data for the SDGs**
Co-Chair	**Mohamed-Slim Alouini** (King Abdullah University of Science and Technology, Saudi Arabia)
	The Big (data) Bang: Opportunities and Challenges for Compiling SDG Indicators Steve Macfeely (Organization for Economic Cooperation and Development)
	Harnessing Digital Twins and Big Data for Advancing Sustainable Development Goals Hossein Hassani (International Institute for Applied Systems Analysis)
	Satellite Federated Edge Learning for Remote Sensing Big Data SHI Yuanming(School of Information Science and Technology, ShanghaiTech University, China)
	Big Data Analysis for Smart Grid and Carbon Neutralization ZHU Han (University of Houston)

Time: 10:40-12:10, September 7th, 2024 Room: 305B

Session	**Digital Techniques in Vegetation and Climate Research**
Co-Chairs	**CHEN Jingming** (University of Toronto and Fujian Normal University, China) **ZHANG Liangpei** (Wuhan University, China) **LIU Qinhuo** (Aerospace Information Research Institute, Chinese Academy of Sciences, China)
	Big Data Strategies for Vegetation- Climate- Health Challenges: Case Study in Australian Grasslands Alfredo Huete (Invited) (University of Technology Sydney, Australia)
	Analysis and Assessment of the Sustainable Development Trends of Global Vegetation Ecosystems LIU Qinhuo (Aerospace Information Research Institute, Chinese Academy of Sciences, China)

A Multi-task Learning Framework for Cooperative Estimation of GPP and SIF
SHEN Huanfeng (Wuhan University, China)

Integration of Ground-Sourced and Satellite-Derived Datafor Forest-Based Natural Climate Solutions
MO Lidong (ETH Zurich (Swiss Federal Institute of Technology), China)

Quantifying Terrestrial Carbon Sink through the Synergy of Terrestrial and Atmospheric Remote Sensing Observations
JU Weimin (Nanjing University, China)

Time: 10:40-12:10, September 7th, 2024 Room: 305C

Session	**Advancing Analysis-readiness, Accessibility, and Applicability for Big Earth Data**
Co-Chairs	**ZHANG Hankui** (South Dakota State University, US) **YU Le** (Tsinghua Univeristy, China) **HE Tao** (Wuhan University, China)

Event 1: Keynote Presentations

Development Progress of the 30-m Resolution Global land Surface Quantitative Parameters Product (Hi-GLASS) to Support the Sustainable Development Goals
HE Tao (Wuhan University, China)

Dual Data-and Knowledge-driven Land Cover Mapping Framework for Monitoring Annual and Near-real-time Changes
YU Le (Tsinghua Univeristy, China)

The First 16 m Global Land Cover Map Based on the Chinese GF 16 m ARD
ZHONG Bo (Chinese Academy of Sciences, China)

Gaofen 16 Meter Analysis Ready Data
HUO Lianzhi (Chinese Academy of Sciences, China)

Analysis Ready Data is Needed
ZHANG Hankui (South Dakota State University, China)

Event 2: Panel Discussion

Topic:
How to Advance ARD for China Satellite Data

Panel Speakers:

HUO Lianzhi (Chinese Academy of Sciences, China)
ZHONG Bo (Chinese Academy of Sciences, China)
HE Tao (Wuhan University, China)
YU Le (Tsinghua Univeristy, China)
ZHANG Hankui (South Dakota State University, US)

Time: 10:40-12:10, September 7th, 2024 Room: 305D

Session	**Big Earth Data for Heritage Conservation and Sustainable Development**
Co-Chairs	**Rosa Lasaponara** (Institute of Methodologies for Environmental Analysis, National Research Council) **LUO Lei** (International Research Center of Big Data for Sustainable Development Goals, China)

Big Earth Observation Data for Protecting the Cultural Heritage
Rosa Lasaponara (Institute of Methodologies for Environmental Analysis, National Research Council)

Multidimensional Dynamic Preservation, Expression, and Revitalization of Cultural Heritage
HOU Miaole (Beijing University of Civil Engineering and Architecture, China)

Tracking Land-cover Changes and Assessing Sustainable Development of Africa's Natural World Heritage Sites in Danger
LUO Lei (International Research Center of Big Data for Sustainable Development Goals, China)

Automated Fine Heritage Documentation by Combining LiDAR and Structured Light Scanner
SHAO Jie (International Research Center of Big Data for Sustainable Development Goals, China)

Monitoring Changes and Analyzing Biodiversity in the OkapiWildlife Reserve towards SDG 15.5
FAN Jinhui (Jiangsu Ocean University, China)

Monitoring and Analyzing Land Cover Change in Yala National Park, Sri Lanka with Landsat Time Series (2000~2022)
SUN Jisi (Aerospace Information Research Institute, Chinese Academy of Sciences, China)

Time: 10:40-12:10, September 7th, 2024 Room: 305E

Session

Digital Technologies for Advancing Sustainable Development Goals - Youth Action

Co-Chairs

CHEN Fang (International Research Center of Big Data for Sustainable Development Goals, China)

ZHU Xufeng (Institute for Sustainable Development Goals, Tsinghua University, China)

Event 1: Opening Remarks (10:40-10:50)

GUO Huadong (International Research Center of Big Data for Sustainable Development Goals, China)

Event 2: Keynote Presentations (10:50-12:05)

Trends in global water availability under climate change
ZHANG Yongqiang (Institute of Geographic Sciences and Natural Resources Research, CAS, China)

Chronic Oiling in Global Oceans
LIU Yongxue (Nanjing University, China)

The science of remote sensing
Matthew Hansen (University of Maryland, College Park, USA)

Time: 10:40-12:10, September 7th, 2024 Room: 307

Session

Global Sustainable Development: Reliable Assessment Based on Big Earth Data

Co-Chairs

LIU Jie (International Research Center of Big Data for Sustainable Development Goals, China)

Gretchen Kalonji (International Research Center of Big Data for Sustainable Development Goals, China)

Event 1: Opening Remark (10 minutes)

Moderator: LIU Jie

Guo Huadong (International Research Center of Big Data for Sustainable Development Goals, China)

José Ramón López-Portillo Romano (Former Member of the Group of 10 experts on the Technology Facilitation Mechanism of the United Nations)

Event 2: Keynote Presentations (45 minutes)

Moderator: LIU Jie

Achieving SDGs and Paris agreement through Water : Prospective from the Intergovernmental Hydrological Programme (IHP) (10 minutes)
Mishra Anil (Intergovernmental Hydrological Programme (IHP), Division of Water Sciences, UNESCO, France)

An Introduction to the UNEP 'Measuring Progress' Report Series (10 minutes)
Therese El Gemayel (United Nations Environment Programme (UNEP))

Application of Open-Source Earth Observation Data in tracking, and assessing SDG 15 in Thailand (10 minutes)
Roshan Bhandari (Asian Institute of Technology, Thailand)

The Outline and overall progress of Global Sustainable Development Scientific Report (15 minutes)
CHEN Yu (International Research Center of Big Data for Sustainable Development Goals, China)

Event 3: Panel Discussion (35 minutes)

Moderator: Gretchen Kalonji

Topics:
Global Sustainable Development: Reliable Assessment Based on Big Earth Data

Panel Speakers:

- Csaba Kőrösi (77th President of the UN General Assembly)
- Guo Huadong (International Research Center of Big Data for Sustainable Development Goals, China)
- José Ramón López-Portillo Romano (Former Member of the Group of 10 experts on the Technology Facilitation Mechanism of the United Nations)
- Gretchen Kalonji (International Research Center of Big Data for Sustainable Development Goals, China)
- Mishra Anil (Intergovernmental Hydrological Programme (IHP), Division of Water Sciences, UNESCO, France)
- Marion Barthelemy (UN Institute for Training and Research (UNITAR))
- Therese El Gemayel (United Nations Environment Programme (UNEP))
- Cesar Luis Garcia (Global Earth Observation - Land Degradation Neutrality Initiative and Apacheta, Argentina)
- Roshan Bhandari (Asian Institute of Technology, Thailand)
- Amos Tiereyangn Kabo-bah (University of Energy and Natural Resources, Ghana)
- Maria Antonia Brovelli (Politecnico di Milano)

- A.K.M. Saiful Islam (Bangladesh University of Engineering and Technology, Bangladesh)
- G M Tarekul Islam (Bangladesh University of Engineering and Technology, Bangladesh)
- Sara Nowreen (Bangladesh University of Engineering and Technology, Bangladesh)
- LIU Jie (International Research Center of Big Data for Sustainable Development Goals, China)
- LI Xiaosong (International Research Center of Big Data for Sustainable Development Goals, China)
- SUN Zhongchang (International Research Center of Big Data for Sustainable Development Goals, China)
- LU Shanlong (International Research Center of Big Data for Sustainable Development Goals, China)
- ZUO Lijun (International Research Center of Big Data for Sustainable Development Goals, China)
- WU Mingquan (International Research Center of Big Data for Sustainable Development Goals, China)
- HUANG Lei (International Research Center of Big Data for Sustainable Development Goals, China)
- CHEN YU (International Research Center of Big Data for Sustainable Development Goals, China)

Time: 13:00-14:30, September 7th, 2024 Room: 305B

Session	**Data Services for the Green Development of the Belt and Road Regions**
Co-Chairs	**NIE Xiaowei** (Institute of Tibetan Plateau Research (ITP), Chinese Academy of Sciences, National Tibetan Plateau Data Center (TPDC), Tibet University, China)
	PAN Xiaoduo (Institute of Tibetan Plateau Research (ITP), Chinese Academy of Sciences, China)
	LI Weiyue (Shanghai Normal University, China)
	Event 1: Presentations
	The Synergistic Impact of Extreme Drought and Urbanization on Food Insecurity in Sub-Saharan Africa (SSA) ZHANG Zhenxin (Capital Normal University, China)
	The Role of Green Finance to Achieve Sustainability through Green Supply Chain Management and Innovative Technologies Moustafa Mohamed Nazief Haggag Kotb Kholaif（Faculty of Commerce, Tanta University, Egypt)

Development of the Global Nested Air Quality Prediction Modeling System (GNAQPMS) for Mitigating Air Pollution in China
WANG Zifa(The Institute of Atmospheric Physics, Chinese Academy of Sciences, China)

Quantum Machine Learning of Earth Surface Systems
YUE Tianxiang (Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences, China)

Event 2: Round Table Discussion

Topic:
Data Services for the Green Development of the Belt and Road Regions

Speakers:

NIE Xiaowei (Institute of Tibetan Plateau Research (ITP), Chinese Academy of Sciences, National Tibetan Plateau Data Center (TPDC), Tibet University, China)

PAN Xiaoduo (Institute of Tibetan Plateau Research (ITP), Chinese Academy of Sciences, China)

LI Weiyue (Shanghai Normal University, China)

WANG Zifa (The Institute of Atmospheric Physics, Chinese Academy of Sciences, China)

YUE Tianxiang (Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences, China)

ZHANG Li (International Research Center of Big Data for Sustainable Development Goals (CBAS), China)

ZHANG Zhenxin (Capital Normal University, China)

Moustafa Mohamed Nazief Haggag Kotb Kholaif (Faculty of Commerce, Tanta University, Egypt)

Time: 13:00-14:30, September 7th, 2024 Room: 305C

Session

Digital Technology in the Service of Historic Building Conservation

Co-Chairs

JIANG Jie (Beijing University of Civil Engineering and Architecture, China)

Maria Antonia Brovelli (Politecnico di Milano, Italy)

Analysis of Heat Island and Air Pollution for Sustainable Urban Planning of Historic Cities: A Case Study of Milan, Italy
Maria Antonia Brovelli (Politecnico di Milano, Italy)

Data-driven Structural Performance Assessment and Enhancing for Chinese Ancient Buildings towards Value Protection and Inheritance
LI Aiqun (International Joint Laboratory of Safety and Energy Conservation for Ancient Buildings, Ministry of Education, China)

Photogrammetry-based Large-scale Cultural Heritage Digitization and Applications
HUANG Xianfeng (Wuhan University, China)

The "Silk Road" Cultural Heritage Digital Collection Platform to Benefit the B&R Countries
YAN Lijin (China Silk Road Group Limited, China)

Component-based BIM Technology for Modeling and Visualization of Ancient Chinese Architecture
HUANG Rentian (Guangzhou Okay Information Technology Co., Ltd. China)

Time: 13:00-14:30, September 7th, 2024 Room: 305D

Session	**Earth Observation for SDGs**
Co-Chairs	**CHANG Wenyen** (National Dong-Hwa University in Taiwan, China) **CHEN Kunshan** (Institute of Space Earth Science, Nanjing University, China)

Joint Validation of Multi-source Remote Sensing Products and Sharing in the BRlCs and BRl countries
ZHOU Xiang (Chinese Academy of Sciences, China)

Co-construction and Sharing of China's Natural Resources Satellite Data and Applications
TANG Xinming (Land satellite remote sensing application center, MNR)

Fengyun Satellites and their International Services
QIN Danyu (National Satellite Meteorological Center, China)

Global Ocean Observations and Applications by China' Socean Satellite Constellation
XU Yin (National Satellite Ocean Application Service, China)

Time 13:00-16:15, September 7th, 2024 Room: 305E

Session	**Digital Technologies for Advancing Sustainable Development Goals - Youth Action**
Co-Chairs	**CHEN Fang** (International Research Center of Big Data for Sustainable Development Goals, China) **ZHU Xufeng** (Institute for Sustainable Development Goals, Tsinghua University, China)

Event 1: Keynote Presentations (13:00-14:00)

Coastal phytoplankton blooms expand and intensify in the 21st century
FENG Lian (Southern University of Science and Technology, China)

Linking climate actions and food systems
Prajal Pradhan (University of Groningen, Netherlands)

Modeling and Simulation for SDG
CHEN Min (Nanjing Normal University, China)

Tracking progress towards sustainable intensification
ZUO Lijun (Aerospace Information Research Institute, CAS, China)

Ecosystem changes, thresholds, and sustainable development in Dryland
WANG Shuai (Beijing Normal University, China)

Event 2: Panel Discussion-Part 1 (14:00-14:30)

Topics:
How can digital technologies advance SDGs?

Panel Speakers:
ZHANG Yongqiang (Institute of Geographic Sciences and Natural Resources Research, CAS, China)
LIU Yongxue (Nanjing University, China)
FENG Lian (Southern University of Science and Technology, China)
Prajal Pradhan (University of Groningen, Netherlands)
CHEN Min (Nanjing Normal University, China)
ZUO Lijun (Aerospace Information Research Institute, CAS, China)
WANG Shuai (Beijing Normal University, China)

Event 3: Keynote Presentations (14:45-15:57)

Widespread societal and ecological impacts from projected Tibetan Plateau lake expansion
ZHANG Guoqing (Institute of Tibetan Plateau Research, CAS, China)

Metacoupling for sustainable development worldwide
XU Zhenci (University of Hong Kong, China)

The response of global forest carbon to the recent drought and wildfire events
FAN Lei (Southwest University, China)

Reversal of the levee effect towards sustainable floodplain management
LIN Peirong (Peking University, China)

Data-Driven Decisions in Sustainable Materials: Assessing What Truly Matters
Xiaolei Feng (Nanyang Technological University, Singapore)

Intranational synergies and trade-offs reveal common and differentiated priorities of sustainable development goals in China
XING Qiang (International Research Center of Big Data for Sustainable Development Goals, China)

Event 4: Panel Discussion-Part 2 (15:57-16:25)

Topic:
How can digital technologies advance SDGs?

Panel Speakers:

Matthew Hansen (University of Maryland, College Park, USA)

ZHANG Guoqing (Institute of Tibetan Plateau Research, CAS, China)

XU Zhenci (University of Hong Kong, China)

FAN Lei (Southwest University, China)

LIN Peirong (Peking University, China)

Xiaolei Feng (Nanyang Technological University, Singapore)

XING Qiang (International Research Center of Big Data for Sustainable Development Goals, China)

Invited guest

Time: 13:00-17:40, September 7th, 2024 Room: 307

Session	**Digital Sciences for Sustainable Development**
Co-Chairs	**GUO Huadong** (International Research Center of Big Data for Sustainable Development Goals, China) **Csaba Kőrösi** (77th President of the UN General Assembly) **Gretchen Kalonji** (International Research Center of Big Data for Sustainable Development Goals, China)

Event 1: Opening 13:00-13:10

Event 2: Keynote Presentations 13:10-13:55

GUO Huadong (International Research Center of Big Data for Sustainable Development Goals, China)

Johannes Cullmann (Climate and Water Department at World Meteorological Organization, Switzerland)

Simon Redfern (Nanyang Technological University, Singapore)

Event 3: Sub-Session-1 Fundamental scientific challenges for sustainable development, and forward-looking strategies for collaboration 13:55-14:55

Shahbaz Khan (UNESCO Multisectoral Regional Office for East Asia, China)

Deliang CHEN (Royal Swedish Academy of Sciences)

GONG Peng (University of Hong Kong, China)

Event 4: Sub-Session-2 Roles of digital sciences (AI and big data) on the sustainability transitions 15:20-16:20

GONG Ke (Chinese Institute of New Generation Artificial Intelligence Development Strategies, China)

Dwikorita Karnawati (Indonesian Agency for Meteorology, Climatology and Geophysics, Indonesia)

Anil Mishra (Division of Water Sciences, UNESCO, Paris)

Event 5: Round Table Discussion 16:30-17:30

Event 6: Conclusion and Next Steps 17:30-17:50

Time: 14:45-16:15, September 7th, 2024 Room: 305B

Session	**Digital Technologies to Empower Sustainable Agriculture**
Co-Chairs	**WU Wenbin** (Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences, China)
	Marie Weiss (National Research Institute for Agriculture, Food and the Environment (INRAe), France)
	Using Big Data to Assess Vegetation Traits in Crop Close Range and Remote Sensing Marie Weiss (National Research Institute for Agriculture, Food and the Environment (INRAe), France)
	Progress and Application of Quantitative Remote Sensing in Smart Agriculture YANG Guijun(Chang'an University, China)
	Toward Global Paddy Rice Mapping in the Big Earth Data Era DONG Jinwei (Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences, China)
	Crop Growth Monitoring through Multi-source Remote Sensing Technologies LI Wenjuan (Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences, China)
	Crop Mapping of East Africa with Sample Generation and Deep Learning Model ZUO Lijun (Aerospace Information Research Institute, Chinese Academy of Sciences, International Research Center of Big Data for Sustainable Development Goals, China)

Time: 14:45-16:15, September 7th, 2024 Room: 305C

Session	**Earth Observation Systems in Geology Mass Identification, Investigation and Inventory Mapping**
Co-Chairs	**BAI Shibiao** (School of Marine Science and Engineering, Nanjing Normal University, Nanjng, China)
	SUN Jianbao (State Key Lab. of Earthquake Dynamics, Institute of Geology, China Earthquake Administration, Beijing, China)
	Probability Hazard Assessment of Earthquake-triggered Landslides in China XU Chong (National Institute of Natural Hazards, Ministry of Emergency Management of China, China)
	Research on Digital Underground Space in the Yangtze River Delta Urban Agglomeration GONG Xulong (Geological Survey of Jiangsu Province, Jiangsu Geological Bureau, Nanjing, China)
	Landslide Susceptibility Assessment Based on Multi-sources Data from Zigui to Badong Section of the Three Gorges Reservoir WANG Ningtao (Wuhan Cente, China Geological Survey (Central South China InnovationCenter for Geosciences), China)
	Comprehensive Remote Sensing Survey and Research of Pakistan's Mining Subsidence ZHAO Hongli (China Aero Geophysical Survey and Remote Sensing Center for NaturalResources (AGRS), China Geological Survey, Beijing, China)
	Application of Multi-Remote Sensing Technology in the Research of Reservoir Landslide Activity TU Kuan (Wuhan University, China; Twenty First Century Aerospace TechnologyCo., Ltd. Beijing, China)
	Landslide Detection Along the China-Pakistan Economic Corridor(CPEC) Route in Mountainous Areas BAI Shibiao (School of Marine Science and Engineering, Nanjing Normal University,Nanjng, China)

Time: 14:45-16:15, September 7th, 2024 Room: 305D

Session	**Open Geographic Information Standards and Services**
Co-Chairs	**YUE Peng** (Wuhan University, China)
	LI Guoqing (Aerospace Information Research Institute, Chinese Academy of Sciences, China)
	JIANG Liangcun (Wuhan University of Technology, China)
	Volunteered Rapid Disaster Monitoring and Mapping LI Guoqing (Aerospace Information Research Institute, Chinese Academy of Sciences, China)
	Guidelines for the Construction of the Intelligent Vehicle Basic Map Standard System in China HUANG Long (Map Supervision Centre, Ministry of Natural Resources, China)
	Improving Hydrological Model Interoperability with Open Geographic Information Standards and Web Services ZHANG Mingda (Hubei University, China)
	The OGC TrainingDML-AI Standard and Its Application in Establishing Remote Sensing Foundation Model SHANGGUAN Boyi (Beijing Institute of Satellite Information Engineering, China)
	Geospatial Service Standardization: Recent Activities of ISO/TC 211 WG 4 WANG Kaixuan (Wuhan University, China)
	Open Geographic Information Standards in Practice: Recent Activities of OGC China Forum WU Haoru (Wuhan University, China)

Time: 16:30-18:00, September 7th, 2024 Room: 305B

Session	**Remote Sensing Big Data and Land System Science**
Co-Chairs	**YU Le** (Tsinghua University, China)
	DONG Jinwei (Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences, China)
	ZHANG Hankui (South Dakota State University, the United States)
	Understanding the Trade-Offs of Food, Water, and Ecological Securities Following Large-Scale Agricultural Land Use Changes in China DONG Jinwei (Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences, China)
	An Efficient and Automated Algorithm for Full Archive Landsat Land Cover Classification and Change Detection ZHANG Hankui (South Dakota State University, the United States)
	China’s Ongoing Rural to Urban Transformation Benefits the Population but Is Not Evenly Spread CHEN Xin (Shanxi University, China)
	Remote Sensing in Land Cover Dynamic Monitoring DU Zhenrong(Dalian University of Technology, China)
	Unprecedented Climate Change Challenges Faced by Informal Settlements Requires Collective Efforts to Empower Urban Poor LI Chengxiu (Tsinghua University, United Nations Industrial Development Organization, China)
	Remote Sensing in Biodiversity Conservation and Protected Areas Network Construction WU Hui (Tsinghua University, China)
	3-Meter Resolution Urban Land Cover Mapping of China CHEN Xidong (The University of Hong Kong, China)

Time: 16:30-18:00, September 7th, 2024 Room: 305C

Session	**Big Earth Data Services for Polar Science**
Co-Chairs	**HUI Fengming** (Sun Yat-sen University, China) **Mohammed Shokr** (Environment and Climate Change Canada, Canada)
	Reconciled Estimation of Antarctic Ice Sheet Mass Balance and Contribution to Global Sea Level Change from 1996 to 2021 LI Rongxing (Tongji University, China)
	Spatial Variations in Ground Surface Temperature and Permafrost Detection on the Third Pole Raul-David Șerban (Free University of Bozen-Bolzano, Italy)
	Towards a Gapless High Resolution Fractional Snow Cover Estimation under All-Weather Conditions XIAO Xiongxin (University of Bern, Switzerland)
	Subglacial Water Pressure Reshapes Antarctic Contributions to Sea-Level Rise ZHAO Chen (University of Tasmania, Australia)
	Mapping Antarctic Grounding Zone with ICESat-2 Laser Altimetry LI Tian (University of Bristol, United Kingdom)
	Rapid Increases in Satellite-Observed Meltwater Production over Polar Ice Sheets ZHENG Lei (Sun Yat-sen University, China)

Time: 16:30-18:00, September 7th, 2024 Room: 305D

Session	Data Infrastructure Technologies and Systems
Co-Chairs	**BAI Yuqi** (Tsinghua University, China)
	LI Guoqing (Aerospace Information Research Institute, Chinese Academy of Sciences, China)
	The UNDRR/ISC Hazard Information Profiles - Standardized Hazard Definition and Information to Support Hazard Understanding and Data Analytics Virginia Murray (Head of Global Disaster Risk Reduction, UK Health Security Agency, United Kingdom)
	BigFlow: An End-to-End Workflow Framework for Cross-Center Data Analysis ZHU Xiaojie (Computer Network Information Center, Chinese Academy of Sciences, China)
	AIRCAS, Efficient Organization and Management of Multi-Source Earth Observation Data Based on DGGS ZHAO Long (Institute of Aerospace Information Innovation, Chinese Academy of Sciences, China)
	Digital Governance Catalyzing Transformative Actions to Advance Prioritized Sustainable Development Goals in China YUAN Haixia (Chongqing University, China)
	Session Summary: Reflections and Perspectives BAI Yuqi (Tsinghua University, China)

Time: 16:30-18:00, September 7th, 2024 Room: 305E

Session	Earth Big Data in Support of Coastal Sustainable Development
Co-Chairs	**SUN Genyun** (China University of Petroleum (East China), China)
	LI Yu (Beijing University of Technology, China)
	JIA Mingming (Northeast Institute of Geography and Agroecology, CAS, China)
	Sarfraz Ahmed (Northeast Normal University; Northeast Institute of geography and Agroecology, CAS)

Event 1: Keynote Presentations

Temporal-spectral-semantic-aware Convolutional Transformer Network for Multi-Class Tidal Wetland Change Detection in Greater Bay Area
XUE Zhaohui (Hohai University, China)

Multimodal Remote Sensing of Coastal Environments for its Sustainability
ZHANG Hongsheng (The University of Hong Kong, China)

Sentinel-1 Dual-polarized SAR Oil Spill Detection with Object Detection and Segmentation Networks
LUO Qingli (Tianjin University, China)

Marine Oil Spill Classification based on Fusing Single and Quad Polarimetric SAR Features
Jamal Sohail (Beijing University of Technology, China)

Rapid Degradation of Mangrove Forests along the Coasts of Pakistan: A 33 years Comparative Study
Sarfraz Ahmed (Northeast Normal University; Northeast Institute of geography and Agroecology, CAS)

Integrated Remote Sensing Monitoring of Ecosystem over Asia-Oceania hot areas
Faisal Mumtaz (Aerospace Information Research Institute, China)

Event 2: Panel Discussion

Topic:
Earth Big Data in Support of Coastal Sustainable Development

Panel Speakers:

SUN Genyun (China University of Petroleum (East China), China)

LI Yu (Beijing University of Technology, China)

JIA Mingming (Northeast Institute of Geography and Agroecology, CAS, China)

XUE Zhaohui (Hohai University, China)

ZHANG Hongsheng (The University of Hong Kong, China)

LUO Qingli (Tianjin University, China)

Jamal Sohail (Beijing University of Technology, China)

Sarfraz Ahmed (Northeast Normal University; Northeast Institute of geography and Agroecology, CAS)

Faisal Mumtaz (Aerospace Information Research Institute, China)

Programme on September 8th, 2024

Time/Site	Room 305				Room 307
	AM				AM
	B	C	D	E	
08:30-09:00					**Plenary Session 7: José Ramón López-Portillo Romano (Topic: Bridging the Innovation Divide for Sustainable Development Goals)**
09:00-09:30					**Plenary Session 8: Jeffrey Sachs (Topic: Big Data and the Sustainable Development Goals)**
09:30-10:00					**Plenary Session 9: Deliang Chen (Topic: Advancing hydroclimate prediction through big data and machine learning)**
10:15-11:45	**Big Earth Data Facilitating SDGs for Small Island Developing States: Challenges and Opportunities (305B)**				**Digital Industry Promoting Sustainable Development**
13:00-14:30	Digital Technology Supporting Sustainable Development in Central Asia	Energy Transition and Sustainable Development	Enhancing SDGs in the Hindu Kush Himalaya (HKH) region through Advanced Big Earth Data Technologies	Big Data and Good Practices in Support of Land Degradation Neutrality (12:45-14:50)	**Closing Ceremony (15:00-16:30)**

September 8th, 2024

8th

Plenary Session 8:30-10:00

Moderator:

JIA Gensuo, Monthip Sriratana

Keynote Speech 1: (8:30-9:00)

Bridging the Innovation Divide for Sustainable Development Goals

José Ramón López-Portillo Romano
Former Member of the Group of 10 experts on the Technology Facilitation Mechanism of the United Nations

Keynote Speech 2: (9:00-9:30)

Big Data and the Sustainable Development Goals

Jeffrey Sachs
Director of the Center for Sustainable Development at Columbia University

Keynote Speech 3: (9:30-10:00)

Advancing hydroclimate prediction through big data and machine learning

Deliang Chen
Member of the Royal Swedish Academy of Sciences

Parallel Sessions

Time: 10:15-11:45, September 8th, 2024 Room: 305B

Session	**Big Earth Data Facilitating SDGs for Small Island Developing States: Challenges and Opportunities**
Co-Chairs	**Sai Navoti** (SIDS Unit, United Nations Department of Economic and Social Affairs (UN DESA))
	CHEN Fang (International Research Center of Big Data for Sustainable Development Goals, China)
	Event 1: Opening Remarks (10:15-10:25)
	GUO Huadong (International Research Center of Big Data for Sustainable Development Goals, China)
	Event 2: Presentations (10:25-11:05)
	Issues and challenges confronting the SDGs in our nation Representatives from the Small Island Developing States (SIDS), with a time limit of 5-minutes each
	Event 3: Discussions (11:05-11:45)
	Harnessing Big Earth Data: Overcoming Challenges and Unveiling Opportunities for SDGs in Small Island Developing States Representatives from CBAS, SIDS

Time: 10:15-11:45, September 8th, 2024 Room: 307

Session	**Digital Industry Promoting Sustainable Development**
Chair	**YU Zhihong** (China Sustainability Tribune, China)

Event 1: Opening Remarks

MC：DU Juan (China Sustainability Tribune, China)

LIU Jie (International Research Center of Big Data for Sustainable Development Goals, China)

Event 2: Keynote Presentations

Digital Innovation for Sustainable Development
ZHANG Weidong (United Nations Development Programme, China)

Technology is a Catalyst for Sustainable Development
Shahira Wahbi (League of Arab States)

Event 3: Report Release

Release of the Report on Digital Industry's Contribution to the SDGs
YU Zhihong (China Sustainability Tribune, China)

Good practice sharing: Power Big Data Supports SDGs Monitoring
FU Yuwei, State Grid Wuxi Electric Power Supply Company

Event 4: Panel Discussion

Topics:
1)Examine the Digital Industry’ s Contributions to Sustainable Development
2)Share Digital Solutions that Foster Sustainable Development
3)Deliberate on Principles Guiding Equitable Digital Industry Development

Panel Speakers:
DU Xiaoping (International Research Center of Big Data for Sustainable Development Goals, China)
QI Zhigang (China National Petroleum Corporation, China)
ZHOU Bo (Alibaba, China)
YANG Hongyue (Kuaishou, China)
CHEN Yangzi (State Grid Wenling Electric Power Supply Company)

Event 5: Initiative Release

Release of Digital Industry Promoting Sustainable Development Initiative

Time: 13:00-14:30, September 8th, 2024 Room: 305B

Session	**Digital Technology Supporting Sustainable Development in Central Asia**
Co-Chairs	**CHEN Xi** (Zhejiang University of Technology, China) **ZHOU Qiming** (Hong Kong Baptist University, China) **Majid Gulayozov** (Research Center for Ecology and Environment of Central Asia of Tajikistan Academy of Sciences)
	Impact of Ecosystem Services in the Aral Sea basin on the Achievement of Sustainable Development Goals over the Past Two Decades CHEN Chaoliang (Wuyi University, China)
	Water Use Modes Siqnificantly Affect Hydrological Cycle and Agriculture Development in Temperate Dryland Regions: Case of Central Asia Alphonse Kayiranga (University of Lay Adventists of Kigali)
	Multiscale Evaluation of Gridded Precipitation DatasetsAcross Varied Elevation Zones in Central Asia's Hilly Region GulakhmadovManuchekhr (Hydrometeorological Agency of the Committee for EnvironmentalProtection under the Government of the Republic of Tajikistan, Tajikistan)
	Spatial and Temporal Variation and Driving Factors of Wetland in the Amu Darya River Delta, Central Asia ZAN Chanjuan (Xinjiang Institute of Ecology and Geography of the Chinese Academy of Sciences, China)
	Evaluation of the Water Conservation Function in the Ili River Delta of Central Asia Based on the InVEST Model CAO Yijie (Xinjiang University, China)
	Modern Monitoring Systems for Safety on Lake Sarez,Tajikistan Majid Gulayozov (Research Center for Ecology and Environment of Central Asia of Tajikistan Academy of Sciences, Tajikistan)
	Research on Intelligent Retrieval of Water Environmental Risk Object from UAV Imagery-A Case Study of Outfalls into Rivers WU Chengbin (Institute of Geographic Sciences and Natural Resources Research,Chinese Academy of Sciences, China)
	Evaluating the Impact of Landscape Fragmentation on Ecosystem Services Provided by Wind Power Development Using High-resolution Remote Sensing XIANG Jianyuan (Zhejiang University of Technology, China)

Building Ecosystem Sustainability Index along the Global Success of SDGs of Water, Energy and Food Security
Fabien Muhirwa (Xinjiang Institute of Ecology and Geography, Chinese Academy of Sciences, China)

Time: 13:00-14:30, September 8th, 2024 Room: 305C

Session	**Energy Transition and Sustainable Development**
Co-Chairs	**HAN Mengyao** (Institute of Geographic Sciences and Natural Resources Research, CAS, China)
	WU Mingquan (Aerospace Information Research Institute, CAS, China)

Event 1: Keynote Presentations

Synergies between REEs, Renewable Energy, and Economic Complexities for Green Growth
Khizar Abbas (Peking University, China)

Remote Sensing Identification and Analysis of Global Building Electrification Status from 2012 to 2023
OU Shengya (Aerospace Information Research Institute, CAS, China)

Deploying Large-scale Photovoltaic Power Stations in China
LI Weilong (University of Chinese Academy of Sciences, China)

The Trade-off between Biodiversity Conservation and the Surgy of Wind Power Dispatch
QING Ao (University of Chinese Academy of Sciences, China)

Event 2: Panel Discussion

Topic:
Opportunities and Challenges for a Sustainable Energy Future

Panel Speakers:

HAN Mengyao (Institute of Geographic Sciences and Natural Resources Research, CAS, China)

WU Mingquan (Aerospace Information Research Institute, CAS, China)

Michael Dunford (University of Sussex, United Kingdom)

Khizar Abbas (Peking University, China)

OU Shengya (Aerospace Information Research Institute, CAS, China)
LI Weilong (University of Chinese Academy of Sciences, China)

Time: 13:00-14:30, September 8th, 2024 Room: 305D

Session	**Enhancing SDGs in the Hindu Kush Himalaya (HKH) Region through Advanced Big Earth Data Technologies**
Co-Chairs	**Birendra Bajracharya** (International Centre For Integrated Mountain Development (ICIMOD), Nepal) **LU Shanlong** (International Research Center of Big Data for Sustainable Development Goals (CBAS), Aerospace Information Research Institute, CAS, China)

Event 1: Keynote Presentations

Remote Sensing Assessment of Sustainable Development in the Hindu Kush-Himalayan (HKH) Region
Harrison Odion Ikhumhen (International Research Center of Big Data for Sustainable Development Goals (CBAS), Aerospace Information Research Institute, CAS, China)

Changes and impacts of glacial lakes in the Himalaya
ZHANG Guoqiang (Institute of Tibetan Plateau Research, CAS, China)

Satellite Remote Sensing-based Soil Salinity Assessment in the Coastal Region of Bangladesh
G M Tarekul Islam (Institute of Water and Flood Management (IWFM) Bangladesh University of Engineering and Technology (BUET), Bangladesh)

Progress in land cover monitoring in the Hindu Kush Himalaya Rajesh
Bahadur Thapa (International Centre for Integrated Mountain Development (ICIMOD), Nepal)

Persistent Terrestrial Water Resource Reduction across High Mountain Asia and its Downstream Basins through End-century
Wang Shudong (State Key Laboratory of Remote Sensing Science, Aerospace Information Research Institute, Chinese Academy of Sciences (AIRCAS), China)

Event 2: Panel Discussion

Topic:
Bridging Policy and Research for Sustainable Development in the HKH Region

Panel Speakers:

Birendra Bajracharya (International Centre For Integrated Mountain Development (ICIMOD), Nepal)
A K M Saiful Islam (Bangladesh University of Engineering and Technology, Bangladesh)
ZHOU Xiang (Institute of Electrical Engineering (IEE) of Chinese Academy of Sciences (CAS), China)
Sharad Kumar Sharma (National Statistics Office, Nepal)

Time: 12:45-14:50, September 8th, 2024 Room: 305E

Session	**Big Data and Good Practices in Support of Land Degradation Neutrality**
Co-Chairs	**LI Xiaosong** (International Research Center of Big Data for Sustainable Development Goals, China)
	Amos Tiereyangn Kabo-bah (University of Energy and Natural Resources, Ghana)
	GEO-LDN Flagship: Missions for Global Monitoring on Land Amos Tiereyangn Kabo-bah (University of Energy and Natural Resources, Ghana)
	Land Productivity Dynamics: Algorithms and Tools for a Key Indicator to Monitor Land Degradation Cesar Luis Garcia (GEO-LDN and Apacheta, Argentina)
	China LDN Monitoring and Reporting WANG Hua (National Forestry and Grassland Administration, China)
	The Use of GEE Platform for Monitoring Dynamics of Sand and Dust Storms and Its Sources Mandakh Nyamtseren (Institute of Geography and Geoecology, Mongolian Academy of Sciences, Mongolia)
	Monitoring Desertification Dynamics in Punjab, Pakistan: A Pathway to Achieving LDN Nausheen Mazhar (Department of Geography, Lahore College for Women University, Pakistan)
	Implementation Path and Strategic Planning of Winning the Battle of "Three-North" and Reconstructing "New Three-North" LU Qi (Institute of Great Green Wall, China)
	Governance of Sustainable Land Management in the context of the Great Green Wall Marcelin Sanou (Pan-African Agency of the Great Green Wall, Mali)
	Down to Earth--Green Solution Demonstration to Mitigate DLDD in Pan-Africa Region LEI Jiaqiang (Xinjiang Institute of Ecology and Geography, Chinese Academy of Sciences, China)
	Great Green Wall-Big Data Facilitator LI Xiaosong (International Research Center of Big Data for Sustainable Development Goals, China)

Closing Ceremony 15:00-16:30

6

Session Information

Session Title: Shaping Future Cities through Digital Innovation and Collaboration

Time: 13:00 - 14:30

Room: 305A

Date: 2024-09-06

Moderator:

Sun Zhongchang

Professor

International Research Center of Big Data for Sustainable Development Goals (CBAS)

Dr. Zhongchang Sun is a professor at Aerospace Information Research Institute (AIR), Chinese Academy of Sciences (CAS). He also serves as deputy director of the Key Laboratory of Digital Earth Science, CAS, as well as head of the Cooperation & Development Office at the International Research Center of Big Data for Sustainable Development Goals (CBAS). He received his Ph.D. from the Center for Earth Observation and Digital Earth (CEODE), CAS in 2011. From 2016-2017, he visited the Department of Geography at the University of South Carolina as a CSC (China Scholarship Council) scholar. He had been a visiting researcher at the German Aerospace Center (DLR) in 2013 supported by the DAAD scholarship. He was honored as Nanhai Young Talent in 2020 and CAS Distinguished Core Researcher in 2022. Recently, his research interests include urban remote sensing and urban sustainability. He has published more than 80 papers in different academic journals, including more than 40 SCI papers, as well as 6 books as an associate editor. He also presided over more than 10 projects funded by agencies including the National Natural Science Foundation of China, the National Key R&D Program, and the Strategic Priority Research Program of the Chinese Academy of Sciences.

Robert Ndugwa

Chief, Data and Analytics Section

UN-Habitat

Robert Ndugwa is the Chief of Data and Analytics Section at UN-Habitat where he oversees the urban statistical methodology development in areas such as housing, transport, public spaces, etc. He has supported several countries to improve their urban statistical and analytical systems, and has authored and contributed to the production of various United Nations urban related analytical reports. Prior to joining UN-Habitat, Robert served as a lead for Research, Monitoring and Evaluation at UNICEF Kenya office. Robert has published widely in the field of urban monitoring and co-authored many papers in the fields of urban health, epidemiology and statistical, etc.

Zhao Mingxiao

Vice Dean

Institute of New Economic Development, Chengdu

Zhao Mingxiao is the vice dean of Institute of New Economic Development, based in Chengdu. She ranks among 2020 Forbes China 30 Under 30 listees and gets the May 4TH Youth Award by Chengdu Municipal Government. She is the co-initiator and editor of the UN Habitat "Future Cities and the New Economy" publication series. She used to work for top international consulting agencies and has rich experiences in industrial transformation and urban consulting, including industrial planning, digital transformation, and policy suggestions. She is the cofounder of iNED. Now, she is committed to help local governments to adapt to the digital trend, upgrade business environment, build city brand and foster new growth drivers. She is actively engaged in researches and activities to encourage innovations for sustainable development agenda and worked with UN agencies, such as UNIDO, UN Habitat, UNDP and UN WOMEN.

Participants:

Event 1

Chen Ling

Director

Center for Industrial Development and Environmental Governance (CIDEG), Tsinghua University

Professor Ling Chen received her PhD in Public Administration from Tsinghua University in 2005 and is currently a tenured professor and doctoral supervisor at the School of Public Policy and Management, Tsinghua University. She has published more than 60 papers in Chinese and English so far, and 4 monographs. Her representative works have been published in top domestic and foreign journals such as Nature, Research Policy, Management World, and Political Science Research. She also serves as the chief expert for major national social science projects, presides over a number of national fund projects, and undertakes more than 30 domestic and foreign projects. He has won the first prize of the 17th Beijing Philosophy and Social Sciences Outstanding Achievement Award, and the Ministry of Education’s “National First-Class Undergraduate Online Course” and other honors.

Event 2

Sun Liqun

Associate Proessor

Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences, China

Dr. Sun Liqun received the B.Eng. degree in computer science and technology and the M.Eng. degree in hydrology water resources from China University of Geosciences in 2004 and 2007, respectively, and the Ph.D. degree in water and environmental engineering from The University of Hong Kong in 2014. His research field focuses on urbanization and sustainable development. He has published more than 20 papers in Chinese and English including Nature Communications. His research was selected as a highlight case in the "Big Earth Data in Support of the Sustainable Development Goals (2022)" and was reported by CCTV News.

Event 3

Zhang Hongsheng

Associate Professor

Department of Geography, The University of Hong Kong

Professor Hongsheng Zhang received the B.Eng. degree in computer science and technology and the M.Eng. degree in computer applications technology from South China Normal University in 2007 and 2010, respectively, and the Ph.D. degree in earth system and geoinformation science from The Chinese University of Hong Kong in 2013. Before joining HKU, he was working in The Chinese University of Hong Kong as research associate and research assistant professor from 2013 to 2019. His research is mainly focused on incorporating multiple remote sensing technologies to understand the urbanization process and its environmental and ecological impacts at various spatial and temporal scales.

Event 4

Chen Jie

Professor

Department of Geoinformatics, Central South University

Chen Jie is now a Professor with the Department of Geoinformatics, Central South University, Changsha, China. His research interests include the interpretation of remote sensing images based on computer vision and artificial intelligence, as well as in the geospatial intelligent cognition driven by remote sensing big data. He serves as a member of the Intelligent Surveying and Mapping Working Committee of the China Society of Surveying and Mapping, and a member of the Remote Sensing Image Professional Committee of the China Society of Image and Graphics.

Event 5

Sun Yi

Deputy Director

Social Value Innovation Research Center, Tencent Research Institute

Sun Yi is senior researcher of Tencent Research Institute. She used to be a strategic expert in IBM Global Enterprise Consulting Service Department. She co-authored best-selling books such as "Sharing Economy: A New Economic Plan for Supply-Side Reform" and wrote major projects of National Social Science Fund in the field of culture and a number of public welfare, emergency response, culture and other sustainable social value innovation research results. Jointly with Tencent Sustainable Social Value Innovation Business Division, she leads to to launch the Tanyuan Initiative, which has been successfully held for three sessions by 2024, and continues to focus on exploring the innovation paradigm of technology enabling the revitalization of Chinese culture.

Event 6

Zeng Hui

Director

Policy and Strategy Research for Autonomous Delivery Department, Meituan

Session Title: Artificial Intelligence Methods for Advancing Deep-Sea Exploration

Time: 13:00 - 14:30

Room: 305B

Date: 2024-09-06

Moderator:

Xiaofeng Li

Professor

Institute of Oceanology,Chinese Academy of Sciences

Xiaofeng Li is a research scientist with the Institute of Oceanology, Chinese Academy of Sciences, Qingdao. His research interests include AI applications in oceanography, big data information mining, and satellite remote sensing. Dr. Li is an IEEE fellow and a fellow of Asia-Pacific Artificial Intelligence Association.

Fan Wang

Professor/Director

Institute of Oceanology, Chinese Academy of Sciences

WANG Fan, Researcher, Doctoral Supervisor, Director of the Institute of Oceanology, CAS (IOCAS), Dean of Marine Science College, University of Chinese Academy of Sciences (UCAS).He is mainly working on ocean circulation dynamics, including the western boundary currents in the low-latitude Pacific, tropical ocean circulation, shelf circulations in the China Seas and mesoscale processes, etc. He undertook more than 30 projects funded by National Basic Research Program, National High Technology Research and Development and National Natural Science Foundation of China, etc.

He has published over 140 papers and 3 Academic Monographs. He has been awarded "National Advanced Science and Technology Workers", "National Science and Technology Innovation Talents" and many other awards for his remarkable works.

Currently, he is the Deputy Chair of Scientific Steering Committee, Northwestern Pacific Ocean Circulation and Climate Experiment (NPOCE), Deputy Chair of Chinese Society of Oceanology and Limnology, Member of Partnership for Observation of the Global Oceans (POGO), Member of CLIVAR/PRP etc.

Participants:

Event 1

Zhenhong Du

Professor/ Dean

Zhejiang University

Zhenhong Du is a full Professor of Zhejiang University. He is awarded as the Qiushi Distinguished Professor of Zhejiang University. He is the Dean of School of Earth Sciences, Zhejiang University and the Director of Key Laboratory of Resources and Environmental Information System of Zhejiang Province. He has long committed to the teaching and research in the fields of geoscience big data and Earth System, Spatiotemporal big data and Artificial Intelligence, remote sensing and GIS. He has published more than 140 papers and 2 monographs, and he has led more than 20 projects from National Natural Science Foundation of China, National Key Research and Development Program of China, National Major Science and Technology Program and Special Science and Technology Program of Ministry of Natural Resources. He also serves as the Technical Breakthrough Chief Commander of Deep-time Digital Earth (DDE) International Big Science Program.

Event 2

Shilin Tang

Professor

South China Sea Institute of Oceanology, Chinese Academy of Sciences

Shilin Tang received his B.S. degree in Exploration Technology and Engineering from China University of Petroleum, Dongying, China, in 2003, and his Ph.D. degree in Physical Oceanography from the Graduate University of the Chinese Academy of Sciences, Beijing, in 2008. In 2008, he worked as an Assistant Scientist at the Center for Earth Observation and Digital Earth, Chinese Academy of Sciences, Beijing, China. In 2009, he was supported by the Natural Sciences and Engineering Research Council of Canada (NSERC) and worked at Fisheries and Oceans Canada in Winnipeg, Canada. He is currently the Director of the Guangdong Key Laboratory of Ocean Remote Sensing at the South China Sea Institute of Oceanology, Chinese Academy of Sciences, and also serves as an Adjunct Scientist at the Sanya Institute of Ocean Eco-Environmental Engineering. His research interests include ocean color remote sensing and ocean big data.

Event 3

Qing Xu

Professor

Ocean University of China

Qing Xu received the B.S. degree in marine science and the Ph.D. degree in physical oceanography from the Ocean University of China, Qingdao, China, in 2002 and 2007, respectively. From 2007 and 2009, she was a Post-

Doctoral Fellow with the Institute of Space and Earth Information Science, The Chinese University of Hong Kong, Hong Kong. She worked at the Department of Physical Oceanography, Hohai University, Nanjing, China, from 2009 to 2021, where she has been a Full-Time Professor since July 2016. In 2006 and 2015, she visited and cooperated with the Department of Atmospheric and Oceanic Science, University of Maryland, College Park, MD, USA, and the Center for Coastal Physical Oceanography, Old Dominion University, Norfolk, VA, USA, respectively. She is currently with the College of Marine Technology, Ocean University of China. Her research interests include the application of satellite remote sensing and artificial intelligence in oceanography and marine meteorology. She has participated in several national and international collaborative research projects as a PI and has published over 100 peer-reviewed papers.

Event 4

Lijing Cheng

Professor

Institute of Atmospheric Physics, Chinese Academy of Sciences

Lijing Cheng, professor of the Institute of Atmospheric Physics, Chinese Academy of Sciences. Lijing received his PhD from the Institute of Atmospheric Physics, Chinese Academy of Science, in 2014. His research focuses on monitoring ocean changes and understanding the associated mechanisms, including ocean heat content, ocean salinity, and stratification changes. He has published more than 90 papers with a total citation of more than 9000 times. Lijing was awarded the "International Data Prize" by WCRP/GCOS in 2020, "The Nicholas P. Fofonoff Award" from AMS and "Xplorer Prize" in 2023. He was selected as a Lead Author for the IPCC Special Report on the Ocean and Cryosphere in a Changing Climate between 2017 and 2019. He is now the co-chair of the International Quality-Controlled Database (IQuOD) and a member of the WCRP/GCOS/GOOS Ocean Observation Physics and Climate Panel (OOPC).

Event 5

Xiaobin Yin

Professor

Ocean University of China

Xiaobin Yin, professor at Ocean University of China. His research interests include the mechanisms and applications of microwave radiometers in ocean remote sensing. He has published more than 70 papers. He was awarded the 'Hundred-Thousand-Ten Thousand talents' project of Beijing, and the Leading Talent of the Zhongguancun National Demonstration Zone.

He is a core member of the preparatory group for the Future Technology college of Ocean University of China, a Vice Chairman of the Marine Technology and Equipment Committee of the Chinese Society of Oceanography, a Deputy Chief Engineer of the ground segment of the Laoshan Laboratory's ocean science satellite, a committee member of the Space Earth Science Professional Committee of the Chinese Society of Space Research, and an associate editor of IEEE TGRS.

Event 6

Baoxiang Huang

Professor

Qingdao University

Baoxiang Huang (Member, IEEE) received the Ph.D. degree in computer engineering from the Ocean University of China, Qingdao, China, in 2011. She was an Academic Visitor with Nottingham University, Nottingham, U.K. Currently she is a Professor with the College of Computer Science and Technology, Qingdao University, and also is a visiting professor with the Laboratory for Regional Oceanography and Numerical Modeling, Laoshan Laboratory. She has presided over the project of the National Natural Science Foundation, sub-project task of the "14th Five-Year Plan" major project of Laoshan Laboratory, and provincial projects. She has published more than 60 papers in international journals and conferences, including reputable international journals such as pattern recognition, IEEE Transactions on Image Processing, IEEE Transactions on Geoscience and Remote Sensing, Science of the Total Environment. Her research interests include remote sensing image processing and analysis, big data oceanography, and artificial intelligence.

Session Title

Open Science Infrastructures Advancing Science for Achieving the SDGs in Africa

Session organizer(s)

Jianhui Li (CBAS & CNIC), Qunli Han (CBAS & IRDR), Lili Zhang (CNIC, GOSC IPO), Tshiamo Motshegwa (AOSP), Francis. P. Crawley (CODATA IDPC)

Short Description

The growing African engagement in Open Science Infrastructures (OSI) represents a transformative approach for science and policy in the drive to achieve the United Nations 2030 Agenda. In line with the UNESCO Recommendation on Open Science and with the collaborative support of the Global Open Science Cloud (GOSC) Initiative, African leadership in south-north and south-south collaborative engagements is bringing regional expertise to co-build a global Open Science environment. This environment connects trusted research e-infrastructures to enable innovative scientific discoveries. The ongoing challenge is to address the interconnectivity and interoperability of OSI to break silos and promote better practices in Open Science and the SDGs. Against this backdrop, the GOSC International Programme Office (GOSC IPO), in partnership with Integrated Research on Disaster Risk (IRDR), the African Open Science Platform (AOSP), and the African Institute for Capacity Development (AICAD), is co-organizing this parallel session at FBAS 2024. The target audience for this session includes all potential stakeholders aligned with Open Science and the SDGs, such as representatives from research e-infrastructures, international research initiatives, domain scientists, social enterprises, and others.

Objectives

The session aims to strengthen regional collaboration in OSI, enhance network connections, improve infrastructure accessibility, and promote data, tools, and knowledge flow. It seeks to amplify Africa's influence on global SDGs research and co-build a sustainable research ecosystem.

Expected Results

The session will review the progress of Open Science and OSI in Africa, pinpoint best domain practices, address common challenges, and reach a consensus on co-building a sustainable research ecosystem for future-oriented open science. Potential deliverable would be a collective paper themed on “OSI Advancing Open Science and SDGs Achievements in Africa.

Agenda

Moderator(s):

Jianhui Li (CNIC, CAS), Qunli Han (IRDR), Lili Zhang (GOSC IPO), Tshiamo Motshegwa (AOSP), Francis. P. Crawley (CODATA IDPC)

Event 1: IRDR's Efforts on Open Science and SDGs Research (10 minutes)

Participants

Qunli HAN

Prof.

CBAS and IRDR

Han Qunli is Professor of International Research Center of Big Data for Sustainable Development Goals (CBAS). He is former Executive Director of International Programme Office of Integrated Research on Disaster Risk (IRDR) cosponsored by ISC and UNDRR (September 2017-June 2024). He has been working with IRDR scientific community to complete the first phase of IRDR (2010-2020) and contributing to the formulation of “A Framework of Global Science in Support of Risk-informed Sustainable Development and Planetary Health” toward 2030 and beyond, as well as the establishment of IRDR’s new decennium phase. During 1989-2017, Qunli worked for UNESCO in positions of Senior Programme Specialist on Environmental Sciences in Asia-Pacific Region, Director of Tehran Cluster Office and Director of the Executive Office of Natural Science Sector. He actively participated in UN-led post-disaster actions responding to 2004 Indian Ocean Earthquake and Tsunami, 2005 Central Java Earthquake and 2010 Pakistan floods. During 2013-2017, Qunli was the Director of Division of Ecological and Earth Sciences and Secretary of UNESCO’s Man and the Biosphere (MAB) Programme and led development of the World Network of Biosphere Reserves.

Event 2: Legal and Ethical Consideration of Cross-border Data Transfer and Sharing (10 minutes)

Participants

Paul F. Uhlir

Dr.

Consultant

Paul is a consultant on public information policy and management. He spent most of his career at the National Academy of Sciences (NAS), now called the National Academies of Science, Engineering, and Medicine (NASEM), in Washington, DC. Paul’s main professional area of emphasis has been on issues at the interface of science, technology, and law, with primary focus on research data and information. Before joining the National Academy of Sciences, he was employed for a year at the Office of the General Counsel and as a foreign affairs officer at the National Oceanic and Atmospheric Administration, where he worked on remote sensing law and policy and on intergovernmental agreements for cooperation in meteorological satellite programs. Paul is the co-author or editor of 44 books or official reports and over 70 technical articles. He has been involved in various consulting and pro bono activities, and speaks worldwide on a broad range of information policy and management issues. He has served as private-sector adviser to the US Department of State for the U.N. World Summit on the Information Society and for the Organization for Economic Co-operation and Development, and advised several other national governments and international organizations. He also has chaired or been a member of numerous international nongovernmental committees on data policy and legal issues.

Event 3: The UNDRR/ISC Hazard Information Profiles StandardzedHazard Definition and Information to Support Hazard Understanding and Data Analytics (10 minutes)

Participants

Virginia Murray

Prof.

Public Health England

Virginia Murray is a public health doctor committed to improving health emergency and disaster risk management. She was appointed as Head of Global Disaster Risk Reduction for UK Health Security Agency (formerly Public Health England) in April 2014. She is a member of the Integrated Research on Disaster Risk (IRDR) scientific committee and Co-Chair of IRDR's Disaster Loss Data (DATA) and is currently the Chair of the UNDRR/ISC Hazard Classification and Review Technical Working Group, with the report published in 2020 and the UNDRR-ISC Hazard Information Profiles: Supplement in 2021. She is currently a member of CODATA Executive Committee. She is currently co-chair of the WHO Thematic Platform Health and Disaster Risk Management Research Network, and by working in collaboration with this network, she is one of the editors of the WHO Guidance on Research Methods for Health and Disaster Risk Management, published in October 2021. She is a a member of the UNSDSN TReNDS network and is a visiting/honorary Professor and fellow at several universities.

Event 4: AOSP Advances Open Science and SDGs Progress (10 minutes)

Participants

Tshiamo Motshegwa

Dr.

National Research Foundation

Dr Motshegwa is the Director of the African Open Science Platform (AOSP) with the strategic portfolio to direct and support the AOSP. AOSP aims to position African scientists at the cutting edge of data intensive science by stimulating interactivity and creating opportunity through the development of efficiencies of scale, building critical mass through shared capacities, amplifying impact through a commonality of purpose and voice, and to engage in Global Commons to address continental and global challenges through joint action. He has a Ph.D. in Computer Science from City, University of London, UK at the School of Mathematics, Computer Science and Engineering. Regionally Dr Motshegwa has been Chair of the Southern African Development Community (SADC) Technical Experts Working Group developing and implementing the SADC Regional Cyber-infrastructure Framework – this to develop a shared regional commons of compute, data, networks and human capital to enhance regional research, innovation and education and host data and computationally intensive projects of regional impact. Globally, he is a member of the Open Science Clouds Executives' Roundtable (OSCER) that promotes collaboration through open science in practice towards optimal global interoperability and reuse of data and services for the benefit of Open Science.

Event 5: Open Data-Driven Future Projection of Rainfall and High-Temperature Extremes: understanding its Impacts on SDG Achievements in Africa (10 minutes)

Participants

Dike Victor Nnamdi

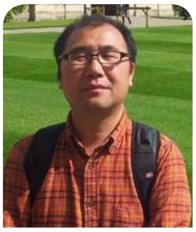
Dr. (Visiting Scientist)

Institute of Atmospheric Physics, Chinese Academy of Sciences, Beijing, China

Victor is an Atmospheric scientist with a speciality in weather and climate extremes. His research involves understanding the complex interactions in the climate system associated with weather and climate extremes in tropical and mid-latitude climate regions. Victor also focuses on climate risk assessment for national planning and disaster management to reduce the impact of future climate risk. He earned a PhD (Atmospheric Physics) from Imo State University, Owerri, Nigeria, and another PhD in Meteorology from the University of Chinese Academy of Sciences, China. After completing his postdoctoral research at the Institute of Atmospheric Physics, Chinese Academy of Sciences, he works there as a visiting associate professor. His career objective is to contribute to the scientific understanding of climate change and use that understanding to inform and guide efforts to mitigate its impacts and build a more sustainable future through research, teaching, and outreach in a multicultural environment. He has participated in several collaborative research activities, through which he has published widely in his area of expertise.

Event 6: Co-building the GOSC Initiative: Highlights & Future Plan (10 minutes)

Participants



Jianhui LI

Prof.

CBAS, CNIC

Jianhui Li is the Deputy Director General of International Research Center of Big Data for Sustainable Development Goals (CBAS) and the Department Director of Computer Network information Center (CNIC), Chinese Academy of Sciences (CAS). He served as the Vice President of the Committee on Data of International Science Council (CODATA, ISC). Jianhui has worked on data infrastructure, data management and data-intensive computing since 1999, and has led the scientific data infrastructure development and open data activities in CAS over a decade.

Lili ZHANG

Dr.

CNIC

Lili Zhang is a senior research scientist at the Computer Network Information Center of the Chinese Academy of Sciences (CNIC, CAS). She is the director of the International Program Office of the Global Open Science Cloud Initiative, an Ex Officio Executive Committee member of CODATA, and co-chair of the CODATA International Data Policy Committee. Zhang received her M.A. and Ph.D. in information management from Peking University, China, with a Dural Bachelor's degree in management science and economics from Nankai University, China. She was a visiting scholar at CIESIN, Columbia University, from 2017 to 2018. She is the PI of an NSFC Young Scientist Fund, a collaborator for a CAS PIFI program, and actively engages in several CAS and MOST programs. Currently, as the CAS Global Open Science Cloud Project manager, her research mainly focuses on open science and open data technologies, policies, and information economy.

Xueting LI

Ms.

CNIC

Xueting LI is the International Cooperation Manager at the CSTCloud Department, CNIC, dedicated to the Global Open Science Cloud International Programme Office (GOSC IPO). Serving as the primary contact for GOSC outreach, Xueting is responsible for planning and implementing GOSC's mission and vision. She oversees the content updates for the GOSC websites and publications, including flyers, meeting briefings, annual reports, and white papers. She also contributes to the design and organization of flagship conferences, meetings, workshops, and training sessions. In close collaboration with the CODATA Secretariat and CODATA IDPC, Xueting is committed to advancing Open Science and SDGs through policy dialogue, capacity building, and science communication, particularly among young and women researchers from the Global South. Before joining CNIC, Xueting graduated from the University of the Chinese Academy of Social Sciences and earned a master's degree in Digital Humanities from King's College London, UK.

Event 7: Panel Discussion: Pathways towards Interoperable and Interconnected OSI in the Future-led Open Science World (30 minutes)

Participants

Francis. P. Crawley

Mr.

CODATA (Committee on Data of the International Science Council)

Francis P. Crawley is a philosopher with a career in bioethics and expertise in research policy, regulation, ethics, integrity & methodology as well as in data/AI/virtual twins ethics and law with particular attention to the life sciences: clinical trials, genomics/omics, new technologies. Expertise in EU, US, international and country-specific ethics, law, and patient and community interests in health-related research. Strong experience working closely with patients, communities, researchers, and policymakers across disciplines. domains, and geographic regions in establishing consortia, developing patient registries, contributing to the development of biobanks, drafting data management and data protection plans, and contributing to building data repositories. A strong background in the methodologies for designing and reviewing health-related research supported by effective communication and leadership skills as well as diplomacy with the ability to influence changes in bioethics and law. Additional strong background in the development of research, guidance, and ethics related to global diseases affecting resource-poor settings and orphan diseases in the context of leading and/or contributing to challenging projects. Wide experience (e.g., UNAIDS, WHO, UNESCO, European Commission, Council of Europe, and others, including local organizations and industry) in developing health-related research projects, collaborative engagements, regulatory and policy outreach, and education and training in Europe, Africa, Asia, the Americas, and Eastern Europe & Central Asia.

Session Title: Artificial Intelligence and Big Data in Engineering

Time: 13:00 - 14:30

Room: 305D

Date: 2024-09-06

Moderator:

Gretchen Kalonji

Prof.

International Center for Big Data for the Sustainable Development Goals

Former Assistant Director General for Natural Sciences, UNESCO; Special Advisor to the International Center for Big Data for the Sustainable Development Goals (CBAS)

Ke Gong

Prof.

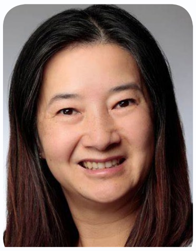
Chinese Institute of New Generation Artificial Intelligence Development Strategies

Former President of the World Federation of Engineering Organizations (WFEO), Executive Director of the Chinese Institute of New Generation Artificial Intelligence Development Strategies (CINGAI)

Participants:

Event 1 (13:05-13:15)

Global Alliance on Artificial Intelligence for Industry and Manufacturing (AIM-Global)



Ana Paula Nishio de Sousa

Director

Digital Transformation and AI Strategies of UNIDO

Director of the Digital Transformation and AI Strategies, United Nations Industrial Development Organization

Event 2 (13:15-13:25)

AI and Big Data for Water Security

Anil Mishra

Chief

Hydrological Systems, Climate Change and Adaptation Section of UNESCO

Chief of the Hydrological Systems, Climate Change and Adaptation Section of UNESCO

Event 3 (13:25-13:35)

Research and Application of Artificial Intelligence in Enhancing the Toughness of Highway Tunnels

Hao Ding

Director

Tunnel and Underground Engineering Research Institute of China Merchants Transportation Research & Design Institute

Dean of the Tunnel and Underground Engineering Research Institute of China Merchants Transportation Research & Design Institute, Director of the National Engineering Research Center for Highway Tunnels.

Event 4 (13:35-13:45)

Application and Practice of AI Empowering the Steel Industry

Yanhua Peng

Chief Scientist

MCC Capital Engineering & Research Incorporation Limited (Chongqing)

Chief Scientist of MCC Capital Engineering & Research Incorporation Limited (Chongqing). He has received one second prize for national scientific and technological progress, two special prizes for provincial and ministerial scientific and technological progress.

Event 5 (13:45-13:55)

Opportunities and Challenges of AI Technology in Industrial Applications

Bin Cao

Chairman

Fitt (Tianjin) Testing Technology Co., Ltd.

Chairman of Fitt (Tianjin) Testing Technology Co., Ltd.. He led the team to obtain 46 invention patents, 22 utility model patents, 120 software copyrights, participated in the compilation of 1 national standard, 1 industry standard, and 1 group standard.

Panel Discusion Tile: Open Discussion
Time: 13:55-14:25
Host: Prof Gong Ke

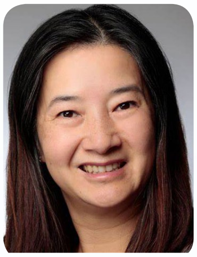
Discussants:

Gretchen Kalonji
Prof.
International Center for Big Data for the Sustainable Development Goals

Former Assistant Director General for Natural Sciences, UNESCO; Special Advisor to the International Center for Big Data for the Sustainable Development Goals (CBAS)

Ke Gong
Prof.
Chinese Institute of New Generation Artificial Intelligence Development Strategies

Former President of the World Federation of Engineering Organizations (WFEO), Executive Director of the Chinese Institute of New Generation Artificial Intelligence Development Strategies (CINGAI)



Ana Paula Nishio de Sousa
Director
Digital Transformation and AI Strategies of UNIDO

Director of the Digital Transformation and AI Strategies, United Nations Industrial Development Organization

Anil Mishra
Chief
Hydrological Systems, Climate Change and Adaptation Section of UNESCO

Chief of the Hydrological Systems, Climate Change and Adaptation Section of UNESCO

Hao Ding
Director
Tunnel and Underground Engineering Research Institute of China Merchants Transportation Research & Design Institute

Dean of the Tunnel and Underground Engineering Research Institute of China Merchants Transportation Research & Design Institute, Director of the National Engineering Research Center for Highway Tunnels.

Yanhua Peng

Chief Scientist

MCC Capital Engineering & Research Incorporation Limited (Chongqing)

Chief Scientist of MCC Capital Engineering & Research Incorporation Limited (Chongqing). He has received one second prize for national scientific and technological progress, two special prizes for provincial and ministerial scientific and technological progress.

Bin Cao

Chairman

Fitt (Tianjin) Testing Technology Co., Ltd.

Chairman of Fitt (Tianjin) Testing Technology Co., Ltd.. He led the team to obtain 46 invention patents, 22 utility model patents, 120 software copyrights, participated in the compilation of 1 national standard, 1 industry standard, and 1 group standard.

Session Title: Intelligent Remote Sensing and Planetary Health

Time: 13:00 - 16:15

Room: 305E

Date: 2024-09-06

Objectives: This session aims to explore and promote cutting-edge understanding of planetary health, providing solutions to key scientific issues in sustainable development areas such as climate change, biodiversity loss, water scarcity, and air pollution through innovation in smart remote sensing technology. This topic not only focuses on the forefront of international smart remote sensing technology development but also directly responds to current hot scientific issues and debate focuses globally, with significant foresight, leadership, comprehensiveness, and interdisciplinarity.

Moderator:

Peng GONG

Vice-President and Pro-Vice-Chancellor of HKU, Chair Professor of Global Sustainability

The University of Hong Kong

Professor Peng Gong was Professor and Chair of the Department of Earth System Science and Dean of the School of Sciences at Tsinghua University. He has taught in the Department of Geomatics Engineering at the University of Calgary and the Department of Environmental Science, Policy and Management at the University of California, Berkeley. In 2000, he founded the International Institute for Earth System Science at Nanjing University and in 2004, served as the founding director of the State Key Laboratory of Remote Sensing Science. His major research interests include mapping and monitoring of global environmental change, modelling environmentally related infectious diseases such as schistosomiasis, avian influenza, dengue, and COVID-19, and healthy cities. He is the author/co-author of over 600 articles and 10 books, and has chaired/co-chaired 9 research reports on climate change and health and healthy cities in China. Internationally, he has served as a member of the Earth League, the Future Earth Advisory Committee, the Earth Commission, and the Publishing Committee of the American Geophysical Union. He is also a member of the editorial board or advisory group of more than 10 international publications including the Lancet.

Andy Haines

Professor

London School of Hygiene and Tropical Medicine

Andy Haines was formerly a primary care physician and Professor of Primary Health Care at UCL. He developed an interest in climate change and health in the 1990's and was a member of the Intergovernmental Panel on Climate Change for the 2 nd and 3 rd assessment exercises and review editor for the health chapter in the 5 th assessment. He was Director (formerly Dean) of the

London School of Hygiene & Tropical Medicine from 2001- October 2010.

Andy chaired the Scientific Advisory Panel for the 2013 WHO World Health Report, the Rockefeller /Lancet Commission on Planetary Health (2014-15) and the European Academies Science Advisory Council working group on climate change and health (2018-19). He currently co-chairs the InterAcademy Partnership (140 science academies worldwide) working group on climate change and health and is also co-chairing the Lancet Pathfinder Commission on health in the zero-carbon economy. He has published many papers on topics such as the effects of environmental change on health and the health co-benefits of low carbon policies. His current research focuses on climate change mitigation, sustainable healthy food systems and complex urban systems for sustainability.

Participants:

Event 1 (13:00-13:15)

Food system in planetary health

Yongguan ZHU

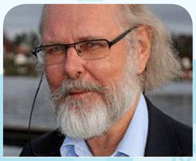
Academician of Chinese Academy of Sciences, Professor

Chinese Academy of Sciences

Professor Yongguan Zhu has been long engaged in environmental soil science research, making innovative achievements in the mechanisms and control of arsenic pollution in soil, the pollution and dissemination mechanisms of antibiotic resistance genes in soil, and the coupling mechanisms of soil biogeochemistry and microbial ecology. His main research results won the second prize of the National Natural Science Award in 2009 and the Science Award of the Third World Academy of Sciences (TWAS). His research findings have been systematically reviewed and reported in international top scientific publications such as Science, Nature, Cell Press, and Trends in Plant Science. After the publication of his papers, they have been cited more than 10,000 times in SCI journals. As a co-chair, he has formulated global standards and control procedures for arsenic in food safety by the World Health Organization and the Food and Agriculture Organization. He has been invited by the World Health Organization many times to participate as a special guest in the "Health Dialogue" forum, promoting research and policy formulation related to environmental antibiotic resistance gene research and control.

Event 2 (13:15-13:30)

Ecosystem modeling and planetary health



Nils Christian Stenseth

Foreign member of US, French, Russian, Chinese Academy of Science, and other academies, Professor

University of Oslo, Norway

Prof. Stenseth is Professor in ecology and evolution, University of Oslo, Norway. His research interests span a broad spectrum of ecological and evolutionary topics, most of which are rooted in population biology. Besides a wide range of theoretical issues, he has worked on terrestrial, aquatic and marine issues, as well as disease systems with an environmental reservoir (plague and anthrax). He is an elected member and President of the Norwegian Academy of Science and Letters (DNVA). He is also an elected member or fellow of several other academies, including the Royal Norwegian Society of Science and Letters (DKNVS), Academia Europaea, French Académie des Sciences and the Finnish Society of Sciences and Letters. He has been awarded honorary doctorates (Doctor Honoris Causa) at the University of Antwerp (Belgium, 2001) and the École Normale Supérieure (Lyon, France, 2011), and he is an Honorary Professor at Addis Ababa University in Ethiopia. Stenseth was made Chevalier (Knight) in the French National Order of the Legion of Honour (2011).

Event 3 (13:30-13:45)

The health risks of high-impact weather

Tong ZHU

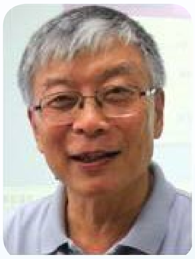
Academician of Chinese Academy of Sciences, Professor

Peking University

Professor Zhu Tong has been long engaged in atmospheric chemistry and environmental health research, achieving a series of innovative results in the identification of atmospheric pollution sources, cause analysis, and health hazard assessment. The main achievements include: breaking through the measurement technology of pollutant gas-surface exchange and regional transport flux, discovering new sources and mechanisms of atmospheric pollution; revealing the heterogeneous chemical reaction causes of atmospheric complex pollution, clarifying the regional transport process of air pollution in North China, and supporting air pollution control; identifying black carbon as one of the key atmospheric components that harm health, and discovering new adverse effects such as the impact of air pollution on reproductive health. He has published more than 340 SCI papers in journals such as Science, Proceedings of the National Academy of Sciences (PNAS), and the Journal of the American Medical Association (JAMA), and has been selected as a highly cited scientist in the "Cross-Field" category by Clarivate Analytics and a highly cited scholar in environmental science in China by Elsevier.

Event 4 (13:45-14:00)

Planet Health and Environmental Benefits



Shu TAO

Academician of Chinese Academy of Sciences, Professor

Chinese Academy of Sciences

Professor Tao Shu primarily focuses on the regional-scale environmental processes of the emission, behavior, fate, and effects of trace toxic pollutants.

He has established a high-resolution emission inventory of polycyclic aromatic hydrocarbons (PAHs) in China and a global PAH emission inventory. He has demonstrated the differentiation of isomers of polycyclic aromatic hydrocarbons during their migration. He has developed a multi-media source apportionment method. In the study of regional environmental fate of pollutants, he has established a multi-media model with spatial resolution, clarified the main mechanisms determining the spatial differentiation of persistent organic pollutants in soil, and established a systematic simulation method for polycyclic aromatic hydrocarbons from generation, migration, exposure to health hazards. He has revealed the quantitative relationship between the intake of organochlorine pesticides and the residue levels in human tissues. He has disclosed the health hazards of respiratory exposure to polycyclic aromatic hydrocarbons in the Chinese population, introduced the variability characteristics of parameters such as genetic susceptibility into risk models, and quantitatively clarified the variability and uncertainty of health risks. He has published more than a hundred papers as the first or corresponding author in foreign academic journals, including 18 papers in the journal Environmental Science & Technology. He has presided over several National Natural Science Foundation projects of China, including the Outstanding Youth Fund, Innovative Research Group, Key Projects, International Cooperation Projects, and 973 topics.

Event 5 (14:00-14:15)

Intelligent remote sensing for planetary health

Peng GONG

Vice-President and Pro-Vice-Chancellor of HKU, Chair Professor of Global Sustainability

The University of Hong Kong

Event 6 (14:15-14:30)

Earth Breathing and Health

Jianping HUANG

Academician of Chinese Academy of Sciences, Professor

Lanzhou University

Professor Jianping Huang, academician, is a distinguished founder of the College of Atmospheric Sciences, Lanzhou University, China. His research focuses on semi-arid climate change by combining observations, numerical modeling, and theoretical studies. He established the theoretical framework of a semi-arid climate change mechanism that emphasizes the effects of aerosol-cloud-precipitation, land-atmosphere and ocean-atmosphere interactions on climate change in semi-arid regions. In recent years, Huang has pioneered a series of studies on oxygen cycle and land cancer, which opened up a new field of climate change research. Huang is among the most highly cited researchers for three consecutive years in 2021, 2022 and 2023 according to Clarivate, with an H-Index of 73. He was elected as a member of the Chinese Academy of Sciences in 2021 and a Fellow of The World Academy of Sciences in 2023 for his notable contributions.

Event 7 (14:30-14:45)

The 'last mile' for sustainability science: climate change impacts and planetary health

Xiaoling ZHANG

Director of Sustainability XLab, Professor

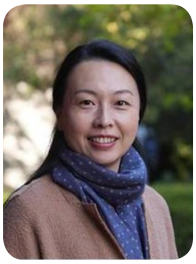
Professor Xiaoling Zhang is a member of the Institute for Climate and Carbon Neutrality (ICCN) and holds the position of full professor in the Department of Real Estate and Construction, Faculty of Architecture, at HKU. She is a sustainability scientist primarily focusing on the intricate relationship between humanity and the environment. Her work centers on developing models of the carbon-climate-human system by understanding the interactions and feedback mechanisms within this coupled complex system, as well as the socio-ecological processes influencing climate and global environmental change. As the Director of 'Sustainability X Lab', she spearheads a research team delving into four core themes:

- Human Dimensions of global & regional environmental change
- Nexus of Energy, Ecology, Environment and Economy.
- Convergence Science and Geospatial analytics for Environmental Sustainability
- Nature-based solutions, AI technology driven innovations and system engineering solutions in achieving Sustainable Development Goals (SDGs).

In recent years, her research has been dedicated to exploring affordable yet effective 'net zero' technologies and systems, including renewable and clean energy technologies across various spatial and temporal scales. Professor Zhang has been honored as a Clarivate Highly Cited Researcher in Cross-Field for the years 2022 & 2023. Furthermore, since 2020, she has been listed among Stanford's top 2% most highly cited & life-long impact scientists in the field of Environmental Engineering.

Event 8 (14:45-15:00)

The Lancet Countdown China report: from science to policy



Wenjia CAI

Professor

Tsinghua University

Professor Wenjia Cai is professor of global change economics in Department of Earth System Science, Tsinghua University, China. Her research group is particularly focusing on the health and economic impacts of climate change and climate actions, as well as how these impacts are distributed among different regions and groups of people. She is also working on the design of carbon peaking and carbon neutrality pathways. Her papers were published in the Lancet, Nature, Lancet Public Health, Lancet Planetary Health and other high-impact journals. She is now the director of The Lancet Countdown Regional Centre for Asia and is one of the leading authors of the China Lancet Countdown Report on Health and Climate Change. She also serves as a member of Global Air Pollution and Health - Technical Advisory Group of the World Health Organization.

Event 9 (15:00-15:20)

Planetary Health and Ways Forward

Andy Haines

Professor

London School of Hygiene and Tropical Medicine

Andy Haines was formerly a primary care physician and Professor of Primary Health Care at UCL. He developed an interest in climate change and health in the 1990's and was a member of the Intergovernmental Panel on Climate Change for the 2 nd and 3 rd assessment exercises and review editor for the health chapter in the 5 th assessment. He was Director (formerly Dean) of the London School of Hygiene & Tropical Medicine from 2001- October 2010.

Andy chaired the Scientific Advisory Panel for the 2013 WHO World Health Report, the Rockefeller /Lancet Commission on Planetary Health (2014-15) and the European Academies Science Advisory Council working group on climate change and health (2018-19). He currently co-chairs the InterAcademy Partnership (140 science academies worldwide) working group on climate change and health and is also co-chairing the Lancet Pathfinder Commission on health in the zero-carbon economy. He has published many papers on topics such as the effects of environmental change on health and the health co-benefits of low carbon policies. His current research focuses on climate change mitigation, sustainable healthy food systems and complex urban systems for sustainability.

Event 10 (15:20-15:35)

Global urban challenges and sustainable development

Bing XU

Professor

Tsinghua University

Bing Xu, 2008- Professor, Department of Earth System Science, Tsinghua University. MS PhD, Environmental Science, University of California, Berkeley. Director, Ministry of Education's Field Ecological Observation and Research Station for East Asian Migratory Birds and Habitat. Council of the Chinese Society for Sustainable Development. She was Assistant Professor of Geography at the Texas State University and the University of Utah. Her research interests focus on multi-resolution remotely sensed data fusion; Modeling of infectious disease transmission and pathogen evolution; the impact of climate change on urban ecological system and human health. She published 9 book chapters and 190 SCI journal articles including PNAS, Lancet. She was recipient of a number of research awards including William A. Fischer Memorial Scholarship Award from the American Society for Photogrammetry and Remote Sensing, Early Career Award from Association of American Geographers, Superior Research Award from the University of Utah, China University GIS Forum Innovative Figure, Elsevier Atlas award, and Advanced Individual Award of Tsinghua University. She served as President of Chinese Professionals in Geographic Information Science (CPGIS), a member of Group on Earth Observations (GEO). She was Editor of the Annals of Geographic Information Sciences; Energy, Ecology and Environment, and ISPRS J Photogrammetry and Remote Sensing.

Event 11 (15:35-15:50)

Urban Remote Sensing and Environment Health

Bin CHEN

Assistant Professor

The University of Hong Kong

Bin Chen is an Assistant Professor at the Faculty of Architecture, The University of Hong Kong. His research focuses on leveraging geospatial big data, data-model fusion, and advanced interdisciplinary approaches to investigate the interaction loops between urban environmental change, human activities, and public health. He has published more than 70 SCI journal articles, including Science, Nature Sustainability, Nature Communications, PNAS, Science Advances, Science Bulletin, RSE, etc. He is the Associate Editor of Remote Sensing in Ecology and Conservation. He received the Geospatial World 50 Rising Stars Award, International Society for Digital Society Young Scientist Award, Global Young Scientist Award, AAG Early Career Award in Remote Sensing, HKU-100 Scholar Award, ISPRS Best Young Author Award, and Li Xiaowen Remote Sensing Excellent Youth Award.

Session 2 (15:50-16:15): Panel Discussion

Host:

Peng GONG（The University of Hong Kong, China)

Andy Haines（London School of Hygiene and Tropical Medicine, UK）

Discussants:

Yongguan ZHU

Academician of Chinese Academy of Sciences, Professor

Chinese Academy of Sciences

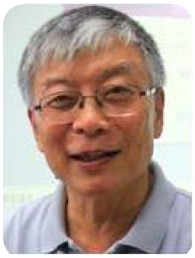
Professor Yongguan Zhu has been long engaged in environmental soil science research, making innovative achievements in the mechanisms and control of arsenic pollution in soil, the pollution and dissemination mechanisms of antibiotic resistance genes in soil, and the coupling mechanisms of soil biogeochemistry and microbial ecology. His main research results won the second prize of the National Natural Science Award in 2009 and the Science Award of the Third World Academy of Sciences (TWAS). His research findings have been systematically reviewed and reported in international top scientific publications such as Science, Nature, Cell Press, and Trends in Plant Science. After the publication of his papers, they have been cited more than 10,000 times in SCI journals. As a co-chair, he has formulated global standards and control procedures for arsenic in food safety by the World Health Organization and the Food and Agriculture Organization. He has been invited by the World Health Organization many times to participate as a special guest in the "Health Dialogue" forum, promoting research and policy formulation related to environmental antibiotic resistance gene research and control.

Nils Christian Stenseth

Foreign member of US, French, Russian, Chinese Academy of Science, and other academies, Professor

University of Oslo, Norway

Prof. Stenseth is Professor in ecology and evolution, University of Oslo, Norway. His research interests span a broad spectrum of ecological and evolutionary topics, most of which are rooted in population biology. Besides a wide range of theoretical issues, he has worked on terrestrial, aquatic and marine issues, as well as disease systems with an environmental reservoir (plague and anthrax). He is an elected member and President of the Norwegian Academy of Science and Letters (DNVA). He is also an elected member or fellow of several other academies, including the Royal Norwegian Society of Science and Letters (DKNVS), Academia Europaea, French Académie des Sciences and the Finnish Society of Sciences and Letters. He has been awarded honorary doctorates (Doctor Honoris Causa) at the University of Antwerp (Belgium, 2001) and the École Normale Supérieure (Lyon, France, 2011), and he is an Honorary Professor at Addis Ababa University in Ethiopia. Stenseth was made Chevalier (Knight) in the French National Order of the Legion of Honour (2011).



Shu TAO

Academician of Chinese Academy of Sciences, Professor

Chinese Academy of Sciences

Professor Tao Shu primarily focuses on the regional-scale environmental processes of the emission, behavior, fate, and effects of trace toxic pollutants. He has established a high-resolution emission inventory of polycyclic aromatic hydrocarbons (PAHs) in China and a global PAH emission inventory. He has demonstrated the differentiation of isomers of polycyclic aromatic hydrocarbons during their migration. He has developed a multi-media source apportionment method. In the study of regional environmental fate of pollutants, he has established a multi-media model with spatial resolution, clarified the main mechanisms determining the spatial differentiation of persistent organic pollutants in soil, and established a systematic simulation method for polycyclic aromatic hydrocarbons from generation, migration, exposure to health hazards. He has revealed the quantitative relationship between the intake of organochlorine pesticides and the residue levels in human tissues. He has disclosed the health hazards of respiratory exposure to polycyclic aromatic hydrocarbons in the Chinese population, introduced the variability characteristics of parameters such as genetic susceptibility into risk models, and quantitatively clarified the variability and uncertainty of health risks. He has published more than a hundred papers as the first or corresponding author in foreign academic journals, including 18 papers in the journal Environmental Science & Technology. He has presided over several National Natural Science Foundation projects of China, including the Outstanding Youth Fund, Innovative Research Group, Key Projects, International Cooperation Projects, and 973 topics.

Tong ZHU

Academician of Chinese Academy of Sciences, Professor

Peking University

Professor Zhu Tong has been long engaged in atmospheric chemistry and environmental health research, achieving a series of innovative results in the identification of atmospheric pollution sources, cause analysis, and health hazard assessment. The main achievements include: breaking through the measurement technology of pollutant gas-surface exchange and regional transport flux, discovering new sources and mechanisms of atmospheric pollution; revealing the heterogeneous chemical reaction causes of atmospheric complex pollution, clarifying the regional transport process of air pollution in North China, and supporting air pollution control; identifying black carbon as one of the key atmospheric components that harm health, and discovering new adverse effects such as the impact of air pollution on reproductive health. He has published more than 340 SCI papers in journals such as Science, Proceedings of the National Academy of Sciences (PNAS), and the Journal of the American Medical Association (JAMA), and has been selected as a highly cited scientist in the "Cross-Field" category by Clarivate Analytics and a highly cited scholar in environmental science in China by Elsevier.

Jianping HUANG

Academician of Chinese Academy of Sciences, Professor

Lanzhou University

Professor Jianping Huang, academician, is a distinguished founder of the College of Atmospheric Sciences, Lanzhou University, China. His research focuses on semi-arid climate change by combining observations, numerical modeling, and theoretical studies. He established the theoretical framework of a semi-arid climate change mechanism that emphasizes the effects of aerosol-cloud-precipitation, land-atmosphere and ocean-atmosphere interactions on climate change in semi-arid regions. In recent years, Huang has pioneered a series of studies on oxygen cycle and land cancer, which opened up a new field of climate change research. Huang is among the most highly cited researchers for three consecutive years in 2021, 2022 and 2023 according to Clarivate, with an H-Index of 73. He was elected as a member of the Chinese Academy of Sciences in 2021 and a Fellow of The World Academy of Sciences in 2023 for his notable contributions.

Xiaoling ZHANG

Director of Sustainability XLab, Professor

Professor Xiaoling Zhang is a member of the Institute for Climate and Carbon Neutrality (ICCN) and holds the position of full professor in the Department of Real Estate and Construction, Faculty of Architecture, at HKU. She is a sustainability scientist primarily focusing on the intricate relationship between humanity and the environment. Her work centers on developing models of the carbon-climate-human system by understanding the interactions and feedback mechanisms within this coupled complex system, as well as the socio-ecological processes influencing climate and global environmental change. As the Director of 'Sustainability X Lab', she spearheads a research team delving into four core themes:

- Human Dimensions of global & regional environmental change
- Nexus of Energy, Ecology, Environment and Economy.

- Convergence Science and Geospatial analytics for Environmental Sustainability
- Nature-based solutions, AI technology driven innovations and system engineering solutions in achieving Sustainable Development Goals (SDGs).

In recent years, her research has been dedicated to exploring affordable yet effective 'net zero' technologies and systems, including renewable and clean energy technologies across various spatial and temporal scales. Professor Zhang has been honored as a Clarivate Highly Cited Researcher in Cross-Field for the years 2022 & 2023. Furthermore, since 2020, she has been listed among Stanford's top 2% most highly cited & life-long impact scientists in the field of Environmental Engineering.

Wenjia CAI

Professor

Tsinghua University

Professor Wenjia Cai is professor of global change economics in Department of Earth System Science, Tsinghua University, China. Her research group is particularly focusing on the health and economic impacts of climate change and climate actions, as well as how these impacts are distributed among different regions and groups of people. She is also working on the design of carbon peaking and carbon neutrality pathways. Her papers were published in the Lancet, Nature, Lancet Public Health, Lancet Planetary Health and other high-impact journals. She is now the director of The Lancet Countdown Regional Centre for Asia and is one of the leading authors of the China Lancet Countdown Report on Health and Climate Change. She also serves as a member of Global Air Pollution and Health - Technical Advisory Group of the World Health Organization.

Andy Haines

Professor

London School of Hygiene and Tropical Medicine

Andy Haines was formerly a primary care physician and Professor of Primary Health Care at UCL. He developed an interest in climate change and health in the 1990's and was a member of the Intergovernmental Panel on Climate Change for the 2 nd and 3 rd assessment exercises and review editor for the health chapter in the 5 th assessment. He was Director (formerly Dean) of the London School of Hygiene & Tropical Medicine from 2001- October 2010.

Andy chaired the Scientific Advisory Panel for the 2013 WHO World Health Report, the Rockefeller /Lancet Commission on Planetary Health (2014-15) and the European Academies Science Advisory Council working group on climate change and health (2018-19). He currently co-chairs the InterAcademy Partnership (140 science academies worldwide) working group on climate change and health and is also co-chairing the Lancet Pathfinder Commission on health in the zero-carbon economy. He has published many papers on topics such as the effects of environmental change on health and the health co-benefits of low carbon policies. His current research focuses on climate change mitigation, sustainable healthy food systems and complex urban systems for sustainability.

Bing XU

Professor

Tsinghua University

Bing Xu, 2008- Professor, Department of Earth System Science, Tsinghua University. MS PhD, Environmental Science, University of California, Berkeley. Director, Ministry of Education's Field Ecological Observation and Research Station for East Asian Migratory Birds and Habitat. Council of the Chinese Society for Sustainable Development. She was Assistant Professor of Geography at the Texas State University and the University of Utah. Her research interests focus on multi-resolution remotely sensed data fusion; Modeling of infectious disease transmission and pathogen evolution; the impact of climate change on urban ecological system and human health. She published 9 book chapters and 190 SCI journal articles including PNAS, Lancet. She was recipient of a number of research awards including William A. Fischer Memorial Scholarship Award from the American Society for Photogrammetry and Remote Sensing, Early Career Award from Association of American Geographers, Superior Research Award from the University of Utah, China University GIS Forum Innovative Figure, Elsevier Atlas award, and Advanced Individual Award of Tsinghua University. She served as President of Chinese Professionals in Geographic Information Science (CPGIS), a member of Group on Earth Observations (GEO). She was Editor of the Annals of Geographic Information Sciences; Energy, Ecology and Environment, and ISPRS J Photogrammetry and Remote Sensing.

Bin CHEN

Assistant Professor

The University of Hong Kong

Bin Chen is an Assistant Professor at the Faculty of Architecture, The University of Hong Kong. His research focuses on leveraging geospatial big data, data-model fusion, and advanced interdisciplinary approaches to investigate the interaction loops between urban environmental change, human activities, and public health. He has published more than 70 SCI journal articles, including Science, Nature Sustainability, Nature Communications, PNAS, Science Advances, Science Bulletin, RSE, etc. He is the Associate Editor of Remote Sensing in Ecology and Conservation. He received the Geospatial World 50 Rising Stars Award, International Society for Digital Society Young Scientist Award, Global Young Scientist Award, AAG Early Career Award in Remote Sensing, HKU-100 Scholar Award, ISPRS Best Young Author Award, and Li Xiaowen Remote Sensing Excellent Youth Award.

Session Title: The 4th Forum on Space Observations for Sustainable Development

Time: 13:00 - 16:00

Room: 307

Date: 2024-09-06

Moderator:

SHI Jiancheng

Professor

National Space Science Center, Chinese Academy of Sciences, China

SHI Jiancheng is a distinguished expert of the Thousand Talents Program, a researcher at the National Space Science Center of the Chinese Academy of Sciences, director of the State Key Laboratory of Remote Sensing Science, and a Fellow of the Institute of Electrical and Electronics Engineers (IEEE), the Society of Photo-Optical Instrumentation Engineers (SPIE), and the International Academy of Electromagnetics and Electronic Sciences. He is mainly engaged in microwave remote sensing and water cycle research. He is now the deputy editor of Remote Sensing of Environment, the Chief editor of Remote Sensing Technology and Application, the deputy editor of the Journal of Space Science, and the editorial board of Science-Earth Science in China. As the chief scientist, he has presided over 1 project of the 973 program, 1 project of the 863 program and 2 key funds. A total of 232 SCI indexed papers were published in international journals, and the total number of citations was more than 16,500; For many years, he has been the chairman, member and sub-chairman of the technical committee of many important international remote sensing conferences such as IGARSS, PIERS, SPIE, International Quantitative Remote Sensing Progress Conference, International SAR Inversion Physical Earth Parameters and Applications Conference.

TANG Shihao

Deputy Director General

TANG Shihao, male, was burn in March 1971. He joined in the CCP in 2004, now deputy director-general of NSMC, senior researcher. TANG graduated from Nanjing meteorological college in 1993, and he got master's degree in 1996 at Nanjing meteorological college in applied meteorology. In 2001, he graduated from Beijing Normal University in remote sensing and geographic information system and got PhD in physical geography. TANG engaged in postdoctoral research in the school of life sciences of Beijing Normal University from 2001 to 2003. TANG began to work for the NSMC since 2003, where he worked as deputy director and director of the Institute of satellite meteorology, director of the remote sensing application department (remote sensing application service center of CMA), and deputy chief engineer of Fengyun meteorological satellite engineering and the chief engineer of application system. TANG served as deputy director-general of the National Satellite Meteorological Center (National Space Weather Monitoring and early warning center) since September 2021.

Participants:

Event 1 (13:05-13:21)

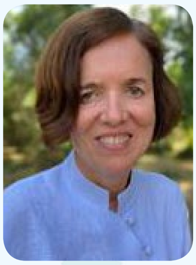
Opening remarks

GUO Huadong

Director General

International Research Center of Big Data for Sustainable Development Goals

Prof. GUO is the Director General of the International Research Center of Big Data for Sustainable Development Goals (CBAS), an Academician of Chinese Academy of Sciences (CAS), a Foreign Member of the Russian Academy of Sciences, a Foreign Member of the Finnish Society of Sciences and Letters, and a Fellow of TWAS. He presently serves as Honorary President of the International Society for Digital Earth (ISDE), Director of the International Center on Space Technologies for Natural and Cultural Heritage under the Auspices of UNESCO, Chair of the Digital Belt and Road Program, and Editor-in-Chief of the International Journal of Digital Earth and the journal of Big Earth Data. He served as a member of the UN 10-Member Group to support the Technology Facilitation Mechanism for SDGs (2018-2021), Chairman of the International Committee of Remote Sensing of Environment (2017-2020), President of ISDE (2015-2019), and ICSU Committee on Data for Science and Technology (CODATA) (2010-2014). He specializes in remote sensing, radar for Earth observation, and Digital Earth science. He is the Principal Investigator of Moon-based Earth Observation Research Project of National Natural Science Foundation of China and the Chief Scientist of the Big Earth Data Science Engineering Project of CAS. He has published more than 500 papers and 24 books, and is the awardee of 18 domestic and international prizes.



Marion Barthelemy

Acting Director of Division for Satellite Analysis and Applied Research UN Institute for Training and Research (UNITAR)

Marion Barthelemy has been Acting Director of UNITAR's Division for Satellite Analysis and Applied Research since April 2024. She manages the UN Satellite Centre (UNOSAT) programme. Earlier, she worked in the UN Department for Economic and Social Affairs as Director of the Division for Intergovernmental Support and Coordination (2018-2023) and as Director of the Division for Public Administration and Development Management (2016-2018). She was part of the team that supported the elaboration of the 2030 Agenda for Sustainable Development and supported the UN high-level political forum on sustainable development since its inception. She also worked in the Secretary-General's office and supported several Under-Secretary-Generals and offices in her career.

WANG Yu
Deputy Director
Bureau of Major Science and Technology Programs, Chinese Academy of Sciences, China

WANG Yu, Researcher and PhD Supervisor. Born in December 1980 in Zhumadian, Henan Province. Graduated in 2002 from Henan University with a degree in Automation, and earned a PhD in Communication Engineering from the Graduate School of the Chinese Academy of Sciences in 2007. Currently serving as deputy director of the Bureau of Major Science and Technology Programs, Chinese Academy of Sciences.

Event 2 (13:21-13:33)
ASSA Achievements Launch Ceremony

Event 3 (13:33-14:46)
UNOSAT Facilitating SDGs in the Second Half

Samir Belabbes

Associate Programme Officer

United Nations Satellite Centre (UNOSAT)

Samir Belabbes, PhD., was awarded his PhD in geophysics from the Louis Pasteur University of Strasbourg (France) and an Engineering degree from the university of sciences and technology of Algiers (Algeria). His doctorate thesis was mainly focused on the use of EO data and more specifically the radar interferometry techniques for seismic risk assessment applications in North Africa and Anatolia. He has more than twenty years of experience in remote sensing data, monitoring of ground data and field observation for environmental and geological studies. He has been working as an Associate Programme Officer for the United Nations Satellite Centre (UNOSAT) where he is primarily involved in remote sensing data processing and interpretation for environmental and biomass degradation in the tropical and sub-tropical areas, natural disasters, and risk assessment applications and is the main activation manager for rapid mapping activities. He has also professional experience in geophysical field exploration using aeromagnetic and gravimetric measurements, research and university teaching in NorthAfrica and Europe.

Event 4 (13:46-13:59)
Earth Observation for the Sustainable Development and the Early Warnings for All Initiative

Natalia Donoho
Head of WMO Space Programme
World Meteorological Organization (WMO)

Natalia Donoho, is an award-winning Physical Scientist and the Head of the WMO Space Programme. She is an expert in multilateral space observation coordination. Prior to joining WMO, Natalia had a wide variety of experiences from several operational components of National Oceanic and Atmospheric Administration (NOAA) in USA. She holds three master's degrees in Physical Oceanography, Project Management, and International Affairs and Diplomacy.

Event 5 (13:59-14:12)

FengYun's Actions for SDGs

WANG Jingsong

Professor

National Satellite Meteorological Center (National Center for Space Weather), China Meteorological Administration

Dr. WANG Jingsong is the Director General of the National Satellite Meteorological Center (National Center for Space Weather) and the Deputy Commander of the FengYun meteorological satellite project. He received his bachelor's degree and master's degree in space physics from Peking University in 1991 and 1994, respectively, and his PhD also in space physics at Chinese Academy of Sciences (CAS) in 1997. In 1999, Dr. Wang finished his post-doctoral research in Department of Geophysics, Peking University, and then was promoted to associate professor and appointed as the deputy director of Institute of Space Physics and Technology there. He visited Max Planck Institute for Aeronomy (now known as Max Planck Institute for Solar System Research) twice as a guest scientist and was involved in the ESA's Mars Express Mission. Dr. Wang's main research fields cover space physics, space weather theory and applications, and atmospheric observation. He has published more than 150 papers (patents, monographs, etc.), of which more than 10 were funded as national scientific research projects. He successfully established the China Meteorological Administration's space weather business for the first time, guiding the construction of the space weather forecast, early warning service, and quality monitoring management system. He was the winner of several national talent support programs, of the Jeoujang Jaw Outstanding Science Reward for Young and Middle-aged Scientists, and of the China Youth Science and Technology Award, etc.

Event 6 (14:12-14:25)

Huanjing Facilitating SDGs in the Second Half

GAO Jixi

Chief Scientist of Prof

Satellite Application Center for Ecology and Environment, MEE

Prof. Dr. GAO Jixi is director of the Satellite Application Center for Ecology and Environment, Ministry of Ecology and Environment, China. He serves as vice president of academic groups such as the Chinese Society for Environmental Sciences and the Ecological Society of China, and a member of the National Committee of Experts on Ecological Environmental Protection.

Prof. Gao took the lead in proposing the concept of "red lines" for ecological protection. His proposal of climate change response program based on the concept was selected by the United Nations Climate Summit as one of the preferred nature-based solutions (NBS) and one of the 16 examples of the most ambitious initiatives for raising climate ambition and accelerating action, which provides a Chinese model for the fulfillment of international conventions around the globe. He led the compilation of the China Biodiversity National Situation Study, which comprehensively analyzed and assessed China's biodiversity, constructed large-scale ecological corridors connecting 97% of China's nature reserves, and scientifically solved the long-standing problems of isolated ecological protection and fragmentation of biological habitats in China.

Event 7 (14:25-14:38)

Ziyuan Satellite Series Facilitating SDGs in the Second Half

LU Shuning

Deputy Director General

China Centre for Resources Satellite Data and Application

LU Shuning, Ph.D., researcher and deputy director of China Centre for Resources Satellite Data and Application, has long been engaged in the application and promotion of domestically produced land observation satellite data, and has promoted the use of domestic satellite data in the operational and industrial applications in a number of industries and localities.

He was awarded the Space Contribution Award by China Aerospace Science and Technology Corporation, and has presided over and participated in scientific research projects that have won three provincial and ministerial science and technology awards, and enjoys special government allowances.

Event 8 (14:38-14:51)

Haiyang Satellite Series Facilitating SDGs in the Second Half

QI Ping

Director

National Satellite Ocean Application Service

QI Ping, Han nationality, born in 1974, a resident of Li County, Hebei Province, Ph.D. in engineering, is the Director and Secretary of National Satellite Ocean Application Service of the Ministry of Natural Resources.

She has long been engaged in marine ecological early warning and monitoring and disaster prevention and mitigation, and has mainly carried out the revision of marine environmental protection law and other regulations, the construction of early warning and monitoring system for typical marine ecosystems, the quality management of marine ecological early warning and monitoring and the comprehensive evaluation of marine ecological status, etc., and has been involved in the prevention and control of seabed moss and green tides, the monitoring of maritime emergencies and surveillance of key areas, the first nationwide marine disaster risk census, the response to marine disasters, and the monitoring and control of marine disasters. It has participated in the prevention and control of seagrass green tide, surveillance and monitoring of maritime emergencies and key sea areas, the first national marine disaster risk census, response to and investigation and assessment of marine disasters, marine forecasting and disaster prevention and mitigation.

Event 9 (14:51-15:04)

SDGSAT-1 Open Science Program Facilitating SDGs in the Second Half

DOU Changyong

Secretary General of ASSA

International Research Center of Big Data for Sustainable Development Goals

DOU Changyong is an associate professor with International Research Center of Big Data for Sustainable Development Goals (CBAS), serving as secretary general of Alliance of Sustainable Development Goals Satellites (ASSA).

As a core staff member, he participated in the demonstration and overall design of the Sustainable Development Goals Science Satellite 1 (SDGSAT-1), he also organized and implemented the demonstration of the technical indexes and determination of the indexes of the engineering system of the SDGSAT-1. Moreover, he supervised and organized the development of the satellite engineering systems, the launch of the satellite, the release of the first map and the implementation of the SDGSAT-1 open science programme. At the same time, he also developed the theory and technical methods of joint radiometric and geometric calibration of remote sensing images on multiple platforms, and carried out joint radiometric and geometric calibration of multiple types of Earth observation payloads on airborne, SDGSAT-1 satellites and space stations, which ensured quantitative remote sensing applications and the production of high-precision data products. With regard to the work on SDGs, Dou Changyong carried out research on SDGSAT-1 services for monitoring and assessment of SDGs. He and his team took advantage of the unique advantages of the Glimmer imager, Multispectral Imager and Thermal Infrared Spectrometer data of the SDGSAT-1 satellite, in conjunction with other data sources, organized research work related to SDG2, SDG6, SDG11, SDG13, SDG14 and SDG15.

Event 10 (15:14-15:59)

High Level Dialogue

Samir Belabbes

Associate Programme Officer

United Nations Satellite Centre (UNOSAT)

Samir Belabbes, PhD., was awarded his PhD in geophysics from the Louis Pasteur University of Strasbourg (France) and an Engineering degree from the university of sciences and technology of Algiers (Algeria). His doctorate thesis was mainly focused on the use of EO data and more specifically the radar interferometry techniques for seismic risk assessment applications in North Africa and Anatolia. He has more than twenty years of experience in remote sensing data, monitoring of ground data and field observation for environmental and geological studies. He has been working as an Associate Programme Officer for the United Nations Satellite Centre (UNOSAT) where he is primarily involved in remote sensing data processing and interpretation for environmental and biomass degradation in the tropical and sub-tropical areas, natural disasters, and risk assessment applications and is the main activation manager for rapid mapping activities. He has also professional experience in geophysical field exploration using aeromagnetic and gravimetric measurements, research and university teaching in NorthAfrica and Europe.

Natalia Donoho

Head, WMO Space Programme

World Meteorological Organization (WMO)

Natalia Donoho, is an award-winning Physical Scientist and the Head of the WMO Space Programme. She is an expert in multilateral space observation coordination. Prior to joining WMO, Natalia had a wide variety of experiences from several operational components of National Oceanic and Atmospheric Administration (NOAA) in USA. She holds three master's degrees in Physical Oceanography, Project Management, and International Affairs and Diplomacy.

Hanif Ur Rehman

Doctor

Space Applications and Research Centre, Space & Upper Atmosphere Research Commission (SUPARCO)

Dr Hanif Ur Rehman did his Master of Science and Master of Philosophy in Physics and PhD in Geophysics from Pakistani universities. He is a regular employee of the Pakistan National Space Agency SUPARCO since 1996 and has worked on numerous research and development studies in the domain of satellite remote sensing and GIS technologies applications. His main areas of interest are climate change impact assessment, surface and groundwater prospection and harvesting, agriculture crops mapping and monitoring and disasters mapping, monitoring, damage assessment and mitigation strategies. He also remained part of SUPARCO's satellite remote sensing data products and services marketing and outreach to governmental organizations and academia. Presently, he is working as Director General of Space Applications and Research Centre, Karachi (SPARC-K), Pakistan.

TANG Xinming

Chief Engineer

Land Satellite Remote Sensing Application Center, Ministry of Natural Resources of P.R.China

TANG Xinming, PhD, Researcher, Chief Engineer of Land Satellite Remote Sensing Application Center, Ministry of Natural Resources of P.R.China, has long engaged in satellite mapping and remote sensing technology research and engineering construction, and served as the chief designer of the application systems of multiple satellite series such as ZY-3 series, ZY-1 02E, and GFDM. He has published 260 papers, 6 monographs in Chinese and English, compiled 5 national industry standards, and obtained 33 invention patents. As a laureate of 5 first and second prizes for National Prize for Progress in Science and Technology, he is the lead of the first batch of Innovation Team of the Ministry of Science and Technology, as well as the chairman of the First Committee of the International Society for Photogrammetry and Remote Sensing (ISPRS).

CHEN Fang

Professor

International Research Center of Big Data for Sustainable Development Goals

CHEN Fang is the Deputy Director General and a Professor of CBAS. He is also serving as the Secretary-General of Integrated Research on Disaster Risk (IRDR) Chinese National Committee, the Executive Deputy Director of the CAS-TWAS Centre of Excellence on Space Technology for Disaster Mitigation (SDIM), and member of World Federation of Engineering Organizations Committee on Disaster Risk Management (WFEO-CDRM). Prof. Chen is the chief scientist of Digital Belt and Road Platform of Big Earth Data Science Engineering Program (CASEarth) of Chinese Academy of Sciences (CAS), which provides the cloud service in support of data sharing and policy-making for sustainable development goals (SDGs). He has ample experience in Big Earth Data for sustainable development, and his work spans the public, private and non-profit sectors. His current work focuses on adapting Big Earth Data technologies to meet the SDGs assessment needs (mainly for SDG 11 and SDG 13) of developing countries including Nepal, Thailand and Small Island Developing States (SIDS). Prof. Chen also conducts interdisciplinary work combining, remote sensing, ecology, and other fields of study to assess spatial patterns of disaster risk. He has published over 100 academic papers and book chapters and was elected to the CAS "Hundred Talent Program" in 2011 and the TWAS Young Affiliate Fellow in 2014.

Awad Ali Alowtheri

Dean

Institute of Consulting and Business Solutions, Saudi Arabia

Session Title: Poles and High Mountains of the Earth: Challenges for Sustainable Development in a Fragile Environment

Time: 16:00 - 18:30

Room: 307

Date: 2024-09-06

Session Title: Monitoring and Assessment Technology for Urban Sustainable Development Goals based on Spatiotemporal Big Data

Time: 14:45 - 16:15

Room: 305A

Date: 2024-09-06

Moderator:

Songnian Li

Professor

Toronto Metropolitan University

Dr. Songnian Li is a professor of Geomatics Engineering in the Department of Civil Engineering at Toronto Metropolitan University. He holds Ph.D. degree from University of New Brunswick, Canada. Prof. Li served the council of the International Society for Photogrammetry and Remote Sensing (ISPRS) (2016-2022), was a twice-Invited Researcher by Japan Society for the Promotion of Science, and received the 2016 ISPRS U.V. Helava Best Paper Award. He is an ISPRS Fellow and the Executive Editor-in-Chief of Big Earth Data journal. His current research focuses on geospatial big data, spatiotemporal analysis, human mobility, geo-collaboration, and smart cities (digital twins).

Linlin Lu

Professor

Aerospace Information Research Institute, Chinese Academy of Sciences

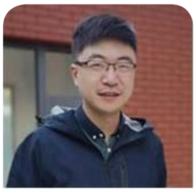
Dr. Linlin Lu is currently an Associate Professor in Aerospace Information Research Institute, Chinese Academy of Sciences (AIR, CAS). She was appointed as member of Sino-EU Panel on Land and Soil (SEPLS) (2018-2022), a member of Group on Earth Observations (GEO) Global Urban Observation and Information Initiative and Human Planet Initiative. She presently co-chairs the Urban Environment Working Group in the Digital Belt and Road program. Her research interests include image information detection, image classification and time series analysis applied to urban environment, urban resilience and sustainability. She is the author of more than 140 journal articles and conference proceeding papers.

Ashraf Dewan

Professor

Curtin University

Ashraf Dewan is an environmental geographer who received his Doctor of Philosophy (PhD) in Environmental Science & Technology in 2005. Ashraf was recently appointed co-chair (for 2022-2026) of the working group Environment and Health, part of the International Society for Photogrammetry and Remote Sensing (ISPRS). He has previously served as secretary of working group IV/5 of the ISPRS, during 2013-2016. Ashraf is on the editorial board of nine international journals, including the climate change section of Nature Portfolio Scientific Reports, and periodically acts as guest editor for top ranked journals in the field of tropical medicine, environment and geospatial sciences.



Shisong Cao

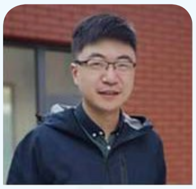
Professor

Beijing University of Civil Engineering and Architecture

Dr. Shisong Cao is the Director of the Center for Urbanization and Climate Change, the Assistant Director of the School of Geomatics and Urban Spatial Informatics. He is also a member of the CAST UN Consultative Committee on Information and Communication Technology, a member of the International Commission on Climate Change and Disaster Management Science. His research interests focus on land-use and land-cover changes, urban climatology, GIS, remote sensing, and sustainable development science.

Participants:

Event 1 (14:45-15:00)
Spatial Monitoring Methods for United Nations' Sustainable Development Goals



Shisong Cao

Professor

Beijing University of Civil Engineering and Architecture

Dr. Shisong Cao is the Director of the Center for Urbanization and Climate Change, the Assistant Director of the School of Geomatics and Urban Spatial Informatics. He is also a member of the CAST UN Consultative Committee on Information and Communication Technology, a member of the International Commission on Climate Change and Disaster Management Science. His research interests focus on land-use and land-cover changes, urban climatology, GIS, remote sensing, and sustainable development science.

Event 2 (15:00-15:15)

Application of Micro Remote Sensing Technology in Monitoring the Mural in Beijing Fahai Temple

Yuqin Huang

Professor

China Academy of Cultural Heritage

Dr. Yuqin Huang is a member of ICOMOS , a member of Cultural Heritage Professional Committee of China Association for Disaster Prevention. Her research interests focus on ancient building surveying, digital cultural heritage, the application of Spatial Information Systems in the protection and management of cultural heritage.

Event 3 (15:15-15:30)

SustainAI: An Integrated Enviroment for Boosting Applications of Artificial Intelligence for SDGs

Yanjie Lv

Researcher

International Research Center of Big Data for Sustainable Development Goals

Event 4 (15:30-15:45)

Research on Urban Transportation Physical Examination Evaluation Platform for High-quality Development: The Case Study of Tianjin

Pei Hu

Researcher

Tianjin Urban Planning and Design Institute Co., Ltd.

Pei Hu is a research associate in Tianjin Key Laboratory of Smart City Planning, affiliated to TUPDI. His research focuses on quantitative analysis in urban planning, spatial-temporal big data modeling, urban governance Innovation with big data and Web-GIS applications in smart city. With a strong focus on integrating digital tools with traditional urban planning practices, his work aims to bridge the collaboration between fundamental planning theories and cutting-edge technological methods in smart city.

Event 5 (15:45-15:55)

Investigation of the Relationship between the Urban Wind–Heat Environment and Urban Development Elements in High-Density Urban Areas

Jiaxuan Li
Researcher
Ministry of Natural Resources, China

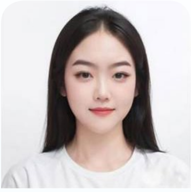
Event 6 (15:55-16:05)

Investigating urban heat-related health risks related to local climate zones

Muhammad Fahad Baqa
Doctor
International Research Center of Big Data for Sustainable Development Goals

Event 7 (16:05-16:15)

Comprehensive Assessment of Urban Resilience Based on CRITIC-TOPSIS Model: A Case Study of Guilin



Liduo Dou
Aerospace Information Research Institute, Chinese Academy of Sciences

Event 8 (16:15-16:25)

The Importance of Supporting Ecosystem in Smart City Implementation: The Development of Tangerang Live Application

Forina Lestari
Doctor
Indonesian Institute of Technology

Session Title: Digital Technology for Disaster Risk Reduction and SDGs

Time: 14:45 - 16:15

Room: 305B

Date: 2024-09-06

Moderator:

WANG Lizhe

Professor &Vice President

China University of Geosciences, Wuhan

WANG Lizhe, Fellow of IEEE, received the Ph.D. degree from Karlsruhe Institute of Technology, Karlsruhe, Germany, in 2007. Currently, he is a Professor with China University of Geosciences, Wuhan, China. His research interests include digital Earth theory, remote sensing information engineering, and geological information applications. Dr. Wang is an Academician of the Academia Europaea and SPIE Fellow. He is a recipient of the National Distinguished Youth Science Fund. He serves as an Editorial Board Member for international journals such as Scientific Data, IEEE Journal on Miniaturization for Air and Space Systems (J-MASS), IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing (J-STARS), and International Journal of Design Engineering (IJDE).

CHEN Fang

Professor & Deputy Director General

International Research Center of Big Data for Sustainable Development Goals

Dr. Fang Chen is the Deputy Director General of the International Research Center of Big Data for Sustainable Development Goals (CBAS), and a Professor of the Chinese Academy of Sciences (CAS) Aerospace Information Research Institute. His work focuses on adapting Big Earth Data technologies to meet the SDGs assessment needs (mainly for SDG 11 and SDG 13) of developing countries, including Nepal, Thailand, and Small Island Developing States (SIDS). Dr. Chen also conducts interdisciplinary work combining remote sensing, geology, and other fields of study to assess spatial and temporal patterns of disaster risk, including glacial lake outburst floods, landslides, wildfires, drought, and earthquakes, especially in the Himalayas and other parts of High Mountain Asia. Dr. Chen has published over 100 academic papers and book chapters.

Participants:

Event 1 (14:45-15:00)

Current Disaster Situation and Considerations for Preventive Measures

YANG Siquan

Professor & Secretary of Party committee

National Institute of Natural Hazards

Yang Siquan is the Party Secretary and Deputy Director of the National Institute of Natural Disaster Prevention, Ministry of Emergency Management, and a Ph.D. supervisor. He primarily focuses on disaster remote sensing monitoring and emergency research. He organized the compilation of the "14th Five-Year Plan for Technological Innovation in Emergency Management" and the "14th Five-Year Development Plan for Emergency Satellites and Applications." He also led the completion of national tasks such as comprehensive damage assessments for the Wenchuan Earthquake, Yushu Earthquake, and Zhouqu Mudslide. He has received the National Second Prize for Scientific and Technological Progress and the First Prize for National Defense Science and Technology Progress, among other awards, and has published over 80 papers.

Event 2 (15:00-15:15)

Earth observation data-based flood risk assessment

YANG Saini

Professor &Executive Director

International Programme Office for Integrated Research on Disaster Risk

YANG Saini took the position of Executive Director of International Programme Office of Integrated Research on Disaster Risk (IRDR) co-sponsored by ISC and UNDRR in July 2024. Dr. Saini Yang is a professor at Beijing Normal University. Saini's research interests include risk analysis and climate change adaptation. Saini is the PI of more than twenty research projects and has published more than 100 papers in academic journals, including Nature Climate Change and Nature Communications. Saini is a member of the expert committee of the National Disaster Reduction Commission and a member of the Asia-Pacific Science and Technology Advisory Group of the United Nations Disaster Risk Reduction, and also serves as the editorial board of several international academic journals. Saini got her bachelor and master degree from Southeast University and PhD degree from University of Maryland.

Event 3 (15:15-15:30)

Space-based Earth Observation Applications for SFDRR Indicators Monitoring

LI Suju

Professor &Director

Emergency Satellite Engineering and Application (ESEA) Key Laboratory of Ministry of Emergency Management

LI Suju, Ph.D, Researcher, Director of the Emergency Satellite Engineering and Application (ESEA) Key Laboratory of Ministry of Emergency Management, P.R.C, the Application System Chief Designer of Emergency and Disaster Satellites. She has been engaged in satellite remote sensing application for disaster risk reduction application and space-based information international cooperation since 2003. She has served as the Project Manager of International Charter Space and Major Disasters since 2007 and had been worked in the United Nations Platform for Space-based Information for Disaster Management and Emergency Response (UN-SPIDER) Beijing Office as Senior Expert from 2011 to 2013.

Event 4 (15:30-15:45)

Empowering Flash Flood Disaster Prevention with Big Data: China's Practices and Progress

PENG Jing

Professor &President

China Institute of Water Resources and Hydropower Research

Peng Jing, female, received her bachelors degree of hydraulic machinery and then master’s degree of hydraulics and river dynamics both in Tsinghua University, and doctoral degree of river and basin environmentology in Tokyo University. She is a professor level senior engineer, doctoral supervisor and national registered consulting engineer (for investment). She is now serving as the President of China Institute of Water Resources and Hydropower Research (IWHR), the Director of International Research and Training Center on Erosion and Sedimentation (IRTCES), Director of Remote Sensing Technology Application Research Center as well as Head of Research Center on Flood and Drought Disaster Reduction, both affiliated to the Ministry of Water Resources of China. She is also serving as the member of the Working Group on Water of World Federation of Engineering Organizations (WFEO).

Her major research fields are hydraulics and river dynamics, water environment and ecology. She has been in charge of over 40 key research and consultancy projects including delta flood management, river and lake water pollution control, river ecology and health, regional water resources allocation, urban flood and drought mixed simulation. She has published over 90 journal papers and 6 monographs, and has made over 20 keynote speeches for international events.

Panel Discusion Tile: Digital Technology for Disaster Risk Reduction and SDGs

Time: 15:45-16:15

Host:

Discussants:

WANG Lizhe

Professor &Vice President

China University of Geosciences, Wuhan

WANG Lizhe, Fellow of IEEE, received the Ph.D. degree from Karlsruhe Institute of Technology, Karlsruhe, Germany, in 2007. Currently, he is a Professor with China University of Geosciences, Wuhan, China. His research interests include digital Earth theory, remote sensing information engineering, and geological information applications. Dr. Wang is an Academician of the Academia Europaea and SPIE Fellow. He is a recipient of the National Distinguished Youth Science Fund. He serves as an Editorial Board Member for international journals such as Scientific Data, IEEE Journal on Miniaturization for Air and Space Systems (J-MASS), IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing (J-STARS), and International Journal of Design Engineering (IJDE).

YANG Saini

Professor &Executive Director

International Programme Office for Integrated Research on Disaster Risk

YANG Saini took the position of Executive Director of International Programme Office of Integrated Research on Disaster Risk (IRDR) co-sponsored by ISC and UNDRR in July 2024. Dr. Saini Yang is a professor at Beijing Normal University. Saini's research interests include risk analysis and climate change adaptation. Saini is the PI of more than twenty research projects and has published more than 100 papers in academic journals, including Nature Climate Change and Nature Communications. Saini is a member of the expert committee of the National Disaster Reduction Commission and a member of the Asia-Pacific Science and Technology Advisory Group of the United Nations Disaster Risk Reduction, and also serves as the editorial board of several international academic journals. Saini got her bachelor and master degree from Southeast University and PhD degree from University of Maryland.

YANG Siquan

Professor & Secretary of Party committee

National Institute of Natural Hazards

Yang Siquan is the Party Secretary and Deputy Director of the National Institute of Natural Disaster Prevention, Ministry of Emergency Management, and a

Ph.D. supervisor. He primarily focuses on disaster remote sensing monitoring and emergency research. He organized the compilation of the "14th Five-Year Plan for Technological Innovation in Emergency Management" and the "14th Five-Year Development Plan for Emergency Satellites and Applications." He also led the completion of national tasks such as comprehensive damage assessments for the Wenchuan Earthquake, Yushu Earthquake, and Zhouqu Mudslide. He has received the National Second Prize for Scientific and Technological Progress and the First Prize for National Defense Science and Technology Progress, among other awards, and has published over 80 papers.

LI Suju

Professor &Director

Emergency Satellite Engineering and Application (ESEA) Key Laboratory of Ministry of Emergency Management

LI Suju, Ph.D, Researcher, Director of the Emergency Satellite Engineering and Application (ESEA) Key Laboratory of Ministry of Emergency Management, P.R.C, the Application System Chief Designer of Emergency and Disaster Satellites. She has been engaged in satellite remote sensing application for disaster risk reduction application and space-based information international cooperation since 2003. She has served as the Project Manager of International Charter Space and Major Disasters since 2007 and had been worked in the United Nations Platform for Space-based Information for Disaster Management and Emergency Response (UN-SPIDER) Beijing Office as Senior Expert from 2011 to 2013.

PENG Jing

Professor &President

China Institute of Water Resources and Hydropower Research

Peng Jing, female, received her bachelors degree of hydraulic machinery and then master’s degree of hydraulics and river dynamics both in Tsinghua University, and doctoral degree of river and basin environmentology in Tokyo University. She is a professor level senior engineer, doctoral supervisor and national registered consulting engineer (for investment). She is now serving as the President of China Institute of Water Resources and Hydropower Research (IWHR), the Director of International Research and Training Center on Erosion and Sedimentation (IRTCES), Director of Remote Sensing Technology Application Research Center as well as Head of Research Center on Flood and Drought Disaster Reduction, both affiliated to the Ministry of Water Resources of China. She is also serving as the member of the Working Group on Water of World Federation of Engineering Organizations (WFEO).

Her major research fields are hydraulics and river dynamics, water environment and ecology. She has been in charge of over 40 key research and consultancy projects including delta flood management, river and lake water pollution control, river ecology and health, regional water resources allocation, urban flood and drought mixed simulation. She has published over 90 journal papers and 6 monographs, and has made over 20 keynote speeches for international events.

CHEN Fang

Professor & Deputy Director General

International Research Center of Big Data for Sustainable Development Goals

Dr. Fang Chen is the Deputy Director General of the International Research Center of Big Data for Sustainable Development Goals (CBAS), and a Professor of the Chinese Academy of Sciences (CAS) Aerospace Information Research Institute. His work focuses on adapting Big Earth Data technologies to meet the SDGs assessment needs (mainly for SDG 11 and SDG 13) of developing countries, including Nepal, Thailand, and Small Island Developing States (SIDS). Dr. Chen also conducts interdisciplinary work combining remote sensing, geology, and other fields of study to assess spatial and temporal patterns of disaster risk, including glacial lake outburst floods, landslides, wildfires, drought, and earthquakes, especially in the Himalayas and other parts of High Mountain Asia. Dr. Chen has published over 100 academic papers and book chapters.

Session Title: Water Resources Survey, Monitoring and Sustainable Development

Time: 14:45 - 16:15

Room: 305C

Date: 2024-09-06

Moderator:

Zhengjun Liu

Professor

Chinese Academy of Surveying & Mapping

Zhengjun Liu is a research professor at the Chinese Academy of Surveying and Mapping, and a visiting professor at Lanzhou Jiaotong University. He is also a member of the third LiDAR Professional Committee of the Chinese National Committee of the International Digital Earth Society.

He research interests focus on LiDAR remote sensing, multi-sensor fusion, and natural resources survey and monitoring with remote sensing and surveying technologies. He has published more than 200 papers in international and domestic journals and conferences. Over the past decades, he has undertaken a number of national projects in remote sensing field supported by the Natural Science Foundation of China, Ministry of Science and Technology, and Ministry of Natural Resources. He is currently in charge of the underwater topographic survey for the water resource basic survey project of the Ministry of Natural Resources.

Liping Zhu

Professor

Institute of Tibetan Plateau Research, Chinese Academy of Sciences

Prof. Liping Zhu has been full time professor in the Institute of Tibetan Plateau Research, Chinese Academy of Sciences since 2005. His main research aspects are lake and global changes, focusing lake sediments, lake processes and their reflected environmental changes.

His main achievements are including:

(1) discovered the transition period from the westerlies to Indian monsoon domination since Last Glacial Maximum on the Tibetan Plateau; (2) revealed lake-atmosphere hydrothermal exchange process and their response to climate changes by a systematic multi-parameter monitoring and simulation studies; (3) elucidated temporal and spatial differentiations of lake water storage and water quality to the response of the westerlies and Indian monsoon by using a large number of in situ lake surveys and remote sensing information extraction.

Participants:

Event 1 (14:45-15:10)

The Role of Tibetan Plateau Lakes in Water Circulation of Asian Water Tower under Global Changes

Liping Zhu

Professor

Institute of Tibetan Plateau Research, Chinese Academy of Sciences

Prof. Liping Zhu has been full time professor in the Institute of Tibetan Plateau Research, Chinese Academy of Sciences since 2005. His main research aspects are lake and global changes, focusing lake sediments, lake processes and their reflected environmental changes.

His main achievements are including:

(1) discovered the transition period from the westerlies to Indian monsoon domination since Last Glacial Maximum on the Tibetan Plateau; (2) revealed lake-atmosphere hydrothermal exchange process and their response to climate changes by a systematic multi-parameter monitoring and simulation studies; (3) elucidated temporal and spatial differentiations of lake water storage and water quality to the response of the westerlies and Indian monsoon by using a large number of in situ lake surveys and remote sensing information extraction.

Event 2 (15:10-15:35)

AI Based Joint Inversion of Lake Quality and Quantity: A Case Study of Lugu Lake

Ronghua Ma

Professor

Nanjing Institute of Geography and Limnology of the Chinese Academy of Sciences

Dr. Ronghua Ma is a Professor in the Nanjing Institute of Geography and Limnology of the Chinese Academy of Sciences. Ronghua Ma is the second level leader of the "333 High level Talents Training Project" in Jiangsu Province, young and middle-aged experts with outstanding contributions in Jiangsu Province, excellent tutor of the Chinese Academy of Sciences, and concurrently serves as the vice chairman of the Digital Mountain Professional Committee of the Chinese Committee of the International Society for Digital Earth, and the vice chairman of the Remote Sensing and Geographic Information System Society of Jiangsu Province. He graduated with a PhD in Cartography and Geographic Information Systems from Nanjing University in 2002. In recent years, he has successively presided over 33 important projects, including 2 National Natural Science Foundation key projects and 7 general projects, National Science and Technology Support Program projects, National Major Special Water Projects, and National Science and Technology Basic Work Projects. He published over 200 academic papers, published 4 academic books as the first author, 1 book as the second author, 2 books as the third author, participated in 8 books, and contributed to 6 thematic collections (1 editor in chief and 1 deputy editor in chief). He received many Jiangsu Province's Science and Technology Progress Awards and the Chinese Academy of Sciences' Science and Technology Promotion Award. His research interests are lake remote sensing, machine learning, water pollution modeling and monitoring, and water quality management.

Event 3 (15:35-15:55)

National Underwater Topographic Surveying and Mapping for Sustainable Water Resources Management

Zhengjun Liu

Professor

Chinese Academy of Surveying & Mapping

Zhengjun Liu is a research professor at the Chinese Academy of Surveying and Mapping, and a visiting professor at Lanzhou Jiaotong University. He is also a member of the third LiDAR Professional Committee of the Chinese National Committee of the International Digital Earth Society. He research interests focus on LiDAR remote sensing, multi-sensor fusion, and natural resources survey and monitoring with remote sensing and surveying technologies. He has published more than 200 papers in international and domestic journals and conferences. Over the past decades, he has undertaken a number of national projects in remote sensing field supported by the Natural Science Foundation of China, Ministry of Science and Technology, and Ministry of Natural Resources. He is currently in charge of the underwater topographic survey for the water resource basic survey project of the Ministry of Natural Resources.

Event 4 (15:55-16:15)

The Causal Impact of Urbanization on Surface Water Based on Multi-Source Remote Sensing Data

Te Sha

Dr.

Capital Normal University

Sha Te obtained a Bachelor's degree in Remote Sensing Science and Technology from Capital Normal University in 2020, and a Master's degree in Resources and Environment from Northwest Normal University in 2023. He is currently pursuing a Ph.D. in Geographic Information Systems at Capital Normal University. His main research interests are intelligent interpretation of remote sensing images, changes in surface water, and sustainable urban development.

Session Title: Big SAR Data: Unleashing SAR technology for SDGs

Time: 14:45 - 16:15

Room: 305D

Date: 2024-09-06

Moderator:

Chao Wang

Prof.

International Research Center of Big Data for Sustainable Development Goals

Prof. Chao Wang received his PhD degree in Geoscience in Nanjing University in 1989. Since then he has been with the Institute of Remote Sensing Applications (IRSA) of Chinese Academy of Sciences (CAS), working on synthetic aperture radar (SAR) data processing and applications. At present he is a Professor in the International Research Center of Big Data for Sustainable Development Goals (CBAS), Aerospace Information Research Institute of Chinese Academy of Sciences (AIRCAS), and University of Chinese Academy of Sciences (UCAS). His research interests include AI and Big Data Computing for SAR applications. He is at present in charge of the key projects funded by the National Natural Science Foundation of China (NSFC, Grant No. 42327801, 41930110) and several projects of international satellite SAR programs.

Soo Chin Liew

Principal Research Scientist

Centre for Remote Imaging, Sensing and Processing, National University of Singapore

Participants:

Event 1 (14:45-15:00)

Interferometric and Polarimetric Synthetic Aperture Radar for Observations of Land Surface Change

Soo Chin Liew

Principal Research Scientist

Centre for Remote Imaging, Sensing and Processing, National University of Singapore

Event 2 (15:00-15:15)

Monitoring ground subsidence over the whole China territory using SAR big data.

Yonghong Zhang

Research Professor

Chinese Academy of Surveying and Mapping (CASM)

Prof. Yonghong Zhang received the B.S. degree in mathematics from Wuhan University in 1994, the M.S. degree in geophysics from the Chinese Academy of Sciences in 1997, and the Ph.D. degree in photogrammetry and remote sensing from Wuhan University in 2001. He was a post doctoral research associate in King's College London from May 2002 to Dec. 2003.

He is currently a research professor and the vice director of the institute of photogrammetry and remote sensing of CASM. His research interests focus on algorithm development and applications associated with SAR, SAR interferometry and SAR polarimetry. In particular, He proposed a novel multitemporal InSAR methodology -- Multiple-master Coherent Target Small-Baseline InSAR (MCTSB-InSAR)-- in 2009, and developed a multitemporal InSAR processing software named GDEMSI based on MCTSB-InSAR in 2011. GDEMSI software has been widely used in many applications associated with land subsidence mapping and landslides monitoring in China. He has authored more than 150 articles in international and chinese peer-reviewed journals.

Event 3 (15:15-15:30)

An Easy-to-use Cloud-Based Computing System For Comprehensive InSAR Time Series Analysis

Yongsheng Li

Professor

National Institute of Natural Hazards, Ministry of Emergency Management of China

Li Yongsheng, Ph.D., Professor, currently employed at National Institute of Natural Hazards, Ministry of Emergency Management of China. He has been mainly engaged in precision InSAR data processing, massive InSAR data computing system construction, and emergency monitoring of natural disaster chains. He is committed to establishing a natural disaster conventional and emergency space-sky-ground integrated monitoring application system based on radar remote sensing technology, promoting the quantitative and business-oriented application of radar remote sensing in natural disaster monitoring (earthquakes, landslides, floods, urban disasters, etc.). He has successively presided over research projects such as the National Natural Science Foundation of China's Youth and General Projects, Key Research and Development Projects, Civil Aerospace Projects, the Gaofen earthquake monitoring and emergency application demonstration.

Event 4 (15:30-15:45)

Land Surface Deformation Dynamics Monitored with Satellite InSAR Technology over China

Yixian Tang

Associate Professor

International Research Center of Big Data for Sustainable Development Goals

Dr. Yixian Tang is an Associate Professor in International Research Center of Big Data for Sustainable Development Goals. He got his B.S. degree in geography from Beijing Normal and Ph.D. degree in Cartography and geography information system from Institute of Remote Sensing Applications, Chinese Academy of Sciences, in 2006. Now he works in the Aerospace Information Research Institute, CAS, and the International Research Center of Big Data for Sustainable Development Goals. His research interests include the differential SAR interferometry/time series InSAR method and its applications to the monitoring of surface displacements, especially in big InSAR data processing for large scale recently. In 2021, based on the high performance computing (HPC) system provided by "Big Earth Data Science Engineering Project", the InSAR-based annual average surface deformation rate of China is produced firstly in China by his research team.

Event 5 (15:45-16:00)

Global Soil Moisture Prediction Based On a Long Short-Term Memory (LSTM) Deep Learning Model Using Multi-Source Remote Sensing Data

Chen Yonghui

Postgraduate

School of Surveying and Geo-Informatics, Shandong Jianzhu University

Chen Yonghui's research explores the complexity of soil moisture inversion and soil moisture product validation. The core of the research is to understand the dynamics of soil moisture and improve inversion algorithms. The main areas of focus include soil moisture remote sensing, improving soil moisture inversion techniques, and evaluating and improving the accuracy of soil moisture products.

Session Title: Spatio-temporal Big Data and AI Accelerates Sustainable High-Quality Development of Digital Smart Cities

Time: 16:30 - 18:00

Room: 305A

Date: 2024-09-06

Moderator:

Min Liu

Professor

East China Normal University

Min Liu is a Professor of Geography and a doctoral supervisor. He currently serves as Director of the Key Laboratory of Geographic Information Science, Ministry of Education, at East China Normal University. He is also the Vice Chairman of the Chinese Geographical Society, Director of the Environmental Geography Committee of the Chinese Geographical Society, and Director of the Sediment Environment Committee of the Chinese Society for Environmental Sciences. In addition, he holds the position of Chief Scientist for a key research and development project of the Ministry of Science and Technology. His research focuses primarily on physical geography and environmental geography. He has published over 200 academic papers in domestic and international journals including Science Advances, Nature Communications, and Acta Geographica Sinica. He has received numerous awards, including a First-class Award for provincial and ministerial scientific and technological progress and a Second-class Award for natural science from the Ministry of Education, China.

ZhaoHui Lin

Professor

Chinese Academy of Sciences

ZhaoHui Lin is the director of CAS-TWAS center of excellence for climate and environment sciences, Institute of Atmospheric Physics, Chinese Academy of Sciences. Currently, Prof. Lin is a member of the coordinating council of the Commission on Science and Technology for Sustainable Development in the South (COMSATS), and theme leader of the CAS-CSIRO bilateral collaboration on Climate Change Impacts. He also serves as deputy editor-in-chief of the “Climatic and Environmental Research” Journal, and session editor for Bulletin of National Research Center of Egypt. He ever worked in the Bureau of Meteorology of Australia, the University of Nevada at Las Vegas, and City University of Hong Kong as visiting scholar. His research interests include Earth system model development and applications, climate and environmental disasters forecast, atmosphere-land-hydrology interaction. He has been the Principal Investigators for more than 30 national research projects funded by the MOST, NSFC and CAS, and published more than 180 peer-reviewed papers.

Prof. Lin received the second grade of national natural science award in 2005, the first grade of the award for Progress of Science and Technology by the Ministry of Education in 2006, and the outstanding Science and Technology Achievement Prize of the CAS in 2011.

Participants:

Event 1 (16:30-17:00)

Chinese High-temporal-resolution meteorological monitoring from geostationary orbit

Feng Lu

Professor

National Satellite Meteorological Centre

Feng Lu received B.S. in Synoptic Dynamics from Nanjing Institute of Meteorology, Nanjing, China in 1995, an M.S. degree in meteorology, and Ph.D. degree in Atmospheric Physics from Peking University, in 2002 and 2008. respectively. He is currently a Professor of engineering and Chief designer of CMA FY-4 Meteorological satellite programs at the National Satellite Meteorological Center(NSMC) and is a member of WMO ET-SAT. His research interests include wind retrievals and observing system simulation experiment (OSSE), meteorological satellite ground segment design, and implementation on atmospheric dynamic applications for new generation meteorological satellites.

Event 2 (17:00-17:20)

Intelligent Generation of Cloud-Free Remote Sensing Data

Bo Huang

Professor

The University of Hong Kong

Bo Huang is Chair Professor of Urban Sustainability and Deputy Director of the Institute of Urban Systems at the University of Hong Kong. He has been recognized for his outstanding contributions to research and was inducted into the National High-Level Talent Program in 2016. Dr. Huang's research focuses on spatial intelligence, satellite image fusion, spatiotemporal statistics, and spatial optimization for sustainable spatial planning. He is an Associate Editor for the International Journal of Geographical Information Science and the Editor-in-Chief of Comprehensive GIS (Elsevier). Dr. Huang has been honored with several awards in recent years, including a second-class award in natural sciences from the Ministry of Education in 2021, a gold medal from the International Exhibition of Inventions Geneva in 2021, a CPGIS Innovation Award in 2023, and a Senior Research Fellowship from the Hong Kong Research Grants Council (2023).

Event 3 (17:20-17:40)

A Computable City in the Age of AI and Big Data: Challenges and Opportunities

Yan Liu

Professor

The University of Queensland

Yan Liu is a Professor of Geographic Information Science at the University of Queensland, Australia. She currently serves at the Australian Research Council's College of Experts and leads the Spatio-Temporal Analytics Research Lab (STAR Lab) at the University of Queensland. Her research focuses on urban issues and computational urban science, including urban analysis, geospatial modeling, cellular automata simulation, GIS and spatial big data analysis, and their applications in spatial planning, policy analysis, and interdisciplinary studies in the humanities and social sciences.

Event 4 (17:40-18:00)

Integrating Spatial Intelligence and Big Data to Empower Smart City Development

Xiang Li

Professor

East China Normal University

Xiang Li is a professor working with East China Normal University (ECNU). He received his Bachelor and Master's degrees from Nanjing University and a PhD degree from The Chinese University of Hong Kong. Before joining ECNU, he has been granted two postdoctoral followships by Naval Academy Research Institute in France and University of Memphis in US, respectively. Dr. Li is currently involved in several academic associations or journal editorial boards, such as ACM SIGSPATIAL China, IJGIS, etc. He has published more than 200 research articles and 3 books. Dr. Li's research interests include spatio-temporal big data modeling and analysis, spatial intelligence and its applications in different fields, and UAV data collection and processing. He is the author of trajectory data accessing software, XSTAR. Some of his research outputs have been grounded in facility planning, emergency management, public security, environmental protection, etc.

Session Title: Big Data and AI solutions for SDG 13 Climate Mitigation and Adaption

Time: 16:30 - 18:00

Room: 305B

Date: 2024-09-06

Session Title: Scientific Data on Resources and Environment in the BRI Region

Time: 16:30 - 18:00

Room: 305C

Date: 2024-09-06

Moderator:

Juanle Wang

Professor

Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences

WANG Juanle, received a Ph.D. degree in 2005 from University of Chinese Academy of Sciences and a B.S and a Master degree from China University of Mining and Technology. He is currently a professor and deputy director of department of Geodata Science and sharing at Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences, director of World Data Center for Renewable Resources and Environment in World Data System of the International Science Council, executive director of sub center of Knowledge Service for Disaster Risk Reduction in IKCEST of UNESCO, member of national expert group of “Man and the Biosphere” in China, editorial board of “Data Science Journal”, “Data”, “Geoscience Data Journal, “China Science & Technology Resources Review” and “China Scientific Data”. His recent main research interests are data sharing of resource and environment science, spatial information system of One Belt One Road and disaster risk reduction knowledge service. He published more than 100 papers, 4 monographs and 2 atlases nearly 5 years. He was awarded the Second prize of National Science and Technology Progress Award of China in 2014, and the Third prize of outstanding map award of China in 2018.

Congrong Li

Dr.

Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences

LI Congrong, received a Ph.D. degree in 2020, a Master degree in 2016 and a B.S in 2013 from Beijing Normal University. She is currently a assistant research fellow at Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences. She has led the General Fund of the China Postdoctoral Science Foundation and a subproject on the development of the Belt and Road Earth Big Data Analytics and Decision Support System Platform. Her main research interests include Earth system science data sharing and knowledge services; sustainable development and big data for disaster prevention and mitigation; disaster remote sensing; and quantitative (forest/vegetation) remote sensing. She published 10 papers as the first/corresponding author in journals such as Remote Sensing of Environment, Journal of Hydrology, and Catena, including 8 SCI-indexed papers.

Participants:

Event 1 (16:30-16:45)

GIES Methodology and Technology in supporting FAO OCOP Flagship

Chuang Liu

Professor

Institute of Geographical Sciences and Natural Resources Research, Chinese Academy of Sciences

LIU Chuang, Professor, Editor-in-Chief of Digital Journal of Global Change Data Repositoryand Associate Chief Editor and Director of Journal of Global Change Data &Discovery, Director of World Data Center on Global Change Research Data Publishing&Repository, SecretaryGeneral of of Big Data Working Committee of Geographical Society of China, Founder and Secretary of CODATA Task Group in/for/with Developing

Countries. She was granted the CODATA Prize(2008), WSIS Prize (e-Science,2018,2021) project leader. She published more than two hundreds of research datasets. She got her Ph.D. in geography in Peking University, China in 1989. She was Visiting Professor of University of British Columbia, Canadaand Information Scientist of CIESIN, USA from 1992-1998 and Professor of IGSNRR/CAS since 1999.

Event 2 (16:45-17:00)

An Intelligent Computing Framework for the Ecological Barrier Sustainable Development of Mongolian Plateau

Juanle Wang

Professor

Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences

WANG Juanle, received a Ph.D. degree in 2005 from University of Chinese Academy of Sciences and a B.S and a Master degree from China University of Mining and Technology. He is currently a professor and deputy director of department of Geodata Science and sharing at Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences, director of World Data Center for Renewable Resources and Environment in World Data System of the International Science Council, executive director of sub center of Knowledge Service for Disaster Risk Reduction in IKCEST of UNESCO, member of national expert group of “Man and the Biosphere” in China, editorial board of “Data Science Journal”, “Data”, “Geoscience Data Journal, “China Science & Technology Resources Review” and “China Scientific Data”. His recent main research interests are data sharing of resource and environment science, spatial information system of One Belt One Road and disaster risk reduction knowledge service. He published more than 100 papers, 4 monographs and 2 atlases nearly 5 years. He was awarded the Second prize of National Science and Technology Progress Award of China in 2014, and the Third prize of outstanding map award of China in 2018.

Event 3 (17:00-17:15)

Overcoming Resource Curse to Achieve Sustainable Development: Digital Twinning Large Scale Mining Areas in Sulawesi, Indonesia

Agung Mahesa Himawan, DORODJATOEN

Deputy Director

Urban Affairs, Indonesia Ministry of National Development Planning (BAPPENAS)

DORODJATOEN Agung, has been trained as an urban planner as well as geographer. He received his Ph.D. in 2019 from the University of Western Australia in the field of Economic Geography. Previously he earned his M.Sc. by research on human geography and planning from Utrecht Universiteit (2009) and Bachelor of Engineering from Bandung Institute of Technology (2006). He has been working for BAPPENAS since 2009. He involved in composing policy on spatial planning in Indonesia during the first 10 years of his work in Bappenas. He also involved in composing rehabilitation plan for liquefaction impacted area in Palu in 2018. Currently he leads a team focusing on urban issues. One of his works includes composing masterplan for newly urbanized area around mining sites in Sulawesi and Maluku.

Event 4 (17:15-17:30)

Analysis on the relationship and driving forces between livestock industry changes and grassland degradation/restoration in Mongolia

Pengfei Li

Professor

College of Geomatics, Xi’an University of Science and Technology

LI Pengfei received a Ph.D. in Philosophy from the University of Leeds in 2015. He is currently the Dean of the School of Surveying and Mapping Science and Technology at Xi’an University of Science and Technology, a professor, and a doctoral supervisor. He also serves as the Chief Scientist at the Suide Soil and Water Conservation Supervision Bureau of the Yellow River Conservancy Commission, Vice President of the Shaanxi Geographical Society, and holds editorial board positions with several domestic and international journals. His primary research focuses on teaching in Geographic Information Science and landform remote sensing, and has published more than 50 academic papers in authoritative journals such as Earth-Science Reviews, Remote Sensing of Environment, Geophysical Research Letters, and Catena. He was awarded the Second Prize of the National Higher Education GIS Teaching Achievement Award in 2021, and the Second Prize of the Shaanxi Society of Surveying and Mapping Geographic Information Science and Technology Progress Award in 2023.

Event 5 (17:30-17:40)

Will the typical Soums in the Selenge River Basin of Mongolia become more overgrazed in the future?

Zengrang Xu

Associated professor

Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences

Dr. Zengrang XU is an associated professor at the Institute of Geographic Science and Natural Resources Research, Chinese Academy of Science. With over 15 years of experience, he specializes in grassland ecosystem dynamic, particularly in relation to climate change and human activities. His work focuses on understanding the vulnerability of grassland ecosystem and the factors driving their degradation. Dr XU has led several significant projects, including the National Key Research and Development Program and the second Tibetan Plateau Scientific Expedition and Research Program, funded by the Ministry of Science and Technology of China and the National Natural Science Foundation of China. He has published more than 80 papers in academic journals. As the Secretary of Department of Resource Ecology within the Chinese Society of Natural Resource, one of his reports on harmonizing human-environmental relationships and promoting green development in Tibet was adopted by the General Office of the Central Committee of the Communist Party of China in 2018.

Event 6 (17:40-17:50)

Comprehensive assessment of future agricultural meteorological disaster risks in the Heilongjiang basin under climate change

Congrong Li

Dr.

Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences

LI Congrong, received a Ph.D. degree in 2020, a Master degree in 2016 and a B.S in 2013 from Beijing Normal University. She is currently a assistant research fellow at Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences. She has led the General Fund of the China Postdoctoral Science Foundation and a subproject on the development of the Belt and Road Earth Big Data Analytics and Decision Support System Platform. Her main research interests include Earth system science data sharing and knowledge services; sustainable development and big data for disaster prevention and mitigation; disaster remote sensing; and quantitative (forest/vegetation) remote sensing. She published 10 papers as the first/corresponding author in journals such as Remote Sensing of Environment, Journal of Hydrology, and Catena, including 8 SCI-indexed papers.

Event 7 (17:50-18:00)

The Assessment of Urban Development Status along Transportation Corridors in the Mongolian Plateau Based on SDGSAT-1 Nighttime Light Data

Zhichen Sun

Student

Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences

SUN Zhichen is a PhD student at the Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences, and the China University of Mining and Technology (Beijing), majoring in surveying and mapping science. His research focuses on assessing urban development status using SDGSAT-1 nighttime light data and evaluating grassland health. His study area includes the Mongolia Plateau and major cities along the China-Mongolia-Russia Economic Corridor. Recently, his research has centered on developing a City Development Index (CDI) to evaluate urban development status by combining the results of SDGSAT-1 nighttime light data analysis with the cities' industrial output and GDP.

Session Title: Digital techniques support mountain eco-environmental researches

Time: 16:30 - 18:00

Room: 305D

Date: 2024-09-06

Moderator:

Xiaoqing Chen

Vice Director

Institute of Mountain Hazards and Environment, CAS

Xiaoqing Chen obtained his BSc in Earth Science from Zhejiang University in 1997 and his MSc and PhD in Disaster Prevention and Mitigation Engineering and Geotechnical Engineering from Southwest Jiaotong University in 2002 and 2006. He has been with the Institute of Mountain Hazards and Environment, Chinese Academy of Sciences since 1997, focusing on mountain hazard prevention and mitigation. Currently the Deputy Director of the Institute, he was awarded the National Science Foundation for Distinguished Young Scholars in 2019. His social roles include Secretary-General of the Debris Flow and Landslide Professional Committee of the China Society of Soil and Water Conservation, member of the Youth Working Committee of the Geographical Society of China, and peer reviewer for the Journal of Mountain Science. He was selected for the Western Light Talent Training Program in 2005 and recognized as an "Outstanding Expert with Significant Contributions" in Sichuan Province in 2010. His research interests include advancing debris flow theory, exploring green mitigation technologies, and developing new mountain hazard prevention methods.

Wei Zhao

Professor

Institute of Mountain Hazards and Environment, CAS

Wei Zhao is a professor with the Institute of Mountain Hazards and Environment (IMHE), CAS, Chengdu, China. He devotes himself to mountain quantitative remote sensing and its applications. Currently, he has published more than 100 papers in peer-reviewed journals such as Remote Sensing of Environment, ISPRS Journal of Photogrammetry and Remote Sensing, IEEE Transactions on Geoscience and Remote Sensing, Journal of Geophysical Research-Atmospheres, and Journal of Hydrology. He serves as an editorial board member of “Mountain Research and Development”, “Journal of Mountain Science”, and “The Innovation Geoscience” and a Youth Editor of “The Innovation”. He was elected as the Excellent Young Scientists Fund awarded by the National Natural Science Foundation of China (NSFC) and served as the secretary of the professional committee of digital mountain and vice director of the professional committee of thermal infrared remote sensing.

Gaofei Yin

Professor

Southwest Jiaotong University

Dr. Gaofei Yin is a professor at the Faculty of Geosciences and Engineering at Southwest Jiaotong University. His research focuses on transportation remote sensing, global ecology remote sensing, and mountainous environment remote sensing. He has been recognized as a National Youth Top-notch Talent under China's National Ten Thousand Talents Program, a Marie Curie Fellow by the European Union, a Young Scientific Talent by the Ministry of Natural Resources of China, and a Sichuan Province Distinguished Young Scholar. Dr. Yin has authored over 100 scientific

publications, including more than 80 SCI-indexed papers. He has led over 10 significant research projects, funded by the European Union's Horizon 2020, the National Key Research and Development Program of China, and the National Natural Science Foundation of China. He serves as an associate editor for IEEE Geoscience and Remote Sensing Letters and is on the youth editorial boards of several journals, including the Journal of Geodesy and Cartography, Journal of Grassland, and Journal of Spatiotemporal Information Science. Dr. Yin holds leadership roles in various scientific organizations, including vice-chairman of the Imaging Spectroscopy Earth Observation Professional Committee of the International Society for Digital Earth and deputy secretary-general of the Digital Mountain Professional Committee. He is also a member of the Mountain Division of the Chinese Geographical Society, the Photogrammetry and Remote Sensing Professional Committee of the Chinese Society for Geodesy, and the Quantitative Remote Sensing Professional Committee of the Chinese Society of Remote Sensing Applications.

Participants:

Event 1 (16:30-16:45)

Integrating geospatial analysis and local expertise to track rangeland changes in Bhutan using GEE

Kabir Uddin

Professor

International Centre for Integrated Mountain Development

Kabir Uddin is Geographic Information System and Remote Sensing Specialist at ICIMOD. A distinguished geographer with over two decades of experience in Geographic Information Systems and Remote Sensing, Kabir holds both a Bachelor of Science (Hons.) and a Master of Science in Geography and Environmental Studies. Renowned for his expertise in leading land cover mapping and change detection, he has also explored various research avenues, including biodiversity corridor design, habitat suitability assessment, and flood inundation mapping. His holistic approach to environmental challenges extends to studying erosion, sedimentation, and river morphological changes, crucial for effective river basin management. Beyond his research, Kabir is deeply committed to capacity building, conducting training sessions and developing manuals across the Hindu Kush Himalayan region to empower local communities and institutions.

Event 2 (16:45-17:00)

Spatial heterogeneity of greenness and greening in the Tibetan Plateau

Kan Yan
Associate Professor
BeiJing Normal University

Kai Yan received the B.S. degree in mapping and surveying from the Beijing University of Civil Engineering and Architecture, Beijing, China, in 2011, and the Ph.D. degree in geographic information systems (GISs)/remote sensing (RS) from Beijing Normal University, Beijing, in 2018. He was a Visiting Scholar with the Department of Earth and Environment, Boston University, Boston, MA, USA, from 2014 to 2016, and an Associate Professor with the School of Land Science and Techniques, China University of Geosciences, Beijing. He is currently an Associate Professor with the Faculty of Geographical Science, Beijing Normal University. He has been involved in the generation and assessment of the official MODIS/VIIRS global leaf area index (LAI) and the fraction of photo synthetically active radiation absorbed by vegetation (FPAR) products. His research interests include vegetation bidirectional reflectance distribution function (BRDF) modeling, RS big data and artificial intelligence, and LAI and FPAR mapping.

Event 3 (17:00-17:15)

A nearly complete ancient landslide inventory of the Qinghai-Tibet Plateau mountains and its application significance

Chenxiao Tang
Associate researcher
Institute of Mountain Hazards and Environment, CAS

Event 4 (17:15-17:30)

Long-term high-resolution leaf area index estimation and vegetation recovery monitoring in National Parks

Guodong Zhang

Assistant Professor

Southwest Jiaotong University

Guodong Zhang is a lecturer at the Southwest Jiaotong University. He received the Ph.D. degree from Wuhan University in June 2023. His research focuses on quantitative remote sensing of vegetation, including radiation transfer, spatiotemporal fusion, deep learning, and data assimilation. He has published over 20 academic papers and serves as a reviewer for several international journals in the field of quantitative remote sensing, including RSE, IEEE TGRS, and GRSL.

Event 5 (17:30-17:45)

Forest terrain and canopy height estimation using stereo images and spaceborne LiDAR data from GF-7 satellite

Liming Du

Assistant researcher

Institute of Forest Resource Information Techniques, CAF

Dr. Du Liming is an assistant researcher at the Institute of Resource Information, Chinese Academy of Forestry. Her research areas include multi-sensor LiDAR integration and data processing, multi-scale forest parameter estimation and carbon measurement. She has participated in and led multiple national level projects and sub projects, and published over 20 papers in international journals and academic conferences such as “Remote Sensing of Environment”, “IEEE Transactions on Intelligent Transportation Systems”, “Plant Phenomics”.

Event 6 (17:45-18:00)

Seasonal Patterns of Multi-Drought Types and Their Potential Impact on Vegetation in Nepal

Jiujiang Wu

Research associate

Institute of Mountain Hazards and Environment, CAS

Dr. Jiujiang Wu is a research associate with the Institute of Mountain Hazards and Environment (IMHE), CAS, Chengdu, China. He obtained his PhD from Northwest A&F University in June 2024. His main research areas are vegetation and hydrological remote sensing, carbon and water cycles in terrestrial ecosystems under climate change, and the impact of extreme climate events on vegetation. He has published more than 10 SCI papers in journals such as the Journal of Hydrology, Field Crops Research, and Computers and Electronics in Agriculture.

Session Title: Big Data on Population and Health Helps Achieve the Sustainable Development Goals

Time: 16:30 - 18:00

Room: 305E

Date: 2024-09-06

Moderator:

Dan HE

Director-General

China Population and Development Research Center

Ms. He Dan serves as the Director-General and Research Fellow of China Population and Development Research Center (CPDRC). She is a member of the Thirteenth and Fourteenth National Committee of the Chinese People's Political Consultative Conference (CPPCC), President of Population and Family Planning Periodical, President and Editor-in-Chief of China Health and Family Planning Yearbook, and Chair of the Editorial Board for China Population and Development Studies (English Journal). Additionally, she holds the position of Chief Expert at the Health and Population Development Research Institute under the National Health Commission (NHC). With a dedicated focus on population and development research and policy support, she has actively contributed to the drafting of several crucial national documents. Ms. He has undertaken numerous projects funded by the National Social Science Foundation of China, key S&T research programs, and major research initiatives of national high-end think tanks. Her research findings are featured in over 70 academic papers and commentary articles published in journals such as Population Research and Economic Daily. Furthermore, she has edited 15 publications, including China Population Prospects, Research Report on Health Poverty Alleviation in China, etc.

Xuying Zhang

Deputy Director-general

China Population and Development Research Center

Mr. Zhang Xuying, Deputy Director-general and researcher of China Population and Development Research Center; Ph.D. in Economics; Standing member of the board for China Population Association; Expert enjoying special government allowance of the State Council; Expert to the Seventh National Census Advisory Committee; Consultant to the National Territorial Plan (2020-2035) development; having long been engaged in researches on population policy, population projection, among others.

Participants:

Event 1 (16:30-16:45)

IPUMS Population and Health Data: Driving Sustainable Development Goal Measurement and Solutions

Elizabeth Heger Boyle

Professor, Department of Sociology and College of Law

University of Minnesota

Dr. Elizabeth Boyle is Professor of Sociology at the University of Minnesota, USA, where she has a Joint Appointment in the College of Law and is affiliated with the Institute for Social Research and Data Innovation. Professor Boyle's research focuses on women and children's rights, especially the rights to health. Recent projects focus on policy interventions to support families that take in orphans. Professor Boyle is the Principal Investigator on several grants from the U.S. National Institutes of Health, which support the data infrastructure projects IPUMS Demographic and Health Surveys (IPUMS DHS) and IPUMS Multiple Indicator Cluster Surveys (IPUMS MICS). In 2023, she was honored to receive the Harriet B. Presser Award from the Population Association of America for outstanding career contributions to the study of gender in demography.

Event 2 (16:30-16:45)

IPUMS Population and Health Data: Driving Sustainable Development Goal Measurement and Solutions

Lara Cleveland

Principal Research Scientist, IPUMS

Institute for Social Research and Data Innovation, University of Minnesota

Dr. Lara Cleveland is a Principal Research Scientist at the University of Minnesota, where she directs the International Microdata projects of IPUMS. IPUMS provides census and survey data from more than 150 countries around the world integrated across time and space. IPUMS integration and documentation makes it easy to study change, conduct comparative research, merge information across data types, and analyze individuals within family and community contexts. She has served on Working Groups and Task Forces convened by statistical and health organizations within the United Nations on the topics of census and survey data and metadata dissemination. In addition to methodological and quality assessment development for IPUMS, Dr. Cleveland's current research projects focus on statistical metadata standards, data dissemination, and cognitive functioning in older adults.

Event 3 (16:45-17:00)

Sustainability Indicators for Regional Population - Population Reproduction Index Considering the Impact of Migration

Yohei Maruyama

Associate Professor

Sapporo City University

Dr. Yohei Maruyama is an associate professor at the School of Design at Sapporo City University, Japan. He majors in regional demography and has researched internal migration, the relationship between migration and family formation, and population and household projection. His current research focuses on developing an analytical framework for the impact of tolerance for diversity in life course choices on internal migration and elucidating the mechanism by which internal migration accelerates the decline in fertility. Maruyama earned a Ph.D. from Keio University in 2013. He received the Promotional Encouragement Award from the Population Association of Japan in 2020.

Event 4 (17:00-17:15)

Integrated Systems Models for Sustainable Development planning

Igor Oliveira

Policy Analyst

Millennium Institute (MI)

With the Millennium Institute, Igor has led modeling for national development planning in three continents, in partnership with governments, UN and development agencies. A system dynamics modeler, he has worked on environmental conflict prevention in Africa with UNEP, innovation policy evaluation with the European Commission and urban resilience with Latin American municipalities. Previously, he founded and directed a consultancy specializing in sectoral and territorial innovation promotion. As an angel investor, he has three exits from different startups. Igor holds a master's in system dynamics from University of Bergen, Norway, and a master's in management (cum laude) from Radboud University, the Netherlands.

Event 5 (17:15-17:30)

"Mobile Signaling+"Multi-source Big Data, Serving Social Governance and Economic Operation

Hua Zhao

Chief Marketing Officer

SmartSteps Data Technology Co., Ltd

Ms. Hua Zhao has been working in the field of innovation and transformation for telecommunications operators for a long time, responsible for brands, operations, and business innovation such as ICT, cloud computing, and data technology. In recent years, she has led a team dedicated to deep cooperation with multiple national ministries, urban planning agencies, large financial institutions, well-known enterprises and universities, and has made leading case demonstrations. The company has become the first service provider of economy, employment, city and statistics. This report will share the principles and application demonstrations of population big data technology based on mobile signaling, especially the practice and exploration of its application in multiple scenarios such as infectious disease monitoring, early warning, and emergency command.

Event 6 (17:30-17:45)

Data-driven Tsinghua Urban Health Index (TUHI) and its Applications for SDGs in China

Dong LI

Dr. / Associate Research Professor

Institute for China Sustainable Urbanization, Tsinghua University

Dr. Dong Li received his bachelor degree of Environmental Engineering at Tsinghua University and his doctoral degree of Ecology at Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences (RCEES, CAS). Dr. Li has been engaged in regional and urban planning researches & practices for a long time in China's first-class planning institutes, such as China Academy Of Urban Planning & Design (CAUPD) and Beijing Tsinghua Tongheng Urban Planning & Design Institute (THUPDI). His main research interests focus on modeling urban policies and issues, analyzing spatio-temporal big data, as well as consulting and developing intelligent systems for cities. He has presided over 70 national/local policy, planning or information systems projects, more than 10 domestic and foreign research projects. His profiles have won national, provincial and ministerial awards several times. He has published more than 50 academic articles in Chinese or English (around 20 indexed by SCI/SSCI), while serving as expert members of the Chinese Society for Urban Studies (CSUS), Ecological Society of China (ESC), China Population Association (CPAW) and China Strategic Alliance of Smart City Industrial and Technology Innovation (CSASCITI).

Event 7 (17:45-18:00)

The Role of Marriage and Educational Attainment in Recent Provincial Fertility Dynamics in China: Both from Period and Cohort Perspectives

Cuiling Zhang

Research Fellow

China Population and Development Research Center

Cuiling Zhang is a senior research fellow at China Population and Development Research Center. She was also a visiting scholar at the Vienna Institute of Demography and the Max Planck Institute for Demographic Research in 2017 and 2019. She holds a Ph.D. in social demography. Her research focuses on family change, gender equity and fertility in China, with special academic contribution on the impact of birth spacing policies on fertility transition of China. She frequently provided academic consultation by the Chinese government and international organizations on matters related to fertility trends, their consequences, and childbirth support policies. She is the panel member of COVID-19, Fertility, and the Family of International Union for the Scientific Study of Population (IUSSP) and council member of the China Population Association (CPA), as well as a member of European Association for Population Studies (EAPS) and Population Association of America (PAA).

Session Title: Digital techniques in vegetation and climate research

Time: 10:40-12:10

Room: 305B

Date: 2024-09-07

Moderator:

Jingming Chen

professor

University of Toronto and Fujian Normal University

Jing M. Chen is a professor at the University of Toronto and Fujian Normal University. His major research interests include vegetation remote sensing, carbon cycle and climate change

Liangpei Zhang

professor

Wuhan University

Liangpei Zhang is a professor at the Wuhan University. His major research interests are in remote sensing, machine learning and big data analytics.

Qinhuo Liu

senior research scientist

Aerospace Information Research Institute, Chinese Academy of Sciences

Qinhuo Liu is a senior research scientist at the Aerospace Information Research Institute of the Chinese Academy of Sciences. His major research interests encompass vegetation remote sensing, ecosystem modelling and climate change.

Participants:

Event 1 (10:20-10:40)

Analysis and assessment of the sustainable development trends of global vegetation ecosystems

Alfredo Huete (Invited)

professor

University of Technology Sydney

Alfredo Huete is a Distinguished Professor at the University of Technology Sydney, in Australia. Prior to his appointment at UTS in 2010, Alfredo was Professor of Soil, Water and Environmental Sciences at the University of

Arizona in the U.S. He is a geospatial ecologist using remote sensing tools to monitor vegetation health and function in the face of climate change, land-use and other major disturbance events. His work is grounded firmly in combined satellite and field research to investigate ecosystem changes to climate change. He has looked at everything from the cotton fields of Arizona to the impacts of drought and climate extremes in Amazon rainforests to Australian drylands. He served on several international space program mission teams, including NASA-EOS MODIS, JAXA GCOM-SGLI, and Earth Observing-1 Hyperion Team in the development of vegetation satellite products. He has published over 300 peer review journal articles, including high impact papers in Nature and Science. Currently, he is actively engaged in generating Himawari-8/9 geostationary data products for ecosystem monitoring and is member of the AusPollen team in satellite tracking of emerging health threats aimed at implementing early warning allergenic pollen predictions for public health risk mitigation.

Event 2 (10:40-11:00)

Big data strategies for vegetation- climate- health challenges: case study in Australian grasslands

Qinhuo Liu

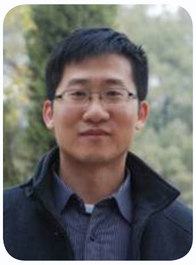
senior research scientist

Aerospace Information Research Institute, Chinese Academy of Sciences

Qinhuo Liu is a senior research scientist at the Aerospace Information Research Institute of the Chinese Academy of Sciences. His major research interests encompass vegetation remote sensing, ecosystem modelling and climate change.

Event 3 (11:00-11:15)

A Multi-task Learning Framework for Cooperative Estimation of GPP and SIF



Huanfeng Shen

professor

Wuhan University

Huanfeng Shen is a Hongyi Distinguished Professor at Wuhan University, serving as a Dean of the School of Resource and Environmental Sciences. His research interests include remote sensing image processing, multi-source data fusion, and intelligent environmental sensing. He was or is the PI of two projects supported by the National Key Research and Development Program of China, and eight projects supported by the National Natural Science Foundation of China. He has authored or co-authored more than 200 journal citation report (JCR) papers and published 5 books as Chief Editor. His papers received more than 16000 citations in Web of Science (WoS).

Event 4 (11:15-11:30)

Integration of Ground-Sourced and Satellite-Derived Data for Forest-Based Natural Climate Solutions

Lidong Mo

postdoctoral researcher

ETH Zurich (Swiss Federal Institute of Technology)

Lidong Mo is a postdoctoral researcher in the Global Ecosystem Ecology group at ETH Zurich. His research primarily focuses on global forest ecosystems under the impact of climate change, exploring aspects such as functional traits, carbon stocks and cycles, and biodiversity restoration. His work is conducted on a global scale, using a combination of groun-sourced and satellite-derived data. He has published over 30 papers in high-impact ecological journals, including a notable publication in Nature last year on the carbon potential of global natural forests, which received widespread coverage in international public and scientific media. Currently, he continues to focus on the application of big data in global ecosystem ecology, introducing cutting-edge methodologies and ideas to further understand and address climate change.

Event 5 (11:30-11:45)

Quantifying terrestrial carbon sink through the synergy of terrestrial and atmospheric remote sensing observations

Weimin Ju

professor

Nanjing University

Weimin Ju received his Ph.D degree from the University of Toronto in 2006 and is a professor at the International Institute for Earth System Sciences (ESSI), Nanjing University, China. His research focuses on the retrieval of vegetation structural and biochemical parameters from remote sensing and the study of terrestrial carbon cycling using remote sensing and models. In recent years, he acted as the principle investigator of above 10 national projects. To date, he has published over 200 papers in top peer-reviewed journals, including Science, Science Advances, Nature Ecology & Evolution, Nature Climate Change, Global Change Biology, and Remote Sensing of Environment. He currently serves as an associate editor for Journal of Geophysical Research-Biogeosciences.

Session Title: Advancing analysis-readiness, accessibility, and applicability for big earth data

Time: 10:40-12:10

Room: 305C

Date: 2024-09-07

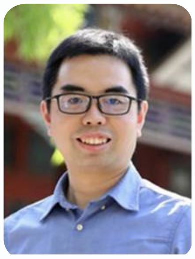
Moderator:

Tao He

Professor

Wuhan University

Tao He, a Professor at School of Remote Sensing and Information Engineering, Wuhan University, China. He received the B.E. degree in photogrammetry and remote sensing from Wuhan University, Wuhan, China, in 2006, and the Ph.D. degree in geography from the University of Maryland, College Park, USA, in 2012. His research interests include surface anisotropy and albedo modeling using remotely sensed data, surface radiation budget, data fusion of satellite products, and long-term regional and global surface radiation budget analysis. He has published more than 90 peer-reviewed journal papers. He currently serves as the Associate Editors for Science of Remote Sensing and Geo-Spatial Information Science.



Le Yu

Associate Professor

Tsinghua Univeristy

Dr. Le Yu is an Associate Professor at the Department of Earth System Science, Tsinghua University. His research has been on the use of geographical information techniques to monitor and model global land use change, especially cropland and to facilitate many applications, e.g., food security, biodiversity conservation, and land system modelling. He particularly focuses on satellite-based methods to quantify the spatiotemporal change of land cover/use and understand their ecological, environmental, and socioeconomic impacts on sustainable development. He is Scientific Steering Committee (SSC) member of the Global Land Programme (GLP), Fellow of the Royal Geographical Society (RGS-IBG), Fellow of the Higher Education Academy, Senior Member of the Institute of Electrical and Electronics Engineers, and Prominent Visiting Researcher at the University of Technology Malaysia (UTM). He is currently Editor-in-Chief of Geo: Geography and Environment, Section Editor-in-Chief of LAND, Associate Editor of Journal of Remote Sensing, International Journal of Remote Sensing, and editorial board member of, Global Sustainability, Geoscientific Model Development and Scientific Data.

Hankui Zhang

Assistant Professor

South Dakota State University

Hankui Zhang (he) is an Assistant Professor in the Department of Geography and Geospatial Sciences and a Scientist at the Geospatial Sciences Center of Excellence (GSCE) at South Dakota State University. He earned his Ph.D. in 2013 from the Chinese University of Hong Kong, with a thesis focusing on satellite image fusion. His current research primarily involves developing global-applicable algorithms to make medium-resolution satellite data (e.g., Landsat and Sentinel-2) ready-for-easy, which includes cloud masking, BRDF correction, and compositing. He also conducts research on advancing AI applications for remote sensing, focusing on surface geophysical and biophysical parameter retrieval, as well as land cover mapping for environmental monitoring. He is a Landsat Science Team member. Dr. Zhang has published over 60 SCI papers and serves as an Editorial Board member for Remote Sensing of Environment (RSE) and Remote Sensing. He has also organized a RSE special issue on deep learning applications.

Participants:

Event 1 (11:15-11:35)

Gaofen 16 meter analysis ready data

Lianzhi Huo

Assistant Professor

Chinese Academy of Sciences

Lianzhi Huo is currently with the Aerospace Information Research Institute, Chinese Academy of Sciences. He earned the Ph.D. degree in signal and information processing from the Institute of Remote Sensing Applications, Chinese Academy of Sciences, Beijing, China, in 2012. From 2015 to 2018, he was a Postdoctoral Fellow with the University of Idaho, Moscow, ID, USA, working on forest disturbance mapping. His research interests include image classification and machine learning, and solving environmental issues (e.g., forest and agriculture monitoring problems) with advanced tools. Dr. Huo serves as Guest Editor for Remote Sensing and Land journals and is a Reviewer for more than 20 international journals.

Event 2 (10:55-11:15)

The First 16 m Global Land Cover Map Based on the Chinese GF 16 m ARD

Bo Zhong

Associate Professor

Chinese Academy of Sciences

Bo Zhong is currently with the Aerospace Information Research Institute, Chinese Academy of Sciences. His research interests include RS data processing (mainly radiometric processing), RS big data analysis, applications and platform, the global land cover mapping, etc. He has designed and realized the framework for producing the GF 16 m ARD and the GF data from 2013~ covering the whole China and the GF data from 2020~2022 covering the globe have been produced. Furthermore, the GF 16 m ARD have been used for yearly land cover mapping of China and a 3-year global land cover mapping. Bo Zhong has published over 60 SCI papers.

Event 3 (10:15-10:35)

Development Progress of the 30-m resolution global land surface quantitative parameters product (Hi-GLASS) to support the sustainable development goals

Tao He

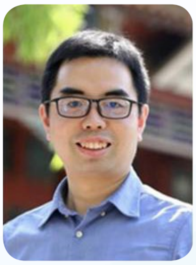
Professor

Wuhan University

Tao He, a Professor at School of Remote Sensing and Information Engineering, Wuhan University, China. He received the B.E. degree in photogrammetry and remote sensing from Wuhan University, Wuhan, China, in 2006, and the Ph.D. degree in geography from the University of Maryland, College Park, USA, in 2012. His research interests include surface anisotropy and albedo modeling using remotely sensed data, surface radiation budget, data fusion of satellite products, and long-term regional and global surface radiation budget analysis. He has published more than 90 peer-reviewed journal papers. He currently serves as the Associate Editors for Science of Remote Sensing and Geo-Spatial Information Science.

Event 4 (10:35-10:55)

Dual data- and knowledge-driven land cover mapping framework for monitoring annual and near-real-time changes



Le Yu

Associate Professor

Tsinghua Univeristy

Dr. Le Yu is an Associate Professor at the Department of Earth System Science, Tsinghua University. His research has been on the use of geographical information techniques to monitor and model global land use change, especially cropland and to facilitate many applications, e.g., food security, biodiversity conservation, and land system modelling. He particularly focuses on satellite-based methods to quantify the spatiotemporal change of land cover/use and understand their ecological, environmental, and socioeconomic impacts on sustainable development. He is Scientific Steering Committee (SSC) member of the Global Land Programme (GLP), Fellow of the Royal Geographical Society (RGS-IBG), Fellow of the Higher Education Academy, Senior Member of the Institute of Electrical and Electronics Engineers, and Prominent Visiting Researcher at the University of Technology Malaysia (UTM). He is currently Editor-in-Chief of Geo: Geography and Environment, Section Editor-in-Chief of LAND, Associate Editor of Journal of Remote Sensing, International Journal of Remote Sensing, and editorial board member of, Global Sustainability, Geoscientific Model Development and Scientific Data.

Event 5 (11:35-11:45)

Analysis ready data is needed

Hankui Zhang

Assistant Professor

South Dakota State University

Hankui Zhang (he) is an Assistant Professor in the Department of Geography and Geospatial Sciences and a Scientist at the Geospatial Sciences Center of Excellence (GSCE) at South Dakota State University. He earned his Ph.D. in 2013 from the Chinese University of Hong Kong, with a thesis focusing on satellite image fusion. His current research primarily involves developing global-applicable algorithms to make medium-resolution satellite data (e.g., Landsat and Sentinel-2) ready-for-easy, which includes cloud masking, BRDF correction, and compositing. He also conducts research on advancing AI applications for remote sensing, focusing on surface geophysical and biophysical parameter retrieval, as well as land cover mapping for environmental monitoring. He is a Landsat Science Team member. Dr. Zhang has published over 60 SCI papers and serves as an Editorial Board member for Remote Sensing of Environment (RSE) and Remote Sensing. He has also organized a RSE special issue on deep learning applications.

Panel Discusion Tile: How to advance ARD for China satellite data

Host:

Discussants:

Lianzhi Huo

Assistant Professor

Chinese Academy of Sciences

Lianzhi Huo is currently with the Aerospace Information Research Institute, Chinese Academy of Sciences. He earned the Ph.D. degree in signal and information processing from the Institute of Remote Sensing Applications, Chinese Academy of Sciences, Beijing, China, in 2012. From 2015 to 2018, he was a Postdoctoral Fellow with the University of Idaho, Moscow, ID, USA, working on forest disturbance mapping. His research interests include image classification and machine learning, and solving environmental issues (e.g., forest and agriculture monitoring problems) with advanced tools. Dr. Huo serves as Guest Editor for Remote Sensing and Land journals and is a Reviewer for more than 20 international journals.

Bo Zhong

Associate Professor

Chinese Academy of Sciences

Bo Zhong is currently with the Aerospace Information Research Institute, Chinese Academy of Sciences. His research interests include RS data processing (mainly radiometric processing), RS big data analysis, applications and platform, the global land cover mapping, etc. He has designed and realized the framework for producing the GF 16 m ARD and the GF data from 2013~ covering the whole China and the GF data from 2020~2022 covering the globe have been produced. Furthermore, the GF 16 m ARD have been used for yearly land cover mapping of China and a 3-year global land cover mapping. Bo Zhong has published over 60 SCI papers.

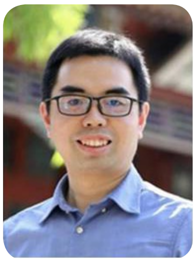
Tao He

Professor

Wuhan University

Tao He, a Professor at School of Remote Sensing and Information Engineering, Wuhan University, China. He received the B.E. degree in photogrammetry and remote sensing from Wuhan University, Wuhan, China, in 2006, and the Ph.D. degree in geography from the University of Maryland, College Park, USA, in 2012. His research interests include surface anisotropy and albedo modeling using remotely sensed data, surface radiation budget, data fusion of satellite products, and long-term regional and global surface radiation budget analysis.

He has published more than 90 peer-reviewed journal papers. He currently serves as the Associate Editors for Science of Remote Sensing and Geo-Spatial Information Science.



Le Yu

Associate Professor

Tsinghua Univeristy

Dr. Le Yu is an Associate Professor at the Department of Earth System Science, Tsinghua University. His research has been on the use of geographical information techniques to monitor and model global land use change, especially cropland and to facilitate many applications, e.g., food security, biodiversity conservation, and land system modelling. He particularly focuses on satellite-based methods to quantify the spatiotemporal change of land cover/use and understand their ecological, environmental, and socioeconomic impacts on sustainable development. He is Scientific Steering Committee (SSC) member of the Global Land Programme (GLP), Fellow of the Royal Geographical Society (RGS-IBG), Fellow of the Higher Education Academy, Senior Member of the Institute of Electrical and Electronics Engineers, and Prominent Visiting Researcher at the University of Technology Malaysia (UTM). He is currently Editor-in-Chief of Geo: Geography and Environment, Section Editor-in-Chief of LAND, Associate Editor of Journal of Remote Sensing, International Journal of Remote Sensing, and editorial board member of, Global Sustainability, Geoscientific Model Development and Scientific Data.

Hankui Zhang

Assistant Professor

South Dakota State University

Hankui Zhang (he) is an Assistant Professor in the Department of Geography and Geospatial Sciences and a Scientist at the Geospatial Sciences Center of Excellence (GSCE) at South Dakota State University. He earned his Ph.D. in 2013 from the Chinese University of Hong Kong, with a thesis focusing on satellite image fusion. His current research primarily involves developing global-applicable algorithms to make medium-resolution satellite data (e.g., Landsat and Sentinel-2) ready-for-easy, which includes cloud masking, BRDF correction, and compositing. He also conducts research on advancing AI applications for remote sensing, focusing on surface geophysical and biophysical parameter retrieval, as well as land cover mapping for environmental monitoring. He is a Landsat Science Team member. Dr. Zhang has published over 60 SCI papers and serves as an Editorial Board member for Remote Sensing of Environment (RSE) and Remote Sensing. He has also organized a RSE special issue on deep learning applications.

Session Title: Big Earth Data for Heritage Conservation and Sustainable Development

Time: 10:40-12:10

Room: 305D

Date: 2024-09-07

Moderator:

Rosa Lasaponara

Professor

Institute of Methodologies for Environmental Analysis, National Research Council

Research Director of CNR-IMAA, Professor at the University of Basilicata in Italy, and President of the European Union EARSel. Undertook more than 20 domestic and international projects (including EU WINTERFHIR (FP6), FUELMAP JRC, ITACA, etc.), published 200+ papers and books, and served as the chairman of more than 10 annual conferences.

Lei Luo

Associate Professor

International Research Center of Big Data for Sustainable Development Goals

Lei Luo is an associate professor of CBAS. He is also serving as the Head of First Research Department of International Centre on Space Technologies for Natural and Cultural Heritage under the auspices of UNESCO (HIST), member of International Council on Monuments and Sites (ICOMOS), and member of International Scientific Committee on Aerospace Heritage. His research interests include natural and cultural heritage and sustainability, remote sensing of biodiversity and conservation, and space archaeology. His current work also focuses on adopting multidisciplinary approaches to meet the needs of scientific cognition and evaluation of the Sustainable Development Goals (SDG11 and 15).

Participants:

Event 1 (10:15-10:30)

Big earth observation data for protecting the cultural heritage

Rosa Lasaponara

Professor

Institute of Methodologies for Environmental Analysis, National Research Council

Research Director of CNR-IMAA, Professor at the University of Basilicata in Italy, and President of the European Union EARSel. Undertook more than 20 domestic and international projects (including EU WINTERFHIR (FP6), FUELMAP JRC, ITACA, etc.), published 200+ papers and books, and served as the chairman of more than 10 annual conferences.

Event 2 (10:30-10:45)

Multidimensional dynamic preservation, expression, and revitalization of cultural heritage

Miaole Hou

Professor

Beijing University of Civil Engineering and Architecture

Hou Miaole is a professor at Beijing University of Civil Engineering and Architecture, who has long been engaged in research on the empowerment of spatiotemporal information for the protection of architectural heritage. She is currently the director of the Beijing Key Laboratory for Fine Reconstruction and Health Monitoring of Architectural Heritage, the co-chair of the Cultural Heritage Visualization and Virtual Restoration Working Group of the ISPRS TC IV, and the deputy director of the Cultural Heritage Protection Special Committee of the Chinese Society of Surveying and Mapping. Published 134 papers (27 SCI indexed papers), 6 monographs, and 14 authorized patents. The research results have been applied to more than 60 large-scale digital protection projects of key cultural relics at home and abroad.

Event 3 (10:45-11:00)

Tracking land-cover changes and assessing sustainable development of Africa's Natural World Heritage sites in Danger

Lei Luo

Associate Professor

International Research Center of Big Data for Sustainable Development Goals

Lei Luo is an associate professor of CBAS. He is also serving as the Head of First Research Department of International Centre on Space Technologies for Natural and Cultural Heritage under the auspices of UNESCO (HIST), member of International Council on Monuments and Sites (ICOMOS), and member of International Scientific Committee on Aerospace Heritage. His research interests include natural and cultural heritage and sustainability, remote sensing of biodiversity and conservation, and space archaeology. His current work also focuses on adopting multidisciplinary approaches to meet the needs of scientific cognition and evaluation of the Sustainable Development Goals (SDG11 and 15).

Event 4 (10:45-11:00)

Automated fine heritage documentation by combining LiDAR and structured light scanner

Jie Shao

Associate Professor

International Research Center of Big Data for Sustainable Development Goals

Jie SHAO received the Ph.D. degree from Beijing Normal University, Beijing, China. He was a Post-Doctoral Fellow with the Department of Land Surveying and Geo-Informatics, The Hong Kong Polytechnic University, Hong Kong. He is currently an associate professor at the Aerospace Information Research Institute, Chinese Academy of Sciences, and a candidate for the '100 Talented Project' of the Chinese Academy of Sciences. His main research interests include geospatial intelligence and sustainability, forest and urban remote sensing, and three-dimensional information acquisition and application. His current work also focuses on adopting geospatial information and deep learning technologies to serve the scientific cognition and evaluation of the Sustainable Development Goals, especially in SDGs11 and 15.

Event 5 (11:15-11:30)

Monitoring Changes and Analyzing Biodiversity in the Okapi Wildlife Reserve towards SDG 15.5

Jinhui Fan

Graduate Student

Jiangsu Ocean University

Event 6 (11:30-11:45)

Monitoring and analyzing land cover change in Yala National Park, Sri Lanka with Landsat time series (2000~2022)

Jisi Sun

Graduate Student

Aerospace Information Research Institute, Chinese Academy of Sciences

Session Title: Global Sustainable Development: Reliable Assessment Based on Big Earth Data

Time: 10:40 - 12:10

Room: 307

Date: 2024-09-07

Moderator:

Liu Jie

International Research Center of Big Data for Sustainable Development Goals

Dr. Liu Jie holds a doctorate in Remote Sensing and Geography Information System. Currently she serves in several prominent roles, including Director of the International Cooperation Office of the Aerospace Information Research Institute of Chinese Academy of Sciences (AIRCAS), Deputy Director of CBAS, and Deputy Director of the International Centre on Space Technologies for Natural and Cultural Heritage (HIST) under the Auspices of UNESCO. In her role as Deputy Director of CBAS, Dr. Liu has been instrumental in promoting the use of big data and innovative methods to address data gaps and technological barriers in monitoring the SDGs globally. She has coordinated collaborations with various UN agencies, including UNDESA, UNEP, FAO, UNESCO, UN Habitat, UN Water, and UNCCD, to facilitate science, technology, and innovation for the SDGs. In addition, she has played a key role in the publication of a series of reports titled Big Earth Data in support of the Sustainable Development Goals, which were released by the Chinese Government for five consecutive years. These reports showcased the immense potential of Big Earth Data in monitoring and assessing progress towards the SDGs.

Gretchen Kalonji

International Research Center of Big Data for Sustainable Development Goals

Prof. Gretchen Kalonji has served in prominent leadership roles, including as the Assistant Director General for Natural Sciences at UNESCO from 2010 to 2014, where she had responsibility for multiple intergovernmental scientific programs, including the International Hydrological Program (IHP), the Man in the Biosphere Program (MAB), the International Geosciences Program (IGCP) and the International Basic Sciences Program. Prior to joining CBAS she served as Professor and Dean at the Sichuan University – the Hong Kong Polytechnic University Institute of Disaster Management and Reconstruction, from 2016 - 2024. Additional leadership roles include serving as the Director of International Strategy Development for the 10 campus University of California system from 2005 to 2010, and as Kyocera Professor of Materials Science at the University of Washington, from 1990 – 2005. Her undergraduate and PhD degrees, in materials science from MIT, were awarded in 1980 and 1982 respectively. She served as Assistant and Associate Professor at MIT from 1982 -1990. Kalonji has served as visiting professor in numerous prestigious universities worldwide, including the University of Paris - Orsay, the Max Planck Institute in Stuttgart, Tohoku University in Japan, and Tsinghua University. Among her various honors, she is a fellow of the American Association for the Advancement of Science (AAS), the recipient of numerous honors from the US NSF, and a Fellow of the International Center for Big Data for the Sustainable Development Goals (CBAS). In China, she is also the recipient first of the Tianfu Friendship Award, from Sichuan Province, in 2021, and then the China Friendship Award, in 2022, which is the highest honor offered to a foreigner for contributions to the social and economic development of China. As Special Advisor of CBAS, her current focus is on development of multinational, multidisciplinary project-based approaches for better targeting the collaborative research efforts of our universities towards achieving the Sustainable Development Goals.

Event 1: Opening Remark

Guo Huadong

Director General

International Research Center of Big Data for Sustainable Development Goals

José Ramón López-Portillo Romano

Former Member of the Group of 10 experts on the Technology Facilitation Mechanism of the United Nations

Event 2: Keynote Presentations

An Introduction to the International Decade of Science for Sustainable Development (IDSSD)

Mishra Anil

Intergovernmental Hydrological Programme (IHP), Division of Water Sciences, UNESCO, France

Anil Mishra is Programme Specialist, Hydrological Systems and Global Change Section and International Hydrological Programme, Division of Water Sciences, UNESCO. He focuses on adaptation strategies of water systems to climate change.

An Introduction to the UNEP 'Measuring Progress' Report Series

Therese El Gemayel

United Nations Environment Programme (UNEP)

El Gemayel Therese is a project manager at the United Nations Environment Programme (UNEP). She has been engaged in the environmental SDGs progress assessment for a long time and is committed to improving the ability to measure the progress of environmental sustainable development goals. She participated in the writing of reports such as "Measuring Progress: Water-related Ecosystems and Sustainable Development Goals" and "Environment and Sustainable Development Goals Progress Assessment Report" released by the United Nations Environment Programme.

Application of Open-Source Earth Observation Data in tracking, and assessing SDG 15 in Thailand

Roshan Bhandari

Asian Institute of Technology, Thailand

Roshan Bhandari is a Project Researcher, at the Asian Institute of Technology, Thailand. He is currently working on the project “SDGs Assessment in Thailand using earth observation data”, under Belt and Road Research Center, AIT, and DBAR-ICoE Bangkok with Associate Professor of AIT, Wenchao Xue. He has good experiences in the Big earth data and SDGs, geospatial analysis and have published severl papers in his subjects.

The Outline and overall progress of Global Sustainable Development Scientific Report

CHEN Yu

International Research Center of Big Data for Sustainable Development Goals, China

Yu Chen is currently an Assistant Researcher at the Aerospace Information Research Institute of the Chinese Academy of Sciences (CAS) and the International Research Center of Big Data for Sustainable Development Goals (CBAS). He is the lead for the comprehensive and cross-sectional chapters of the "Big Earth Data in supporting of the Sustainable Development Goals Report" Additionally, He is a key member of the CAS A-class Strategic Priority Research Program "Big Earth Data Science Engineering". Yu Chen has long been engaged in the comprehensive and interdisciplinary research of Earth Big Data supporting SDG indicators. His work focuses on exploring methodologies and practices for integrating Earth Big Data into sustainable development research. He has developed pixel-scale comprehensive assessment methods for SDG indicators. He has published over 40 related SCI papers in this field.

Event 3: Panel Discussion

Panel Speakers:

- Gretchen Kalonji (International Research Center of Big Data for Sustainable Development Goals, China)
- Guo Huadong (International Research Center of Big Data for Sustainable Development Goals, China)
- Mishra Anil (Intergovernmental Hydrological Programme (IHP), Division of Water Sciences, UNESCO, France)
- Marion Barthelemy (UN Institute for Training and Research (UNITAR))
- Therese El Gemayel (United Nations Environment Programme (UNEP))
- LIU Jie (International Research Center of Big Data for Sustainable Development Goals, China)
- Roshan Bhandari (Asian Institute of Technology, Thailand)
- HUANG Lei(International Research Center of Big Data for Sustainable Development Goals, China)
- CHEN Yu(International Research Center of Big Data for Sustainable Development Goals, China)
- More participants will be updated

Session Title: Digital Technologies for Advancing Sustainable Development Goals - Youth Action

Time: 10:40-12:10

Room: 305E

Date: 2024-09-07

Moderator:

CHEN Fang

Professor &Deputy Director General

International Research Center of Big Data for Sustainable Development Goals

Dr. Fang Chen is the Deputy Director General of the International Research Center of Big Data for Sustainable Development Goals (CBAS), and a Professor of the Chinese Academy of Sciences (CAS) Aerospace Information Research Institute. His work focuses on adapting Big Earth Data technologies to meet the SDGs assessment needs (mainly for SDG 11 and SDG 13) of developing countries, including Nepal, Thailand, and Small Island Developing States (SIDS). Dr. Chen also conducts interdisciplinary work combining remote sensing, geology, and other fields of study to assess spatial and temporal patterns of disaster risk, including glacial lake outburst floods, landslides, wildfires, drought, and earthquakes, especially in the Himalayas and other parts of High Mountain Asia. Dr. Chen has published over 100 academic papers and book chapters.

ZHU Xufeng

Professor &Executive Director

Institute for Sustainable Development Goals, Tsinghua University

Participants:

Event 1 (10:40-10:50)

Opening remarks

GUO Huadong

Director General

International Research Center of Big Data for Sustainable Development Goals

Event 2 (10:50-11:15)

Trends in global water availability under climate change

ZHANG Yongqiang

Professor

Institute of Geographic Sciences and Natural Resources Research

Yongqiang Zhang is a Distinguished Professor/Deputy Director of Key Laboratory of Water Cycle and Land Surface Processes. He has been long engaged in the research of regional and global water cycle and water security. Around the goal of SDG 6, Professor Zhang has specifically carried out work on hydrological processes in a changing environment, water resources security and sustainable use, and has published 240 papers in journals such as Science, Nature Water and Nature Communications.

Event 3 (11:15-11:40)
Chronic Oiling in Global Oceans

LIU Yongxue

Professor

Nanjing University

Yongxue Liu is a professor of School of Geography and Ocean Sciences (SGO) at Nanjing University. He has long been engaged in research on information extraction, monitoring and analysis of offshore energy infrastructure, and time series remote sensing analysis on a global scale. Around the goal of SDG 14, Prof Liu has specifically conducted work on global oil spill detection and analysis, global offshore gas flaring estimation, and has published more than 40 papers in journals such as Science, Nature Sustainability, Remote Sensing of Environment, and other Tier-1 journals.

Event 4 (11:40-12:05)
The science of remote sensing

HANSEN Matthew

Professor

University of Maryland, Colledge Park

Prof. Matthew Hansen is a remote sensing scientist with a research specialization in large area land cover and land use change mapping. His research is focused on developing improved algorithms, data inputs and thematic outputs which enable the mapping of land cover change at regional, continental and global scales. Such maps enable better informed approaches to natural resource management, including deforestation and biodiversity monitoring and can also be used by other scientists as inputs to carbon, climate and hydrological modeling studies.

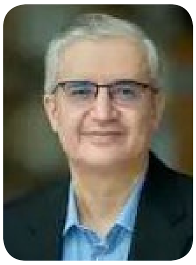
TWAS ONLINE PANEL SESSION FOR FBAS

7 September 2024, from 10:40to 12:10 a.m. (Beijing time).

Title for the panel session: Big Data for the SDGs

Panelists: Steve MacFeely, Hossein Hassani, Yuanming Shi, Zhu Han

Chaired by Mohamed-Slim Alouini



Mohamed-Slim Alouini

Professor

King Abdullah University of Science and Technology (KAUST)

Bio: Mohamed-Slim Alouini is the Al-Khwarizmi Distinguished Professor of Electrical and Computer Engineering and the holder of the UNESCO Chair in Education to Connect the Unconnected at the King Abdullah University of Science and Technology (KAUST), Thuwal, Makkah Province, Saudi Arabia. His research interests include the modeling, design, and performance analysis of wireless, satellite, and optical communication systems. He is a fellow of the Institute of Electrical and Electronics Engineers (IEEE) and OPTICA (formerly known as the Optical Society of America (OSA).

Steve MacFeely

Professor

Chief Statistician and Director of Statistics and Data, OECD

Bio: Dr. Steve MacFeely is the Chief Statistician and Director of the Statistics and Data Directorate at the OECD. He is also Adjunct Professor at the Department of Economics at University College Cork in Ireland.

He chairs the Advisory Board of the Statistical Journal of the IAOS, the UNs Productive Capacity Index Statistical and Technical Expert Group, and the Advisory Board of the International Statistics Literacy Project. Steve is an elected member of the International Statistics Institute.

Prior to joining the OECD, Steve served as the Director of Data and Analytics at the World Health Organization and as Director of Statistics and Information at UN Trade and Development. Before joining the UN, he was the Deputy Director-General at the Central Statistics Office (CSO) in Ireland.

Title of Presentation:

The Big (data) Bang: Opportunities and Challenges for Compiling SDG Indicators

Abstract: Official statisticians around the world are faced with the herculean task of populating the Sustainable Development Goals global indicator framework. As traditional data sources appear to be insufficient, statisticians are naturally considering whether big data can contribute anything useful. While the statistical possibilities appear to be theoretically endless, in practice big data also present some enormous challenges and potential pitfalls: legal;

ethical; technical; and reputational. This paper examines the opportunities and challenges presented by big data for compiling indicators to support Agenda 2030.

Hossein Hassani

Hossein Hassani

Professor

Senior Research Scholar

Cooperation and Transformative Governance Research Group

Advancing Systems Analysis Program

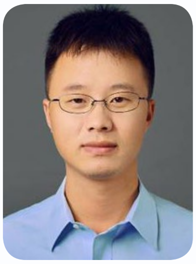
International Institute for Applied Systems Analysis (IIASA)

Bio: Hossein Hassani is a top 1% scientist globally, a seasoned data scientist, and a leading researcher with over 15 years of experience. He has held key roles in international organizations, and his extensive contributions are evident in 200+ high-impact journal papers. With a strong track record in securing research funding, Hassani's work informs policy decisions and has garnered media attention in prestigious outlets. His main research interests are Digital Twins, AI, Big Data, and both applied and theoretical statistics.

Title of Presentation:

Harnessing Digital Twins and Big Data for Advancing Sustainable Development Goals

Abstract: Digital twins—virtual models of physical systems—paired with big data analytics offer powerful tools for advancing the United Nations' Sustainable Development Goals (SDGs). By integrating real-time data and simulations, these technologies can optimize resource use, improve decision-making, and address challenges in areas such as climate action, public health, and infrastructure resilience. This paper explores how digital twins and big data can accelerate progress toward the SDGs, highlighting successful applications and discussing the key challenges, including data privacy and the digital divide, that must be navigated to ensure their effective and equitable use.



Yuanming Shi

Professor

School of Information Science and Technology, ShanghaiTech University

Bio: Yuanming Shi received the B.S. degree in electronic engineering from Tsinghua University, Beijing, China, in 2011. He received the Ph.D. degree in electronic and computer engineering from The Hong Kong University of Science and Technology (HKUST), in 2015. Since September 2015, he has been with the School of Information Science and Technology in ShanghaiTech University, where he is a Full Professor. His research areas include edge AI, space computing, and optimization. He is a recipient of the IEEE Marconi Prize Paper Award in Wireless Communications in 2016, the Young Author Best Paper Award by the IEEE Signal Processing Society in 2016, the IEEE ComSoc Asia-Pacific Outstanding Young Researcher Award in 2021, and the Chinese Institute of Electronics First Prize in Natural Science in 2022. He is also an editor of IEEE

Transactions on Wireless Communications, IEEE Journal on Selected Areas in Communications, and Journal of Communications and Information Networks. He is an IET Fellow.

Title of Presentation:

Satellite Federated Edge Learning for Remote Sensing Big Data

Abstract: By integrating communication and computation capabilities into the space networks, satellite federated edge learning (FEEL) stands out as a disruptive technology to seamlessly integrate communication, sensing, computation, and intelligence, thereby improving the timeliness, effectiveness, and trustworthiness for remote sensing big data analytics. This is achieved by sharing only model parameters instead of raw data. Although promising, the dynamics of low-earth-orbit satellite networks, characterized by the high mobility of satellites and short ground-to-satellite link (GSL) duration, pose unique challenges for satellite FEEL. In this talk, we shall propose to integrate inter-satellite links for intra-orbit model aggregation, thereby reducing the usage of low data-rate and intermittent GSL. Our proposed method includes a ring all-reduce based intra-orbit aggregation mechanism, coupled with a network flow-based transmission scheme for global model aggregation, which enhances transmission efficiency. This talk also investigates applying the satellite FEEL method for fine-tuning the remote sensing foundation model.

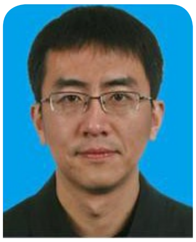
Session Title: Data Services for the Green Development of the Belt and Road Regions

Time 13:00 - 14:30

Room 305B

Date 2024-09-07

Moderator:



Xiaowei Nie

Professor

Institute of Tibetan Plateau Research (ITP), Chinese Academy of Sciences, National Tibetan Plateau Data Center (TPDC), Tibet University, China

Dr. Xiaowei Nie is a professor at the Institute of Tibetan Plateau Research, Chinese Academy of Sciences. His research interests include data-driven ecosystem service realization. Closely focusing on the important directive requirements for the construction of ecological civilization highland and high-quality development, he proposed the ecosystem service theory centering on the Sustainable development Goals (SDGS), carried out ecological monitoring technology research based on bionic eye, and carried out multi-dimensional observation, wide-area and high-precision monitoring research in the wetlands of the Xizang Plateau and the Yarlung Zangbo River basin. He also generated data products through the National Tibetan Plateau Data Center to support and serve the construction and high-quality development of Tibet's ecological civilization highland. Xiaowei Nie has undertaken more than 10 projects at the national and provincial levels. In the past five years, he has published 3 monographs and more than 20 papers in academic journals such as science of total environment (IF : 8.2). Among them, 19 papers have been included in SCI, SSCI, CSSCI journals (11 of which are the first author / correspondent author). He has also written more than 20 policy research reports as the main pen on the "Belt and Road" scientific and technological cooperation, ecological protection of the Xizang Plateau, and ecological protection of the cryosphere, and has received leadership instructions nearly ten times.

Xiaoduo Pan

Professor

Institute of Tibetan Plateau Research (ITP), Chinese Academy of Sciences

Dr. Pan Xiaoduo is a distinguished research fellow and doctoral supervisor at the Institute of Tibetan Plateau Research, Chinese Academy of Sciences. Her research focuses on regional climate change, data assimilation, data integration, and big data analysis. She has established a framework for assimilating regional climate model precipitation remote sensing products, used for assimilating precipitation and snow products from multiple sources of passive and active microwave remote sensing, such as Doppler radar data, FY-series, GPM, and MODIS. She has also developed high spatiotemporal resolution long-term near-surface atmospheric data for the Heihe River Basin, which is used to provide driving data for the model development and operation of the "Integrated Simulation and Prediction of Water-Ecology-Economy System in the Heihe River Basin" project funded by the National Natural Science Foundation of China. Dr. Pan has integrated characteristic data sets in the fields of remote sensing, cryosphere, hydrology, and ecology for the Xizang Plateau and even the terrestrial Earth's surface, providing data services for Earth system science and regional sustainable development on the Xizang Plateau. Her research results have been published in international mainstream journals such as BAMS and JGR, with over 100 publications to date.

Weiyue Li

Professor

Shanghai Normal University

Weiyue Li is a professor and doctoral supervisor at the School of Environmental and Geographical Sciences of Shanghai Normal University. Additionally, he holds the position of deputy director at the National Field Observation Research Station for Urban Wetland Ecosystems in the Yangtze River Delta. With a doctoral degree in Cartography and Geographic Information Engineering from Tongji University in 2014, Li boasts a robust academic foundation. From 2016 to 2021, he conducted postdoctoral research at the Northwest Institute of Eco-Environment and Resources, Chinese Academy of Sciences. He has long been dedicated to field observation and data integration and has carried out research on multi-source data fusion and assimilation. Centering on the environmental and ecological issues of the Yangtze River Delta urban agglomeration and the Yangtze River Delta Integration Demonstration Area, through the integrated observation and demonstration of air-space-ground, the methods of scale transformation and remote sensing authenticity verification have been adopted to serve the ecological security assessment, carbon source and sink estimation, and demonstration application in the Yangtze River Delta region.

Participants:

Event 1 (13:08-13:19)

The Synergistic Impact of Extreme Drought and Urbanization on Food Insecurity in Sub-Saharan Africa (SSA)

Zhenxin Zhang

Professor

Capital Normal University, China

Doctor of Geography, postdoctoral fellow in Surveying and Mapping, young professor and doctoral supervisor at Capital Normal University, and a visiting scholar to Purdue University in the United States. Has been engaged in the research of intelligent algorithms and law mining combining machine learning, deep learning and geospatial big data (such as 3D laser imaging, remote sensing images, etc.). A series of research progresses have been made in feature extraction, target detection and classification, and spatial data matching of geospatial data. He has presided over more than 10 projects including the general projects and youth projects of the National Natural Science Foundation of China, and the general projects of the Beijing Natural Science Foundation. The above progresses have resulted in more than 40 SCI papers. Among them, more than 30 SCI-indexed papers have been published as the first author/corresponding author in international journals such as ISPRS JP&RS (Top) of the International Society for Photogrammetry and Remote Sensing, IEEE TGRS (Top) of the Institute of Electrical and Electronics Engineers Geoscience and Remote Sensing Society, and JAG (Top) (including more than 20 papers in JCR Zone 1, including ESI highly cited papers in the top 1% worldwide). He has applied for/been authorized 6 patents. The research results have been cited and positively evaluated by top publications such as PNAS. He served as a guest editor for J-STARS and Remote Sensing and a reviewer for more than 10 journals such as Nature Communications. He has received honorary titles such as the Second Prize of Geoinformation Science and Technology Progress and Outstanding Graduate of Beijing.

Event 2 (13:20-13:31)

The Role of Green Finance to Achieve Sustainability through Green Supply Chain Management and Innovative Technologies

Moustafa Mohamed Nazief Haggag Kotb Kholaif

Faculty of Commerce, Tanta University, Egypt

Dr. Moustafa Kholaif is an accomplished academic with a Ph.D. in Business Administration on 2023, from the School of Economics and Management at the University of Science and Technology Beijing, China. His research delves into the impact of management accounting and modern technological tools such as Big Data Analytics (BDA) and Blockchain Technology (BCT) on firms' performance, particularly during crises like the COVID-19 pandemic. Currently serving as a Lecturer at both the Faculty of Commerce, English Section, Tanta University, and the Faculty of Business Administration, English Section, Horus University, Dr. Kholaif has built a robust teaching and research portfolio. He has published 18 research papers, with 9 as the first author, contributing significantly to the fields of accounting, sustainability, and technological integration. His work has been recognized with an H-index of 8 and a cumulative Impact Factor exceeding 77. Dr. Kholaif's academic excellence is further reflected in numerous accolades, including the Chinese Government Scholarship, the Excellent Doctoral Thesis Award 2023, and recognition as the Academic Star of his department. His dedication to advancing knowledge and his passion for teaching make him a valuable asset to the academic community.

Event 3 (13:32-13:43)

Development of the Global Nested Air Quality Prediction Modeling System (GNAQPMS) for Mitigating Air Pollution in China

Zifa Wang

Professor

The Institute of Atmospheric Physics, Chinese Academy of Sciences

Prof. Wang Mainly engaged in the study of atmospheric pollution transport and deposition, development of atmospheric chemical models, and research on air quality forecasting theories and methods. Developed China's own full-scale (global-regional-urban agglomeration-city) nested grid air quality forecasting model system (NAQPMS), cooperated in the development of a new generation of atmospheric chemical data assimilation system, initiated and chaired the third phase of the Asia Air Quality Model Intercomparison Study (MICS-Asia III), supported the establishment of a national, regional, provincial, and urban air quality multi-model ensemble forecasting and warning operational system, and provided core technology for ensuring air quality for major national events and winning the battle for blue skies. Has co-authored more than 310 SCI papers, with over 9200 SCI paper citations, and an H-index of 52. Has previously won the 10th China Youth Science and Technology Award (2007), the 2011 Chinese Academy of Sciences' Outstanding Scientific and Technological Achievement Award (for outstanding contributors), and the 2017 National Science and Technology Progress Second Prize, among other accolades.

Event 4 (13:44-13:55)

Quantum machine learning of Earth surface systems

Tianxiang Yue

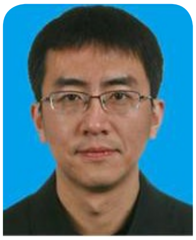
Professor

Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences

Prof. Yue, based on a comprehensive summary and analysis of the theoretical deficiencies of classical surface modeling methods and the modern mathematical theories that overcome these deficiencies, the rasterized description of the Earth's surface system and its environmental elements is abstracted as mathematical "surfaces". Based on surface theory, systems theory, and control theory, the pioneering High Accuracy Surface Modeling (HASM) method was established, effectively solving the error and multi-scale problems that have plagued surface modeling for half a century. Over the past 30 years, the development and widespread application of high-precision surface modeling methods and theories have refined and formed the basic theorems of surface modeling for the Earth's surface system and ecological environment, as well as their inferences and algorithms related to spatial interpolation, scale transformation, data fusion, and model-data assimilation, laying the methodological foundation for the development of ecological environmental informatics. More than 10 foreign monographs have been published, and about 300 academic papers have been published in domestic and foreign academic journals, including over 100 SCI/SSCI indexed papers.

Panel Discusion Tile: Data Services for the Green Development of the Belt and Road Regions

Discussants:



Xiaowei Nie

Professor

Institute of Tibetan Plateau Research (ITP), Chinese Academy of Sciences, National Tibetan Plateau Data Center (TPDC), Tibet University, China

Dr. Xiaowei Nie is a professor at the Institute of Tibetan Plateau Research, Chinese Academy of Sciences. His research interests include data-driven ecosystem service realization. Closely focusing on the important directive requirements for the construction of ecological civilization highland and high-quality development, he proposed the ecosystem service theory centering on the Sustainable development Goals (SDGS), carried out ecological monitoring technology research based on bionic eye, and carried out multi-dimensional observation, wide-area and high-precision monitoring research in the wetlands of the Xizang Plateau and the Yarlung Zangbo River basin. He also generated data products through the National Tibetan Plateau Data Center to support and serve the construction and high-quality development of Tibet's ecological civilization highland. Xiaowei Nie has undertaken more than 10 projects at the national and provincial levels. In the past five years, he has published 3 monographs and more than 20 papers in academic journals such as science of total environment (IF : 8.2). Among them, 19 papers have been included in SCI, SSCI, CSSCI journals (11 of which are the first author / correspondent author). He has also written more than 20 policy research reports as the main pen on the “Belt and Road” scientific and technological cooperation, ecological protection of the Xizang Plateau, and ecological protection of the cryosphere, and has received leadership instructions nearly ten times.

Xiaoduo Pan

Professor

Institute of Tibetan Plateau Research (ITP), Chinese Academy of Sciences

Dr. Pan Xiaoduo is a distinguished research fellow and doctoral supervisor at the Institute of Tibetan Plateau Research, Chinese Academy of Sciences. Her research focuses on regional climate change, data assimilation, data integration, and big data analysis. She has established a framework for assimilating regional climate model precipitation remote sensing products, used for assimilating precipitation and snow products from multiple sources of passive and active microwave remote sensing, such as Doppler radar data, FY-series, GPM, and MODIS. She has also developed high spatiotemporal resolution long-term near-surface atmospheric data for the Heihe River Basin, which is used to provide driving data for the model development and operation of the "Integrated Simulation and Prediction of Water-Ecology-Economy System in the Heihe

River Basin" project funded by the National Natural Science Foundation of China. Dr. Pan has integrated characteristic data sets in the fields of remote sensing, cryosphere, hydrology, and ecology for the Xizang Plateau and even the terrestrial Earth's surface, providing data services for Earth system science and regional sustainable development on the Xizang Plateau. Her research results have been published in international mainstream journals such as BAMS and JGR, with over 100 publications to date.

Weiyue Li

Professor

Shanghai Normal University

Weiyue Li is a professor and doctoral supervisor at the School of Environmental and Geographical Sciences of Shanghai Normal University. Additionally, he holds the position of deputy director at the National Field Observation Research Station for Urban Wetland Ecosystems in the Yangtze River Delta. With a doctoral degree in Cartography and Geographic Information Engineering from Tongji University in 2014, Li boasts a robust academic foundation. From 2016 to 2021, he conducted postdoctoral research at the Northwest Institute of Eco-Environment and Resources, Chinese Academy of Sciences. He has long been dedicated to field observation and data integration and has carried out research on multi-source data fusion and assimilation. Centering on the environmental and ecological issues of the Yangtze River Delta urban agglomeration and the Yangtze River Delta Integration Demonstration Area, through the integrated observation and demonstration of air-space-ground, the methods of scale transformation and remote sensing authenticity verification have been adopted to serve the ecological security assessment, carbon source and sink estimation, and demonstration application in the Yangtze River Delta region.

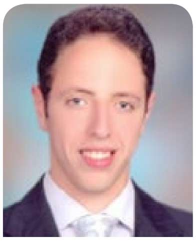
Zhenxin Zhang

Professor

Capital Normal University, China

Doctor of Geography, postdoctoral fellow in Surveying and Mapping, young professor and doctoral supervisor at Capital Normal University, and a visiting scholar to Purdue University in the United States. Has been engaged in the research of intelligent algorithms and law mining combining machine learning, deep learning and geospatial big data (such as 3D laser imaging, remote sensing images, etc.). A series of research progresses have been made in feature extraction, target detection and classification, and spatial data matching of geospatial data. He has presided over more than 10 projects including the general projects and youth projects of the National Natural Science Foundation of China, and the general projects of the Beijing Natural Science Foundation. The above progresses have resulted in more than 40 SCI papers. Among them, more than 30 SCI-indexed papers have been published as the first author/corresponding author in international journals such as ISPRS JP&RS (Top) of the International Society for Photogrammetry and Remote Sensing, IEEE TGRS

(Top) of the Institute of Electrical and Electronics Engineers Geoscience and Remote Sensing Society, and JAG (Top) (including more than 20 papers in JCR Zone 1, including ESI highly cited papers in the top 1% worldwide). He has applied for/been authorized 6 patents. The research results have been cited and positively evaluated by top publications such as PNAS. He served as a guest editor for J-STARS and Remote Sensing and a reviewer for more than 10 journals such as Nature Communications. He has received honorary titles such as the Second Prize of Geoinformation Science and Technology Progress and Outstanding Graduate of Beijing.

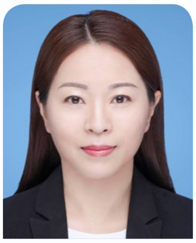


Moustafa Mohamed Nazief Haggag Kotb Kholaif

Faculty of Commerce, Tanta University, Egypt

Dr. Moustafa Kholaif is an accomplished academic with a Ph.D. in Business Administration on 2023, from the School of Economics and Management at the University of Science and Technology Beijing, China. His research delves into the impact of management accounting and modern technological tools such as Big Data Analytics (BDA) and Blockchain Technology (BCT) on firms' performance, particularly during crises like the COVID-19 pandemic.

Currently serving as a Lecturer at both the Faculty of Commerce, English Section, Tanta University, and the Faculty of Business Administration, English Section, Horus University, Dr. Kholaif has built a robust teaching and research portfolio. He has published 18 research papers, with 9 as the first author, contributing significantly to the fields of accounting, sustainability, and technological integration. His work has been recognized with an H-index of 8 and a cumulative Impact Factor exceeding 77. Dr. Kholaif's academic excellence is further reflected in numerous accolades, including the Chinese Government Scholarship, the Excellent Doctoral Thesis Award 2023, and recognition as the Academic Star of his department. His dedication to advancing knowledge and his passion for teaching make him a valuable asset to the academic community.



Li Zhang

Professor

International Research Center of Big Data for Sustainable Development Goals (CBAS)

Li Zhang is a Professor at the Aerospace Information Research Institute, Chinese Academy of Sciences. She serves as the Head of the Science and Technology Innovation Department at the International Research Center of Big Data for Sustainable Development Goals (CBAS), the Deputy Director of the Hainan Key Laboratory of Earth Observation and the Ph.D. supervisor in University of Chinese Academy of Sciences. She works as the Principal Scientist of the National Science and Technology Fundamental Resources Investigation Programme funded by the Ministry of Science and Technology, the Senior Science Officer of the Digital Belt and Road Program (DBAR), and the Co-Chair of the Coastal Zone Working Group of DBAR (DBAR-COAST). She has successfully led over 40 National and Provincial science projects and has authored more than 190 academic papers. Prof. Zhang is also the lead author of five monographs and has been honored with nine provincial, ministerial, and international awards.

Zifa Wang

Professor

The Institute of Atmospheric Physics, Chinese Academy of Sciences

Prof. Wang Mainly engaged in the study of atmospheric pollution transport and deposition, development of atmospheric chemical models, and research on air quality forecasting theories and methods. Developed China's own full-scale (global-regional-urban agglomeration-city) nested grid air quality forecasting model system (NAQPMS), cooperated in the development of a new generation of atmospheric chemical data assimilation system, initiated and chaired the third phase of the Asia Air Quality Model Intercomparison Study (MICS-Asia III), supported the establishment of a national, regional, provincial, and urban air quality multi-model ensemble forecasting and warning operational system, and provided core technology for ensuring air quality for major national events and winning the battle for blue skies. Has co-authored more than 310 SCI papers, with over 9200 SCI paper citations, and an H-index of 52. Has previously won the 10th China Youth Science and Technology Award (2007), the 2011 Chinese Academy of Sciences' Outstanding Scientific and Technological Achievement Award (for outstanding contributors), and the 2017 National Science and Technology Progress Second Prize, among other accolades.

Tianxiang Yue

Professor

Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences

Prof. Yue, based on a comprehensive summary and analysis of the theoretical deficiencies of classical surface modeling methods and the modern mathematical theories that overcome these deficiencies, the rasterized description of the Earth's surface system and its environmental elements is abstracted as mathematical "surfaces". Based on surface theory, systems theory, and control theory, the pioneering High Accuracy Surface Modeling (HASM) method was established, effectively solving the error and multi-scale problems that have plagued surface modeling for half a century. Over the past 30 years, the development and widespread application of high-precision surface modeling methods and theories have refined and formed the basic theorems of surface modeling for the Earth's surface system and ecological environment, as well as their inferences and algorithms related to spatial interpolation, scale transformation, data fusion, and model-data assimilation, laying the methodological foundation for the development of ecological environmental informatics. More than 10 foreign monographs have been published, and about 300 academic papers have been published in domestic and foreign academic journals, including over 100 SCI/SSCI indexed papers.

Session Title: Digital Technology in the Service of Historic Building Conservation

Time: 13:00 - 14:30

Room: 305C

Date: 2024-09-07

Moderator:

Jie Jiang

Professor

Beijing University of Civil Engineering and Architecture, China

Prof. Dr. JIANG Jie received her BSc. and MSc. degrees in Applied Geophysics from the Changchun University of Geology, China, and PhD in Surveying Engineering from China University of Mining and Technology (Beijing). She worked as a remote sensing and GIS specialist in the Municipal Urban Planning and Management Information Center of Changzhou during 1989 to 1999, as a senior engineer in the National Geomatics Center of China during 2000 to 2018. Since 2018 she serves as full professor in School of Geomatics and Urban Spatial Informatics, Beijing University of Civil Engineering and Architecture. She took in charge of several national-level projects on remote sensing and GIS applications, among them the most important ones included the National Platform for Geoinformation Services, the National Geodatabases for E-government and in-car Navigation. Her recent research focuses on spatial-temporal modelling for smart city. She is the Secretary General of International Society for Photogrammetry and Remote Sensing (ISPRS, www.isprs.org) for term 2022-2026. She is Fellow of ISPRS, member of “Beijing Scholars”, and ordinary member of the European Academy of Sciences and Arts.

Maria Antonia Brovelli

Professor

Politecnico di Milano, Italy

Maria Antonia Brovelli is a distinguished academic and researcher with a background in Physics and a Ph.D. in Geodesy and Cartography. She is a Professor of GIS and Earth Observation at Politecnico di Milano (PoliMI). Having dedicated her entire career to PoliMI, she began as a researcher and later became a Full Professor, also serving as the Vice-Rector of PoliMI for the Como Campus. Her contributions extend beyond academia, where she has lectured GIS at ETH Zurich and currently holds key positions in various international organizations. She serves as the Vice President of the ISPRS Technical Commission on Spatial Information Science, co-chair of the United Nations Open GIS Initiative, chair of the UN-GGIM Academic Network and Co-Director of the International Joint (with BUCEA) Laboratory Sustainable Preservation and Development of Historical and Cultural Cities. Her research in geomatics covers diverse areas, including geodesy, radar-altimetry, GIS, webGIS, VGI, Citizen Science, Big Geo Data, and GEOAI. Brovelli is a global leader in Open-Source GIS. She has an impressive publication record and has been involved in numerous national and international research projects. She has received awards such as the ISPRS President's Honorary Citation in 2020 and the Sol Katz Award from OSGeo in 2015.

Participants:

Event 1 (13:00-13:20)

Data-driven structural performance assessment and enhancing for Chinese ancient buildings towards value protection and inheritance

Aiqun Li

Professor

International Joint Laboratory of Safety and Energy Conservation for Ancient Buildings, Ministry of Education, China

LI Aiqun is the Director of International Joint Laboratory of Safety and Energy Conservation for Ancient Buildings, Ministry of Education, China. He is a recipient of the National Outstanding Youth Fund of China and a member of "Beijing Scholars". He started his career at Southeast University from 1993 after receiving PhD in Southeast University and becoming a full professor in 1998. From 1996 to 2009, he led the School of Civil Engineering at Southeast University. From 2015 to 2023, he was the vice president of BUCEA. His research activity is in the field of structural engineering. His main research interests include structural anti-seismic, seismic mitigation and isolation, and vibration control, structural health monitoring and safety assessment, new structural system, function improvement and renovation of existing building, and preventive protection, monitoring and early warning of architectural heritage.

Event 2 (13:20-13:40)

Analysis of Heat Island and Air Pollution for Sustainable Urban Planning of Historic Cities: A Case Study of Milan, Italy

Maria Antonia Brovelli

Professor

Politecnico di Milano, Italy

Maria Antonia Brovelli is a distinguished academic and researcher with a background in Physics and a Ph.D. in Geodesy and Cartography. She is a Professor of GIS and Earth Observation at Politecnico di Milano (PoliMI). Having dedicated her entire career to PoliMI, she began as a researcher and later became a Full Professor, also serving as the Vice-Rector of PoliMI for the Como Campus. Her contributions extend beyond academia, where she has lectured GIS at ETH Zurich and currently holds key positions in various international organizations. She serves as the Vice President of the ISPRS Technical Commission on Spatial Information Science, co-chair of the United Nations Open GIS Initiative, chair of the UN-GGIM Academic Network and Co-Director of the International Joint (with BUCEA) Laboratory Sustainable Preservation and Development of Historical and Cultural Cities. Her research in geomatics covers diverse areas, including geodesy, radar-altimetry, GIS, webGIS, VGI, Citizen Science, Big Geo Data, and GEOAI. Brovelli is a global leader in Open-Source GIS. She has an impressive publication record and has been involved in numerous national and international research projects. She has received awards such as the ISPRS President's Honorary Citation in 2020 and the Sol Katz Award from OSGeo in 2015.

Event 3 (13:40-14:00)

Photogrammetry-based Large-scale Cultural Heritage Digitization and Applications

Xianfeng Huang

Professor

Wuhan University, China

HUANG Xianfeng is the Director of space and aerial photogrammetry department of State Key Laboratory of Information Engineering in Surveying, Mapping and Remote Sensing (LIESMARS), Wuhan University. He is also Deputy Director of Cultural Heritage Intelligent Computing Laboratory of Ministry of Education, China. He has long been engaged in the research of mapping remote sensing technology in cultural heritage protection. His research results have been applied to dozens of important cultural heritage protection units in China and abroad, such as Digital Dunhuang, Yungang, Longmen, the Great Wall Protection, the National Museum and the Palace Museum of Forged Manchuria, as well as many of China's top ten archaeological discovery projects.

Event 4 (14:00-14:15)

The "Silk Road" Cultural Heritage Digital Collection Platform to Benefit the B&R Countries

Lijin Yan

Senior Economist

China Silk Road Group Limited, China

Dr. YAN Lijin was born in 1964. He is Senior Engineer and Senior Economist. Now he is the Chairman of China Silk Road Group Limited, Chairman of Silk Road Development Fund Management Holding Limited, Silk Road International

Foundation, Member of Strategic Direction Committee of United Nations Conference on Trade and Development(UNCTAD), the Chairman of Law and Globalization Research Center in Renmin University, Senior Advisor to Oxford University, Co-Director of Research Center for Peru-China Community of Shared Future, Vice President of United World Chinese Association and governmental adviser for countries. He has lad the construction of the "Silk Road" cultural heritage digital collection platform aims at preserving and revitalization the rich cultural heritages for the Belt and Road countries.

Event 5 (14:15-14:30)

Component-based BIM Technology for Modeling and Visualization of Ancient Chinese Architecture

Rentian Huang

Researcher

Guangzhou Okay Information Technology Co., Ltd. China

HUANG Rentian is currently a researcher at Guangzhou Okay, specializing in the application of BIM technology in the preservation and revitalization of architectural heritage. With a strong focus on integrating digital tools with traditional architectural practices, her work aims to bridge the gap between modern technology and historic preservation. She holds an MPhil in Architecture and Urban Studies from the University of Cambridge. She got a Bachelor of Architecture from the South China University of Technology and a Bachelor of Architecture at the Politecnico di Torino, where she gained solid knowledge of both Chinese and Western architectural history. With her educational background and expertise in both digital and traditional architectural methodologies, she is dedicated to advancing the field of architectural heritage preservation.

Session Title: Earth Obervation for SDGs
Time: 13:00 - 14:30
Room: 305D
Date: 2024-09-07

Moderator:

Wen-Yen Chang
Vice President / Lifetime Distinguished Professor
National Dong-Hwa University

Wen-Yen Chang obtained the B.S.in mechanicalengineering and received the M.S and Ph.D. degrees from the Geophysics Institute, National Central University. Prof. Chang has been with the faculty of the department of Natural Resources and Environmental Studies (NRES), National Dong-Hwa University (NDHU) since 2012. Now, he is currently a Vice-President and Lifetime Distinguished Professor of NDHU, Joint Appointment Research Fellow of Institute of Earth Sciences (IES), Academia Sinica and administrative positions, such as Dean of College of Environmental Studies and Oceanography, Director of Eastem Taiwan Earthquake Research Centre (E-TEC), Director of Industrial Innovation-Incubation Centre of NDHU. His research activities involve the areas of Geophysics, Seismic wave propagation, Natural disasters prevention and Seismology.

Kun-Shan Chen
Dean / Professor
Institute of Space Earth Science, Nanjing University

Kun-Shan Chen (Fellow, IEEE) received the Ph.D. degree in electrical engineering from The University of Texas at Arlington, Arlington, TX, USA, in 1990. Currently, he is with the Institute of Space Earth Science, Nanjing University, Nanjing, China. He has authored or coauthored over 400 referred journal articles and conference papers, and 5 books. His research interests include microwave remote sensing theory, modeling, system and measurement, and electromagnetic sensing techniques. Dr. Chen is a member of Academia Europaea, and the Deputy Editor-in-Chief Editor of the IEEE Transactions on Geoscience and Remote Sensing. He received the 2021 IEEE GRSS Fawwaz Ulaby Distinguished Achievement Award for contributing to microwave scattering and emission modeling of rough surfaces and radar image simulation and understanding.

Participants:
Event 1 (13:10-13:30)
Joint validation of multi-source remote sensing products and sharing in the BRICS and BRI countries

Dr. Xiang ZHOU

Professor

Chinese Academy of Sciences

Prof. Zhou's research interests focus on Environmental Remote Sensing and applications, remote sensing product validation and open EO data. At present, he is leading a project on establishment of countrywide validation field network for remote sensing information products, which aims to provide trusted in-situ data for improving the accuracy of land surface core variables. He is dedicated to international cooperation and capacity building in the field of earth observation applications in the past decade. Member of GEO Program Board and AOGEO (Asia-Oceania GEO) Coordination Board, Member of CAST Consultative Activities to the UN, China Association for Science and Technology (CAST).

Event 2 (13:30-13:50)

Co-construction and sharing of China's Natural Resources Satellite Data and Applications

Dr. Xinming TANG

Chief Engineer

Land satellite remote sensing application center, MNR

Xinming Tang, PhD, Researcher, Chief Engineer of Land Satellite Remote Sensing Application Center, Ministry of Natural Resources of P.R.China, has long engaged in satellite mapping and remote sensing technology research and engineering construction, and served as the chief designer of the application systems of multiple satellite series such as ZY-3 series, ZY-1 02E, and GFDM. He has published 260 papers, 6 monographs in Chinese and English, compiled 5 national industry standards, and obtained 33 invention patents. As a laureate of 5 first and second prizes for National Prize for Progress in Science and Technology, he is the lead of the first batch of Innovation Team of the Ministry of Science and Technology, as well as the chairman of the First Committee of the International Society for Photogrammetry and Remote Sensing (ISPRS).

Event 3 (13:50-14:10)

Fengyun satellites and their international services

Dr. Danyu Qin

Director of the International User Service Centre, NSMC/CMA

National Satellite Meteorological Center, China

Danyu Qin received the Ph.D. degree in atmospheric physics and atmospheric environment from the Nanjing University of Information Science and Technology, Nanjing, China, in 2004. He is currently the chief designer of the

Fengyun Satellite Project Application System of the China Meteorological Administration (CMA), and the director of the International User Service Centre, the National Satellite Meteorological Centre (NSMC). His research focuses on mesoscale convection activities, especially from the view of satellite. His research interests include satellite weather and remote sensing applications of Fengyun satellites.

Event 4 (14:10-14:30)

Global ocean observations and applications by China's ocean satellite constellation

Dr. Yin XU

Professor / PI of CFOSAT

National Satellite Ocean Application Service, China

Ying Xu received the B.E. degree in information engineering from Wuhan University, Wuhan, China, in 2002, and the Ph.D. degree in ocean information detecting and processing from the Ocean University of China, Qingdao, China, in 2015. He is currently an research professor with the National Satellite Ocean Application Service, Ministry of Natural Resources, Beijing, China. In particular, he is also the Chinese Principal Investigator of the China France Oceanography Satellite (CFOSAT). His research interests include ocean remote sensing data processing,using remote sensing data to study oceanic processes, sea level rising, coral reef bleaching and ocean disasters.

Session Title: Digital Sciences for Sustainable Development

Time: 13:00:00 - 17:50:00

Room: 307

Date: 2024-09-07

Session Chairs:

GUO Huadong

The Director General of the International Research Center of Big Data for Sustainable Development Goals (CBAS), an Academician of Chinese Academy of Sciences (CAS), a Foreign Member of the Russian Academy of Sciences, a Foreign Member of the Finnish Society of Sciences and Letters, and a Fellow of TWAS. He presently serves as Honorary President of the International Society for Digital Earth (ISDE), Director of the International Center on Space Technologies for Natural and Cultural Heritage under the Auspices of UNESCO, Chair of the Digital Belt and Road Program, and Editor-in-Chief of the International Journal of Digital Earth and the journal of Big Earth Data. He served as a member of the UN 10-Member Group to support the Technology Facilitation Mechanism for SDGs (2018-2021), Chairman of the International Committee of Remote Sensing of Environment (2017-2020), President of ISDE (2015-2019), and ICSU Committee on Data for Science and Technology (CODATA) (2010-2014). He specializes in remote sensing, radar for Earth observation, and Digital Earth science. He is the Principal Investigator of Moon-based Earth Observation Research Project of National Natural Science Foundation of China and the Chief Scientist of the Big Earth Data Science Engineering Project of CAS. He has published more than 500 papers and 24 books, and is the awardee of 18 domestic and international prizes.

Csaba Kőrösi

The 77th President of the UN General Assembly. As a career diplomat, he has spent entire professional life in public service, combining national duties with assignments received from various international communities. He has held several high-ranking positions, including Deputy State Secretary in charge of security policy, multilateral diplomacy and human rights; Vice-President of the UN General Assembly (2011-12); Co-chair of the UN Open Working Group on SDGs; State Secretary for Environmental Sustainability, Office of the President of Hungary (2015-2022); etc. As Director (State Secretary) of the Office of the President of Hungary, he had the duty and privilege to work alongside the President of the Republic in discharging his functions as a member of the High-level Panel on Water, co-convened by the Secretary-General and the President of the World Bank Group. He performed a similar role in the framework of the Water and Climate Leaders panel, co-convened by the Secretary-General of the World Meteorological Organization and the President of UN-Water. During his tenure as President of the UN General Assembly, he was the co-chair of the intergovernmental process (Open Working Group of the General Assembly on Sustainable Development Goals) tasked with producing the 2030 Agenda for Sustainable Development and the Sustainable Development Goals at its heart. He is a founding member of the Hungarian Scientific Panel on Climate Change and a permanent invitee to the Presidential Committee on Sustainable Development at the Hungarian Academy of Sciences and the National Council on Sustainable Development at the Hungarian National Assembly.

Gretchen Kalonji

Former Assistant Director-General for Natural Sciences, UNESCO, the Dean of the Sichuan University-Hong Kong Polytechnic University Institute for Disaster Management and Reconstruction and as Strategic Advisor to the Institutional Development of Sichuan University, CBAS Fellow. Prof. Kalonji has been working closely with China for 22 years and has made remarkable contributions to the development of research and education in China. She was awarded the TIANFU Friendship Award in 2020. In partnership with UNESCO, under the U-INSPIRE framework, she has worked with networks of young scholars from many countries in Asia, who collaborate across national boundaries on disaster research. She also co-leads the Secretariat of the Alliance of Alliances on Research and Education on Water and Disasters (AoA), which is a flagship initiative of the High-Level Panel on Water and Disasters. Within Sichuan, Kalonji led the establishment of the Ministry of Education's Youth Disaster Prevention and Reduction Education Base at Sichuan University, the creation of the Sichuan Province Emergency Management Department - Sichuan University new key laboratory on "Integrated Disaster Sciences and Management", and a "Natural Disaster Emergency Management and Post-Disaster Reconstruction" think tank.

Session Speakers:

Irina Bokova

Co-chair of the International Science Council's Global Commission on Science Missions for Sustainability, Former Director-General of UNESCO. Irina Bokova, born in Sofia (Bulgaria), has been two terms Director-General of UNESCO from 2009 to 2017. As Director-General of UNESCO, Irina Bokova was actively engaged in the adoption of UN Agenda 2030 for Sustainable Development, particularly on "inclusive and equitable quality education and life-long learning for all", promoting the critical role of culture and science for development, as well as the protection of the world's cultural heritage. From 2013 to 2017 she chaired the Scientific Advisory Board with the UN Secretary General, entrusted to analyse and give recommendations to the science-policy interface within the Sustainable Development Agenda. She has received state distinctions from more than 40 countries and is Doctor honoris causa of leading universities across the world, such as King's College, Durham University and University of Edinburgh, UK, Paris-Saclay, France, Boston University, US, Catholic University of Milan, Italy, Tonji University, China, among others. In 2016 Irina Bokova was on the Forbes list of the most influential women. In 2020, she was elected

International Honorary Member of the American Academy of Arts and Sciences and in 2021 - Honorary Fellow of the World Academy of Arts and Sciences (WAAS). In 2022 Irina Bokova was elected Patron of the International Science Council (ISC). Currently, Bokova is a Member of "Ban Ki Moon Centre for Global Citizens", Chair of the Board of Governors of the UN University of Peace, Costa Rica, Member of the Global Advisory Board of the Tsinghua School of Public Policy and Management (SPPM), Member of the Concordia Leadership Council, New York, Member of the Leadership Council of the Sustainable Development Solutions Network (SDSN), among others.

Johannes Cullmann

Scientific Advisor to the President of the 77th United Nations General Assembly and Director of the Climate and Water Department at World Meteorological Organization. Johannes moved to Geneva from the German Federal Institute of Hydrology, where he served as director responsible for strategy, science and partnerships. Prior to this, Johannes coordinated the German Transportation Ministry's international water affairs and directed the German committee for the water programmes of UNESCO and WMO. He was Senior Advisor to WMO's water activities and President of UNESCO`s Intergovernmental Council on water from 2012 to 2014. In his function as a department head in the German Federal Institute for Hydrology, he was the German representative to the Commission for the Hydrology of the Rhine River and co-organised the first climate change impact analysis for the Rhine River. One of Johannes's continuous focus areas has been data and information. He was responsible for German support for UNEP's water quality monitoring systems related activities. He is familiar with data and information sharing arrangements in support of creating political trust in disputed situations. Johannes worked as a scientist for the Max Planck Institute in Amazonia, Brazil and as a development specialist for the German Development Cooperation in Chile.

Simon Redfern

Dean of the College of Science at Nanyang Technological University (NTU) and President's Chair in Earth Sciences. Redfern is a mineralogist, trained as a crystallographer, who is interested in the links between atomic scale structure and the physical and chemical properties of planetary materials, from Earth's oceans to its core. His scientific research career, focused on mineral sciences and more broadly within geosciences, spans more than 35 years. In 2016 he became Head of the Department of Earth Sciences at the University of Cambridge. He left Cambridge in 2019 to move to NTU and take up the post of President's Chair in Earth Sciences, alongside the role of Dean of the College of Science. He is an Emeritus Fellow of Jesus College, University of Cambridge. He is the recipient of the European Mineralogical Society's Medal for Research Excellence and is the only individual to have been awarded both the Max Hey and Schlumberger Medals of the Mineralogical Society of Great Britain and Ireland, of which he is a Fellow. He is also Fellow of the Mineralogical Society of

America and of the Geological Society of London. Professor Redfern is keen to translate scientific discovery to wider audiences and served as a British Science Association Media Fellow working alongside journalists at the BBC for some time. He was also a member of the UK ministerially appointed Committee on Radioactive Waste Management charged with providing independent scrutiny of the development of a geological radioactive waste repository in the UK.

Shahbaz Khan

Chief of the Water and Sustainable Development Section, Director of UNESCO Multisectoral Regional Office for East Asia. Prof Khan has worked in Australia, France, Indonesia and Pakistan in various research, consultancy and policy positions. Before joining UNESCO, he was Professor and Director at the Charles Sturt University (Australia). His work has been widely recognized e.g. 2019 China Friendship Award, Great Wall Friendship Award China 2017, FEIAP Engineer of the Year Award 2016, UNESCO Team Award for Managing Hydro Hazards 2009, Land and Water Australia's Eureka Prize 2007, CSIRO Medal 2007, Biennial Medal of the Modelling and Simulation Society of Australia and New Zealand. Prof Shahbaz Khan is currently Adjunct Professor at the University of Canberra and Western Sydney University (Australia), Adjunct Professor at the Lincoln University (New Zealand), Distinguished Professor at the National University of Science and Technology (Pakistan) and Distinguished Professor at the Capital Normal University (China).

Deliang CHEN

Member of the Royal Swedish Academyof Sciences, he is an internationally renowned climatologist who has made significant achievements in the areas of the relationship between regional climate and atmospheric circulation, climate dynamics and climate change. His primary work involves climate and environmental changes over the Third Pole (Tibetan Plateau) region and their impacts on ecosystems and water resources. Chen is an ISC (International Science Council) Fellow and a member of the Royal Swedish Academy of Sciences, the European Academy of Sciences and Arts, the Royal Academy of Arts and Sciences of Gothenburg, the Academy of Sciences for Developing Countries, and a foreign member of the Chinese Academy of Sciences and the Norwegian Academy of Sciences and Letters. He has been active in the international scientific community for many years, particularly in Sweden and China. From 2009 to 2012, he served as Executive Director of the International Council for Science (ICSU), making significant contributions to global scientific research leadership, coordination and collaboration. Chen previously served as the Science Director of the National Climate Center at the China Meteorological Administration and the Center for Atmospheric Sciences in Gothenburg, Sweden. He has served as a scientific advisor and reviewer to many governments, intergovernmental and international non-governmental organizations and national research funding agencies, and on scientific steering committees and councils of internationally renowned research centres and programs. He has also served as a judge of international awards such as the

Volvo Environment Prize and Olav Thon Award, a member of the Project Evaluation Committee of the Institute of Humanities and Nature Research in Japan, a member of the expert group of the National Major Scientific Research Program on Global Change Research of the Ministry of Science and Technology of China and the Board of the Stockholm Resilience Centre, Chair of the Scientific Advisory Committee of the Swedish Environment and Climate Data Centre, Chair of the Nomination Committee for the Stockholm Water Prize, and Chair of the Division of Geosciences of the Royal Swedish Academy of Sciences. He also served as a contributing, lead, and coordinating lead author for the Working Group I of three IPCC assessment reports, and as editor of several international scientific journals. and he won the 2016 International Science and Technology Cooperation Award from the Chinese Academy of Sciences and the 2017 International Science and Technology Cooperation Award from the People's Republic of China. Recently, he was listed in the @ Reuters Hot List of top climate scientists in the world and was awarded the H. M. the Swedish King's Medal for his outstanding contributions to Swedish and international climate research.

GONG Peng

Vice-President of the University of Hong Kong, tenured professor at the University of California at Berkeley, USA, former Dean of the Faculty of Science at Tsinghua University, researcher at the Institute of Remote Sensing Applications of the Chinese Academy of Sciences, and so on. His major research interests include mapping and monitoring of global environmental change, modelling environmentally related infectious diseases such as schistosomiasis, avian influenza, dengue, and COVID-19, and healthy cities. He is the author/co-author of over 600 articles and 10 books and has chaired/co-chaired 9 research reports on climate change and health and healthy cities in China. Internationally, he has served as a member of the Earth League, the Future Earth Advisory Committee, the Earth Commission, and the Publishing Committee of the American Geophysical Union. He is also a member of the editorial board or advisory group of more than 10 international publications including the Lancet.

GONG Ke

Executive Director of the Chinese Institute for the New Generation Artificial Intelligence Development Strategies, Director of Haihe Laboratory of Information Technology Application Innovation. He had been the Dean of the Department of Electronic Engineering, Director of Tsinghua Aerospace Research Center, Deputy Dean of the Graduate School, Director of the Science & Technology Office, Director of Chinese State Key Laboratory on Microwave and Digital Communications, and Director of Chinese National Research Center for Information Science and Technology (formerly known as the National Lab) at Tsinghua. From 1999-2006 he was vice president of Tsinghua University for research and strategic planning. From 2006-2011 he was President of Tianjin University, then the President of Nankai University from 2011 to 2018. Prof.

GONG has led a number of research projects in wireless communications including the initiative on developing China's wireless transmission standard for digital television as well as the research on experimental microsatellite, through which he has received a number of awards including the National Technological Invention Award. He is foreign member of the Russian Academy of Cosmonautics. He has served as member the Experts Committee of the National High-tech R&D Program (2001-2010) for space technology, and served as member of standing committee of Chinese Association of Science and Technology (2006-2016), etc.

Dwikorita Karnawati

Director of the Indonesian Agency for Meteorology, Climatology and Geophysics. Previously, she was the first female President of Universitas Gadjah Mada and Professor in Environmental Geology and Disaster Mitigation. She is an internationally recognized expert on disaster risk reduction and early warning, with a PhD in Earth Sciences and post-doctoral research on hydro-meteorological disaster prediction. She has served as Vice-President of the International Consortium on Landslides since 2015 and chairs the Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System. Prof. Karnawati has actively promoted integration of social concerns in technical systems for disaster risk reduction, leading to the adoption of an international standard for community-based landslide early warning (ISO 22327). She also led efforts for the establishment of the Multi-Hazard Early Warning System in Indonesia. In her current role, she drives innovation on early warning technology and impact-based forecasting systems, powered by big data, artificial intelligence and the Internet of Things.

Anil Mishra

Chief of Hydrological Systems, Climate Change and Adaptation within UNESCO's Intergovernmental Hydrological Programme. He has been involved in a number of international scientific research studies, including education, capacity building, co-operation and project development programmes in the fields of hydrology and water resources management in Africa, Asia and Europe and Americas. He joined the UNESCO Almaty Cluster Office in Kazakhstan in 2006 as a Hydrology and Science Officer. He was responsible for planning, managing and implementation of the International Hydrological Programme (IHP) in the Central Asian region. He coordinated activities related to melting glaciers and impacts on water resources in the region. Dr. Mishra has authored numerous scientific publications, edited books, reports and convened and co-convened conferences focusing on Hydrology, Water Resources and Climate Change Adaptation.

Session Title: Digital Technologies for Advancing Sustainable Development Goals - Youth Action

Time: 13:00 - 16:15

Room: 305E

Date: 2024-09-07

Moderator:

CHEN Fang

Professor & Deputy Director General

International Research Center of Big Data for Sustainable Development Goals

Dr. Fang Chen is the Deputy Director General of the International Research Center of Big Data for Sustainable Development Goals (CBAS), and a Professor of the Chinese Academy of Sciences (CAS) Aerospace Information Research Institute. His work focuses on adapting Big Earth Data technologies to meet the SDGs assessment needs (mainly for SDG 11 and SDG 13) of developing countries, including Nepal, Thailand, and Small Island Developing States (SIDS). Dr. Chen also conducts interdisciplinary work combining remote sensing, geology, and other fields of study to assess spatial and temporal patterns of disaster risk, including glacial lake outburst floods, landslides, wildfires, drought, and earthquakes, especially in the Himalayas and other parts of High Mountain Asia. Dr. Chen has published over 100 academic papers and book chapters.

ZHU Xufeng

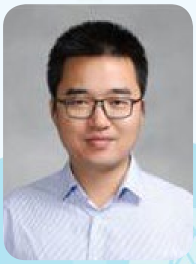
Professor &Executive Director

Institute for Sustainable Development Goals, Tsinghua University

Participants:

Event 1 (13:00-13:10)

Coastal phytoplankton blooms expand and intensify in the 21st century



FENG Lian

Professor &Associate Dean

Southern University of Science and Technology

Lian Feng is a full professor/Associate Dean at Southern University of Science and Technology. He has been long engaged in the research of the theory, methods, and applications of water environment remote sensing. Around the goal of SDG 6 (Clean Water and Sanitation), he has specifically carried out work on the analysis of optical signal transmission and imaging mechanisms in water bodies, the development of remote sensing algorithms and dataset production for water environments on global and regional scales, and the analysis of water environment evolution patterns and mechanisms. He has published approximately 100 papers in journals such as Nature, Nature Geoscience, Nature Water, Nature Communications, Remote Sensing of Environment.

Event 2 (13:12-13:24)

Saving food mitigates climate change

PRADHAN Prajal

Assistant Professor

University of Groningen, Netherlands

Prajal Pradhan is an Assistant Professor at the University of Groningen. Prajal was a lead author of the IPCC Special Report on Climate Change and Land and a contributing author of the AR6 IPCC WG III Report and the AR6 IPCC WG II Report. He has experience in designing relevant research on sustainable development, climate change, and food systems. Prajal is an expert in food systems, climate change, and sustainable development goals (SDGs). His current research focuses on understanding the necessary conditions for long-term sustainability, including achieving SDGs, urban transformations, and climate resilience.

Event 3 (13:24-13:36)

Modeling and Simulation for SDG

CHEN Min

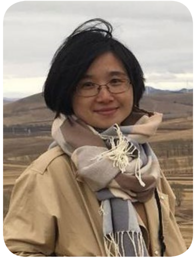
Professor

Nanjing Normal University

Dr. Min Chen, professor of geography at Nanjing Normal University and recipient of the National Science Fund for Distinguished Young Scholars of China, primarily focuses on geographic modeling and simulation research and has led the development of OpenGMS, a model-sharing and collaborative simulation platform that has Chinese own brand and characteristics in an open web environment. He has published over 190 publications in journals such as Nature Reviews Earth & Environment and Nature Communication. Taking cross-comprehensive modeling of SDG multi-indicators as an entry point, he has researched dynamic simulation and scenario analysis of sustainable development. He has made significant contributions to synergy and trade-off, as well as comprehensive simulation among SDG indicators.

Event 4 (13:36-13:48)

International Food Trade Contributes to Dietary Risks and Mortality at Global, Regional and National Levels



ZUO Lijun

Professor

Aerospace Information Research Institute, Chinese Academy of Sciences

Dr. Lijun Zuo is a professor of Aerospace Information Research Institute, Chinese Academy of Sciences (CAS), and International Research Center of Big Data for SDGs, SDG 2 coordinator of "Big Earth Data Supporting the Sustainable Development Goals". Her research focuses on remote sensing of land use, and impact of land use change on food security and ecosystems. She has published more than 80 papers in journals including Nature Sustainability, Remote Sensing of Environment, etc.

Event 5 (13:48-14:00)

Ecosystem changes, thresholds, and sustainable development in Dryland

WANG Shuai

Professor

Beijing Normal University

Shuai Wang is a professor of Beijing Normal University. His areas of specialization are ecohydrology and structure, function and dynamic of coupled human and environment systems.

Panel Discussion-Part 1

Topics: How can digital technologies advance SDGs?

Time: 14:00-14:30

Panel Speakers:

ZHANG Yongqiang
Professor
Institute of Geographic Sciences and Natural Resources Research

Yongqiang Zhang is a Distinguished Professor/Deputy Director of Key Laboratory of Water Cycle and Land Surface Processes. He has been long engaged in the research of regional and global water cycle and water security. Around the goal of SDG 6, Professor Zhang has specifically carried out work on hydrological processes in a changing environment, water resources security and sustainable use, and has published 240 papers in journals such as Science, Nature Water and Nature Communications.

LIU Yongxue
Professor
Nanjing University

Yongxue Liu is a professor of School of Geography and Ocean Sciences (SGO) at Nanjing University. He has long been engaged in research on information extraction, monitoring and analysis of offshore energy infrastructure, and time series remote sensing analysis on a global scale. Around the goal of SDG 14, Prof Liu has specifically conducted work on global oil spill detection and analysis, global offshore gas flaring estimation, and has published more than 40 papers in journals such as Science, Nature Sustainability, Remote Sensing of Environment, and other Tier-1 journals.

FENG Lian
Professor &Associate Dean
Southern University of Science and Technology

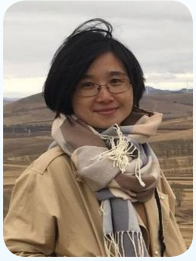
Lian Feng is a full professor/Associate Dean at Southern University of Science and Technology. He has been long engaged in the research of the theory, methods, and applications of water environment remote sensing. Around the goal of SDG 6 (Clean Water and Sanitation), he has specifically carried out work on the analysis of optical signal transmission and imaging mechanisms in water bodies, the development of remote sensing algorithms and dataset production for water environments on global and regional scales, and the analysis of water environment evolution patterns and mechanisms. He has published approximately 100 papers in journals such as Nature, Nature Geoscience, Nature Water, Nature Communications, Remote Sensing of Environment.

PRADHAN Prajal
Assistant Professor
University of Groningen, Netherlands

Prajal Pradhan is an Assistant Professor at the University of Groningen. Prajal was a lead author of the IPCC Special Report on Climate Change and Land and a contributing author of the AR6 IPCC WG III Report and the AR6 IPCC WG II Report. He has experience in designing relevant research on sustainable development, climate change, and food systems. Prajal is an expert in food systems, climate change, and sustainable development goals (SDGs). His current research focuses on understanding the necessary conditions for long-term sustainability, including achieving SDGs, urban transformations, and climate resilience.

CHEN Min
Professor
Nanjing Normal University

Dr. Min Chen, professor of geography at Nanjing Normal University and recipient of the National Science Fund for Distinguished Young Scholars of China, primarily focuses on geographic modeling and simulation research and has led the development of OpenGMS, a model-sharing and collaborative simulation platform that has Chinese own brand and characteristics in an open web environment. He has published over 190 publications in journals such as Nature Reviews Earth & Environment and Nature Communication. Taking cross-comprehensive modeling of SDG multi-indicators as an entry point, he has researched dynamic simulation and scenario analysis of sustainable development. He has made significant contributions to synergy and trade-off, as well as comprehensive simulation among SDG indicators.



ZUO Lijun
Professor
Aerospace Information Research Institute, Chinese Academy of Sciences

Dr. Lijun Zuo is a professor of Aerospace Information Research Institute, Chinese Academy of Sciences (CAS), and International Research Center of Big Data for SDGs, SDG 2 coordinator of "Big Earth Data Supporting the Sustainable Development Goals". Her research focuses on remote sensing of land use, and impact of land use change on food security and ecosystems. She has published more than 80 papers in journals including Nature Sustainability, Remote Sensing of Environment, etc.

WANG Shuai
Professor
Beijing Normal University

Shuai Wang is a professor of Beijing Normal University. His areas of specialization are ecohydrology and structure, function and dynamic of coupled human and environment systems.

14:45-14:57

Widespread societal and ecological impacts from projected Tibetan Plateau lake expansion

ZHANG Guoqing
Professor
Institute of Tibetan Plateau Research, CAS

Guoqing Zhang is a professor at the Institute of Tibetan Plateau Research, Chinese Academy of Sciences. He has long been engaged in research on remote sensing of lakes, lake changes and disaster impacts on the Tibetan Plateau. In the context of the SDG [Goal 13: Take urgent action to address climate change and its impacts], Guoqing Zhang has specifically worked on the response of lake variability to climate change and disaster risk on the Tibetan Plateau, and has published about 100 papers in journals such as Nature Geoscience, Nature Reviews Earth & Environment, and Geophysical Research Letters.

14:57-15:09

Metacoupling for sustainable development worldwide

XU Zhenci
Assistant Professor
University of Hong Kong

Zhenci Xu is an Assistant Professor of the University of Hong Kong. He has been engaged in long-term research on sustainable development analysis and the nexus of water-energy-food relationships, conducting specific spatiotemporal assessments and remote coupling studies around the comprehensive and interdisciplinary analysis of the SDGs. He has published 70 papers in journals such as Nature, Nature Sustainability, and Nature Communications.

15:09-15:21

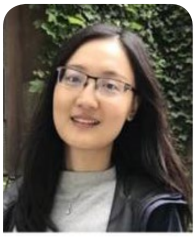
The response of global forest carbon to the recent drought and wildfire events

FAN Lei
Professor
Southwest University

Lei Fan is a professor at Southwest University. He has been long engaged in the research of remote sensing of global forest carbon change, the response mechanisms of forest carbon to climate change. Around the goal of SDG 15, Prof. Fan has specifically carried out work on Boreal carbon changes in response to wildfire, Tropical carbon changes in response to drought, and has published 16 papers in journals such as Nature Geoscience, Nature Plants, Science Advances.

15:21-15:33

Reversal of the levee effect towards sustainable floodplain management



LIN Peirong
Assistant Professor
Peking University

Dr. Peirong Lin is an Assistant Professor at Peking University. She dedicates herself to developing innovative methods and theory for next-generation hydrologic models that are better able to address emerging fundamental questions of hydrological science in a changing environment. Around the goal of SDG 11&13, she has specifically carried out work on global floodplain mapping and LULC analyses, and has published 16 first/corresponding author papers in journals such as Nature Sustainability.

15:33-15:45

Xiaolei Feng
Lecturer
Nanyang Technological University, Singapore

Dr. Xiaolei Feng is a lecturer at Nanyang Technological University, Singapore, with a focus on education in sustainable development. Trained as a physicist with a PhD from Jilin University (China), she pursued a second PhD in Earth Sciences at the University of Cambridge (UK), driven by a desire to broaden her understanding of materials within environmental contexts. Dr. Feng has a diverse research background, having served as a postdoctoral research fellow at the High Pressure Science and Technology Advanced Research Institute in China and as an associate professor at the Institute for Disaster Management and Reconstruction at Sichuan University.

15:45-15:57

Intranational synergies and trade-offs reveal common and differentiated priorities of sustainable development goals in China

XING Qiang
Assistant Professor
International Research Center of Big Data for Sustainable Development Goals

Qiang Xing is the assistant professor of the International Research Center of Big Data for Sustainable Development Goals (CBAS) and Aerospace Information Research Institute, Chinese Academy of Sciences. He has been long engaged in the research of sustainable development. Focusing on the 17 SDGs, he conducted research on the interactions among different SDGs, the progress of SDGs, and the application of big earth data in SDG2, SDG6, SDG11 and SDG15. He has published 21 papers in journals such as Nature Communications.

Panel Discussion-Part 2

Topics: How can digital technologies advance SDGs?

Time: 15:57-16:25

Panel Speakers:

HANSEN Matthew
Professor
University of Maryland, Colledge Park

Prof. Matthew Hansen is a remote sensing scientist with a research specialization in large area land cover and land use change mapping. His research is focused on developing improved algorithms, data inputs and thematic outputs which enable the mapping of land cover change at regional, continental and global scales. Such maps enable better informed approaches to natural resource management, including deforestation and biodiversity monitoring and can also be used by other scientists as inputs to carbon, climate and hydrological modeling studies.

ZHANG Guoqing
Professor
Institute of Tibetan Plateau Research, CAS

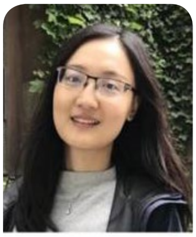
Guoqing Zhang is a professor at the Institute of Tibetan Plateau Research, Chinese Academy of Sciences. He has long been engaged in research on remote sensing of lakes, lake changes and disaster impacts on the Tibetan Plateau. In the context of the SDG [Goal 13: Take urgent action to address climate change and its impacts], Guoqing Zhang has specifically worked on the response of lake variability to climate change and disaster risk on the Tibetan Plateau, and has published about 100 papers in journals such as Nature Geoscience, Nature Reviews Earth & Environment, and Geophysical Research Letters.

XU Zhenci
Assistant Professor
University of Hong Kong

Zhenci Xu is an Assistant Professor of the University of Hong Kong. He has been engaged in long-term research on sustainable development analysis and the nexus of water-energy-food relationships, conducting specific spatiotemporal assessments and remote coupling studies around the comprehensive and interdisciplinary analysis of the SDGs. He has published 70 papers in journals such as Nature, Nature Sustainability, and Nature Communications.

FAN Lei
Professor
Southwest University

Lei Fan is a professor at Southwest University. He has been long engaged in the research of remote sensing of global forest carbon change, the response mechanisms of forest carbon to climate change. Around the goal of SDG 15, Prof. Fan has specifically carried out work on Boreal carbon changes in response to wildfire, Tropical carbon changes in response to drought, and has published 16 papers in journals such as Nature Geoscience, Nature Plants, Science Advances.



LIN Peirong
Assistant Professor
Peking University

Dr. Peirong Lin is an Assistant Professor at Peking University. She dedicates herself to developing innovative methods and theory for next-generation hydrologic models that are better able to address emerging fundamental questions of hydrological science in a changing environment. Around the goal of SDG 11&13, she has specifically carried out work on global floodplain mapping and LULC analyses, and has published 16 first/corresponding author papers in journals such as Nature Sustainability.

Xiaolei Feng
Lecturer
Nanyang Technological University, Singapore

Dr. Xiaolei Feng is a lecturer at Nanyang Technological University, Singapore, with a focus on education in sustainable development. Trained as a physicist with a PhD from Jilin University (China), she pursued a second PhD in Earth Sciences at the University of Cambridge (UK), driven by a desire to broaden her understanding of materials within environmental contexts. Dr. Feng has a diverse research background, having served as a postdoctoral research fellow at the High Pressure Science and Technology Advanced Research Institute in China and as an associate professor at the Institute for Disaster Management and Reconstruction at Sichuan University.

XING Qiang
Assistant Professor
International Research Center of Big Data for Sustainable Development Goals

Qiang Xing is the assistant professor of the International Research Center of Big Data for Sustainable Development Goals (CBAS) and Aerospace Information Research Institute, Chinese Academy of Sciences. He has been long engaged in the research of sustainable development. Focusing on the 17 SDGs, he conducted research on the interactions among different SDGs, the progress of SDGs, and the application of big earth data in SDG2, SDG6, SDG11 and SDG15. He has published 21 papers in journals such as Nature Communications.

Session Title: Digital technologies to empower sustainable agriculture

Time: 14:45 - 16:15

Room: 305B

Date: 2024-09-07

Moderator:

Wenbin Wu

Professor

Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences, China

Wenbin Wu is the Director and Researcher of the Institute of Agricultural Resources and Regional Planning of the Chinese Academy of Agricultural Sciences, and a Ph.D. supervisor. He also holds positions as the Deputy Director of the National Key Laboratory of Arid and Semi-Arid Northern China, Director of the National Digital Agriculture Innovation Center, Director of the Key Laboratory of Agricultural Remote Sensing of the Ministry of Agriculture and Rural Affairs, and is the Chief Editor of CABI Bioscience and Agriculture, Chinese Agricultural Resources and Regional Planning, and Chinese Agricultural Information. He has long been engaged in theoretical and technical research in the fields of agricultural remote sensing, digital agriculture, and intelligent arable land, achieving significant results in integrated sky-earth intelligent perception of agricultural land systems, remote sensing monitoring, and intelligent evaluation. He has won 2 Second Prizes for National Science and Technology Progress, 6 provincial and ministerial scientific and technological awards, published more than 160 journal research papers, and has been selected for the Ministry of Science and Technology's "Innovation Talent Promotion Plan" and the national special support plan for high-level talents.

Marie Weiss

Professor

(National Research Institute for Agriculture, Food and the Environment (INRAe), France)

Dr. Marie Weiss is working at the French National Institute of Agronomic Research (INRA), in Avignon, France. She is the Editors-in-Chief of Remote Sensing of Environment. She received an engineering diploma in signal and image processing from ENSEEIHT (Toulouse, France) in 1995 and a PhD (University of Nice Sophia- Antipolis, France) in 1998. Her main research interest is the development and the validation of algorithms for the estimation of biophysical variables such as leafarea index (LAI) and fraction of absorbed photosynthetically active radiation (fAPAR) from remote sensing data. She has been working on the development ofoperational products from European satellites (VEGETATION, PROBAV, SENTINEL2). She was also involved in designing instruments and softwares for proxy sensing (e.g. CAN-EYE, PASTiS, SCANAREA). More recently, she is focusing on very high resolution sensing byUAVs and mobile robots for applications in phenotyping contexts. She is also co-leader ofthe CEOS (Committee on Earth Observation Satellites) LPV (Land Product Validation) subgroup on fAPAR since 2017.

Participants:

Event 1 (14:45-15:05)

Using Big Data to Assess Vegetation Traits in Crop Close Range and Remote Sensing

Marie Weiss

Professor

(National Research Institute for Agriculture, Food and the Environment (INRAe), France)

Dr. Marie Weiss is working at the French National Institute of Agronomic Research (INRA), in Avignon, France. She is the Editors-in-Chief of Remote Sensing of Environment. She received an engineering diploma in signal and image processing from ENSEEIHT (Toulouse, France) in 1995 and a PhD (University of Nice Sophia- Antipolis, France) in 1998. Her main research interest is the development and the validation of algorithms for the estimation of biophysical variables such as leafarea index (LAI) and fraction of absorbed photosynthetically active radiation (fAPAR) from remote sensing data. She has been working on the development ofoperational products from European satellites (VEGETATION, PROBAV, SENTINEL2). She was also involved in designing instruments and softwares for proxy sensing (e.g. CAN-EYE, PASTiS, SCANAREA). More recently, she is focusing on very high resolution sensing byUAVs and mobile robots for applications in phenotyping contexts. She is also co-leader ofthe CEOS (Committee on Earth Observation Satellites) LPV (Land Product Validation) subgroup on fAPAR since 2017.

Event 2 (15:05-15:20)

Progress and Application of Quantitative Remote Sensing in Smart Agriculture

Guijun Yang

Professor

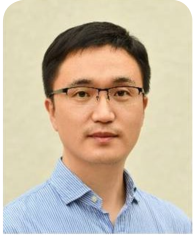
Chang'an University, China

Guijun Yang, Distinguished Professor of the Yangtze River Scholar, Chang 'an University. He is mainly engaged in agricultural quantitative remote sensing mechanism and application research, and has been listed in Elsevier's list of Highly cited Scholars in China since 2020, and Stanford University's World's Top 2% Scientists list. He has won five prizes, including the first Prize of Zhejiang Provincial Science and Technology Progress Award, the first prize of

Henan Provincial Science and Technology Progress Award, and the first prize of Science and Technology Progress Award of the Ministry of Education.

Event 3 (15:20-15:35)

Toward Global Paddy Rice Mapping in the Big Earth Data Era



Jinwei Dong

Professor

Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences, China

Dr. Jinwei Dong is a professor at the Institute of Geographic Sciences and Natural Resources Research (IGSNRR), Chinese Academy of Sciences (CAS), and director of the Key Laboratory of Resource Utilization and Environmental Restoration. He received his Ph.D. from the IGSNRR, CAS in 2010. Then he worked as a postdoctoral researcher, research scientist, and research assistant professor at the University of Oklahoma from 2010 to 2016, before he came back to work at IGSNRR CAS in 2016. Dr. Dong's studies focus on the land cover and land use change and its consequences by using big earth data and cloud-computing approaches. He has published over seventy SCI-indexed papers as the first or corresponding author in the leading journals such as Nature Sustainability, Nature Communications, and Remote Sensing of Environment. He was continuously recognized as one of the Highly Cited Scientists by Clarivate Analytics in 2021, 2022 and 2023.

Event 4 (15:35-15:50)

Crop Growth Monitoring Through Multi-source Remote Sensing Technologies

Wenjuan Li

Professor

Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences, China

Dr. Wenjuan Li is a professor and Ph.D. supervisor of the Institute of Agricultural Resources and Agricultural Planning of the Chinese Academy of Agricultural Sciences. She was recognized as a young talent by the Chinese Academy of Agricultural Sciences in 2022. She holds a Doctor of Science from the University of Chinese Academy of Sciences and a Doctor of Agronomy from the French Academy of Agricultural Sciences. Her main research focuses on extracting high-precision, spatiotemporally continuous farmland parameters from multi-source remote sensing platforms, applying these in smart farms, crop phenotyping studies, and related industries. She has published over 30 SCI paper, including Remote Sensing of Environment, and her developed algorithms and related technologies have been successfully applied in several intelligent farm management and breeding-related scientific research and industrial projects. Currently, she leads projects and subjects under the National Natural Science Foundation and the National Key R&D Program. She has been invited to join the editorial board of young scientists for Plant Phenomics since 2023.

Event 5 (15:50-16:05)

Crop Mapping of East Africa with Sample Generation and Deep Learning Model

Lijun Zuo

Professor

Aerospace Information Research Institute, Chinese Academy of Sciences, International Research Center of Big Data for Sustainable Development Goals, China

Dr. Lijun Zuo is professor of Aerospace Information Research Institute, Chinese Academy of Sciences (CAS), and International Research Center of Big Data for SDGs, deputy director of the National Engineering Research Center for Remote Sensing Applications of China, SDG 2 coordinator of "Big Earth Data Supporting the Sustainable Development Goals". Her research focuses on remote sensing of land use, and impact of land use change on food security and ecosystems. She hosted more than 10 major national science and technology projects, and has published more than 80 papers in journals including Nature Sustainability, Remote Sensing of Environment, etc.

Session Title: Earth Observation Systems in Geology Mass Identification, Investigation and Inventory Mapping

Time: 14:45 - 16:15

Room: 305C

Date: 2024-09-07

Moderator:

Shibiao Bai

Professor

School of Marine Science and Engineering, Nanjing Normal University, Nanjng, China

Professor Bai is a Professor and Vice Dean at Nanjing Normal University's School of Marine Science and Engineering. He holds a Ph.D. in Cartography and Geographic Information Systems. His expertise is in Geographic Information Science, Remote Sensing, and Natural Hazards Assessment. He has led multiple national research projects and has over 100 publications with 4,000 citations. Bai has conducted research at IMHE, CAS, and universities in Austria and Switzerland.

Jianbao Sun

Professor

State Key Lab. of Earthquake Dynamics, Institute of Geology, China Earthquake Administration, Beijing, China

Jianbao Sun received his B.S. degree in Applied Geophysics from the East China Institute of Technology in 1997. He then worked for two years in China's nuclear industry. In 2002, he earned his M.S. degree in Geophysics from the Institute of Geology, China Earthquake Administration. In 2005, he completed his Ph.D. in Remote Sensing Applications at Beijing Normal University. He is currently a Professor of Geophysics and Geodesy at the Institute of Geology, China Earthquake Administration, and serves as a Ph.D. supervisor. His research interests focus on remote sensing applications for studying earthquake cycle deformation and geodynamic problems, utilizing InSAR and GNSS techniques. He is the Principal Investigator (PI) of the ESA-MOST Dragon projects (Dragon-1 to Dragon-5) and a Co-PI for Dragon-6. Additionally, he is a scientific member of the ESA FRINGE meeting. He has published around 40 papers in journals such as *Nature Geoscience, Journal of Geophysical Research (JGR), Geophysical Research Letters (GRL), and Earth and Planetary Science Letters (EPSL).*

Participants:

Event1 (14:45 - 15:00)

Probability hazard assessment of earthquake-triggered landslides in China

Chong Xu

Research Professor

National Institute of Natural Hazards, Ministry of Emergency Management of China

Chong Xu is the Professor at National Institute of Natural Hazards, Ministry of Emergency Management of China, the Director of the Committee on Earthquake Hazard Chain, Seismological Society of China, the Director of the Key Laboratory of Compound and Chained Natural Hazards Dynamics, Ministry of Emergency Management of China, and the Director of the Geological Hazards Research Center, National Institute of Natural Hazards. He got his Ph.D. at Institute of Geology and Geophysics, Chinese Academy of Sciences in 2010. His research interests include earthquake-triggered landslides, rainfall-induced landslides, and geological hazards using GIS, remote sensing, and statistical analysis techniques. By virtue of the study of earthquake-triggered landslides over 10 years, he has obtained a series of scientific research achievements of this subject, including database construction and criteria of earthquake-triggered landslides, quantitative description of landslide distribution, addressing issues of earthquake geology, landslide volume modeling, and hazard assessment. He has published over 400 papers with over 15000 citations and an h-index 60 from Google Scholar. He was selected into Elsevier's "China's highly cited scholars" since 2020. His research achievements, mainly on landslides triggered by large earthquakes and heavy rainfalls, have been extended to about 150 research institutes and universities worldwide.

Event2 (15:00 - 15:15)

Research on Digital Underground Space in the Yangtze River Delta Urban Agglomeration

Xulong Gong

Professor

Geological Survey of Jiangsu Province, Jiangsu Geological Bureau, Nanjing, China

Gong Xulong is the Professor at Geological Survey of Jiangsu Province, The Director of Science and Technology, Geological Survey of Jiangsu Province, the Director of the Environmental Geology Research Institute, the Director of the Big Data Center, and the Vice Chairman of the second council of the Jiangsu Underground Space Society. Awarded the title of "Most Beautiful Geologist" in the national geological exploration industry and the Youth Geological

Contribution Award for field work, won the second prize of the Ministry of Natural Resources Land and Resources Science and Technology Award three times, and the third prize of Jiangsu Province Science and Technology Award once, received a personal commendation, and was selected into the fifth and sixth phases of the "333 High-Level Talent Training Project" in Jiangsu Province. His research interests include comprehensive geological surveys, ground subsidence monitoring networks, monitoring and early warning and prevention and control of ground fissures, urban planning construction and safe operation, and multi-source data coupling for urban underground space resource surveys, evaluation, and intelligent control. He has presided over more than 20 major projects such as geological resource and environmental surveys, comprehensive utilization of underground space resources, and monitoring, early warning and prevention and control of ground subsidence and ground fissures.

Event 3 (15:15-15:30)

Landslide susceptibility assessment based on multi-sources data from Zigui to Badong section of the Three Gorges Reservoir

Ningtao Wang

Professor

Wuhan Center, China Geological Survey (Central South China Innovation Center for Geosciences),China

Professor Ningtao Wang is Director of Geological Safety Assessment Office (Geological Disaster Investigation and Monitoring Center), Wuhan Center, China Geological Survey (Central South Geological Science and Technology Innovation Center). His main reserach directions is comprehensive investigation and research of hydrology, engineering and environmental geology, focusing on geological disaster investigation, evaluation, monitoring and simulation. He presided over 6 National Geological Survey and scientific research projects, including “Project of Comprehensive Geological Survey of hydrology, engineering and environmental geology in small towns of Guigang (12120114047201)” “Study on red bed landslide and reservoir bank control engineering technology in Three Gorges Reservoir area (000121 2019C C60 012)” “Study on meteorological early warning and prediction model and numerical simulation of geological hazards in the Qing River River basin (NSFC:41401607)”.

Event4(15:30-15:45)

Comprehensive Remote Sensing Survey and Research of Pakistan's Mining Subsidence

Hongli Zhao

Senior engineer

China Aero Geophysical Survey and Remote Sensing Center for Natural Resources (AGRS), China Geological Survey, Beijing, China

Hongli Zhao received the Ph.D. degrees in Remote Sensing of Resources and Environment from China University of Geosciences (Beijing), Beijing, China, in 2011, the M.S. degree in Solid Geophysics from the Institute of Geology, China Earthquake Administration, Beijing, China, in 2002. She is currently a Senior Engineer with AGRS. Her work interests include remote sensing application on geology and natural resources, especially ground motion monitoring using synthetic aperture radar (SAR) interferometry. She is the Main technical personnel of a project of National Key R&D Program of China (Grant No. 2021YFE0116800), and Demonstration of High Resolution Aerial Load Natural Resource Survey Application(Grant No. 04-H30G01-9001-20/22)

Event5 (15:45 - 16:00)

Application of Multi-Remote Sensing Technology in the Research of Reservoir Landslide Activity

Kuan Tu

Doctor Candidate; Senior Engineer

Wuhan University, China; Twenty First Century Aerospace Technology Co., Ltd. Beijing, China.

Kuan Tu is a doctoral candidate at the GNSS Center of Wuhan University, China. His expertise lies in landslide hazard identification, investigation, and monitoring. He focuses on combining multiple remote sensing technologies, including InSAR, LiDAR, and Satellite Stereo Technology, to research geohazards and improve the understanding of landslide mechanisms. Kuan Tu has made significant contributions to the scientific community through his research. He has many years of experience in remote sensing surveys of geological hazards and is actively involved in key R&D programs aimed at addressing complex geological challenges. He specializes in advancing the understanding of geohazards and environmental changes through innovative use of technology and data analysis.

Event6 (16:00 - 16:15)

Landslide Detection Along the China-Pakistan Economic Corridor (CPEC) Route in Mountainous Areas

Shibiao Bai

Professor

School of Marine Science and Engineering, Nanjing Normal University, Nanjng, China

Professor Bai is a Professor and Vice Dean at Nanjing Normal University's School of Marine Science and Engineering. He holds a Ph.D. in Cartography and Geographic Information Systems. His expertise is in Geographic Information Science, Remote Sensing, and Natural Hazards Assessment. He has led multiple national research projects and has over 100 publications with 4,000 citations. Bai has conducted research at IMHE, CAS, and universities in Austria and Switzerland.

Session Title: Open Geographic Information Standards and Services

Time: 14:45 - 16:15

Room: 305D

Date: 2024-09-07

Moderator:

Peng Yue

Prof.

Wuhan University

Dr. Peng Yue received the Ph.D. degree in geographic information system (GIS) from Wuhan University. He serves as the deputy dean at School of Remote Sensing and Information Engineering, Wuhan University. His research interests are Earth science data and information systems, Web GIS and GIServices, GIS software and engineering, and High-Definition Map for Autonomous Driving. He is the author or co-author of over 200 publications in refereed scientific journals, conference proceedings, and books.

He is the ISO/TC211 WG 4 Convenor, the founding Chair of OGC China Forum, former Chair of the IEEE Geoscience and Remote Sensing Society Earth Science Informatics Technical Committee, and Chair of OGC Training Data Markup Language for Artificial Intelligence (TrainingDML-AI) Standards Working Group. He also got the 2023 OGC Community Impact Award, a top prize from Chinese Society for Geodesy, Photogrammetry and Cartography in 2022, a first prize of 2016 Hubei Province Natural Science Award, a first prize of 2014 Natural Science Award in Ministry of Education of China, a first prize of 2013 Hubei Province Natural Science Award, a first place with the Crystal Bull Award in the 2013 Europa Challenge, and 2017 OpenMI association Award for outstanding contributions.

Guoqing Li

Prof.

Aerospace Information Research Institute, Chinese Academy of Sciences

Dr. Guoqing Li, is the director of National Earth Observation Data Center of China (NODA), the director of ChinaGEOSS Data Sharing Network, and a professor of Aerospace Information Research Institute in the Chinese Academy of Sciences. His favorite research areas concern high-performance remote-sensing image-processing technology and the big earth data. His main focus is currently on next-generation spatial data infrastructure and nature disaster data management. He has served as the Member of the Science Committee of World Data System and also the co-chair of CODATA Task Group on Linked Open Data for Global Disaster Risk Research since 2012. He was the winner of 2021 GEO Individual Excellent Award.

Liangcun Jiang

Dr.

Wuhan University of Technology

Dr. Liangcun Jiang received the Ph.D. degree in cartography and geographic information engineering from Wuhan University. His research interests are geographic information system and services, geospatial data provenance, and geospatial artificial intelligence. He is the member of ISO/TC211 WG 4 and member of OGC China Forum. He developed LuojiaSET, a large-scale training sample database for remote sensing. He also participated in OGC Training Data Markup Language for Artificial Intelligence (TrainingDML-AI) Standards.

Participants:

Event 1 (14:45 - 15:00)

Volunteered Rapid Disaster Monitoring and Mapping

Guoqing Li

Prof.

Aerospace Information Research Institute, Chinese Academy of Sciences

Dr. Guoqing Li, is the director of National Earth Observation Data Center of China (NODA), the director of ChinaGEOSS Data Sharing Network, and a professor of Aerospace Information Research Institute in the Chinese Academy of Sciences. His favorite research areas concern high-performance remote-sensing image-processing technology and the big earth data. His main focus is currently on next-generation spatial data infrastructure and nature disaster data management. He has served as the Member of the Science Committee of World Data System and also the co-chair of CODATA Task Group on Linked Open Data for Global Disaster Risk Research since 2012. He was the winner of 2021 GEO Individual Excellent Award.

Event 2 (15:00 - 15:15)

Guidelines for the Construction of the Intelligent Vehicle Basic Map Standard System in China

Long Huang

Mr.

Map Supervision Centre, Ministry of Natural Resources

Huang Long serves as the deputy director at Map Supervision Centre, Ministry of Natural Resources. He is a doctoral student at Wuhan University. His research interests are geographic information security, standardization of geographic information, high-precision map for autonomous driving, and crowd-sourced surveying and mapping. He is the author or co-author of over 20 publications in refereed scientific journals, conference proceedings, and books.

He has 5 invention patents. He participated in the preparation of a number of normative documents and standards.

He is the ISO/TC211 WG 4 expert, member of the Development Strategy Committee of Chinese Society for Geodesy Photogrammetry and Cartography, and member of the Autonomous driving High-Precision Map professional committee of China Satellite Navigation and Positioning Association. He got a special award of China Surveying and Mapping Science and Technology Progress in 2018.

Event 3 (15:15 - 15:30)

Improving Hydrological Model Interoperability with Open Geographic Information Standards and Web Services

Mingda Zhang

Prof.

Hubei University

Dr. Mingda Zhang received a Ph.D. in geographic cartography and geographic information engineering from Wuhan University. He currently serves as an Associate Professor at the Faculty of Resources and Environmental Science, Hubei University. His research interests include geospatial web services, integrated environmental modeling, and spatial data provenance.

His familiarity with open geographic information standards led to his appointment as the Open Geospatial Consortium (OGC) representative at Hubei University and his role as an ISO/TC211 WG 4 expert. He has led several projects with a hydrological focus, such as “Research on Web-Oriented Hydrological Model Sharing and Dynamic Integration” funded by the Natural Science Foundation of China, and “Research on Real-time Hydrological Modelling by Using Observation Data,” funded by Natural Science Foundation of Hubei Province. These works have improved the interoperability of hydrological models by leveraging the power of open geographic information standards and web services.

Event 4 (15:30 - 15:45)

The OGC TrainingDML-AI standard and Its Application in Establishing Remote Sensing Foundation Model

Boyi Shangguan

Dr.

Beijing Institute of Satellite Information Engineering

Dr. Boyi Shangguan is an engineer and technology researcher at the State Key Laboratory of Space-Earth Integrated Information Technology, Beijing Institute of Satellite Information Engineering. He received the Ph.D degree in geographic information system from Wuhan University, and his research expertise lies in the realm of processing and service methodologies for earth observation data. He is the co-chair of the OGC Training Data Markup Language for Artificial Intelligence Standard Working Group, and actively engages in driving the standardization process for AI in geospatial technology. He has also been an active participant in numerous OGC initiatives, such as the OGC Testbed-17 and the OGC Disaster Pilot 2019 projects.

Event 5 (15:45 - 16:00)

Geospatial Service Standardization: Recent Activities of ISO/TC 211 WG 4

Kaixuan Wang

Mr.

Wuhan University

Kaixuan Wang is a graduate student in the School of Remote Sensing and Information Engineering at Wuhan University. His research interests are Earth science data and information systems, high-performance geoprocessing, GIServices, GIS software, and engineering. He is dedicated to the development of several international standards. He is a member of the OGC Training Data Markup Language for Artificial Intelligence (TrainingDML-AI) Standards Working Group and has participated in the OGC Testbed series projects. He serves as the secretary of ISO/TC211 WG 4, contributing to the management of WG 4 projects and participating in the development of ISO 19178-1 and the revision of ISO 19119.

Event 6 (16:00 - 16:15)

Open Geographic Information Standards in Practice: Recent Activities of OGC China Forum

Haoru Wu

Mr.

Wuhan University

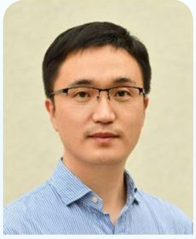
Haoru Wu is a doctoral student in the School of Remote Sensing and Information Engineering, Wuhan University. His research interests are efficient processing of large-scale remote sensing data and geographic information services. He is a member of the OGC Training Data Markup Language for Artificial Intelligence (TrainingDML-AI) Standards Working Group and Analysis Ready Data Standards Working Group, and participates in the development of ISO 19178-1 and the revision of ISO 19119. He also actively participates in the OGC Climate and Disaster Resilience Pilot 2024 and the OGC Urban Digital Twins Interoperability Pilot.

Session Title: Remote sensing big data and land system science
Time: 16:30 - 18:00
Room: 305B
Date: 2024-09-07

Moderator:

Le Yu
Associate Professor
Tsinghua University

Dr. Le Yu is an Associate Professor at the Department of Earth System Science, Tsinghua University. His research has been on the use of geographical information techniques to monitor and model global land use change, especially cropland and to facilitate many applications, e.g., food security, biodiversity conservation, and land system modelling. He particularly focuses on satellite-based methods to quantify the spatiotemporal change of land cover/use and understand their ecological, environmental, and socioeconomic impacts on sustainable development. He is Scientific Steering Committee (SSC) member of the Global Land Programme (GLP), Fellow of the Royal Geographical Society (RGS-IBG), Fellow of the Higher Education Academy, Senior Member of the Institute of Electrical and Electronics Engineers, and Prominent Visiting Researcher at the University of Technology Malaysia (UTM). He is currently Editor-in-Chief of Geo: Geography and Environment, Section Editor-in-Chief of LAND, Associate Editor of Journal of Remote Sensing, International Journal of Remote Sensing, and editorial board member of Global Sustainability, Geoscientific Model Development and Scientific Data.



Jinwei Dong
Professor
Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences

Dr. Jinwei Dong is a professor at the Institute of Geographic Sciences and Natural Resources Research (IGSNRR), Chinese Academy of Sciences (CAS), and director of the Key Laboratory of Resource Utilization and Environmental Restoration. He received his Ph.D. from the IGSNRR, CAS in 2010. Then he worked as a postdoctoral researcher, research scientist, and research assistant professor at the University of Oklahoma from 2010 to 2016, before he came back to work at IGSNRR CAS in 2016. Dr. Dong's studies focus on the land cover and land use change and its consequences by using big earth data and cloud-computing approaches. He has published over seventy SCI-indexed papers as the first or corresponding author in the leading journals such as Nature Sustainability, Nature Communications, and Remote Sensing of Environment. He was continuously recognized as one of the Highly Cited Scientists by

Clarivate Analytics in 2021, 2022 and 2023.

Hankui Zhang

Assistant Professor

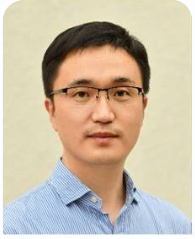
South Dakota State University

Hankui Zhang (he) is an Assistant Professor in the Department of Geography and Geospatial Sciences and a Scientist at the Geospatial Sciences Center of Excellence (GSCE) at South Dakota State University. He earned his Ph.D. in 2013 from the Chinese University of Hong Kong, with a thesis focusing on satellite image fusion. His current research primarily involves developing global-applicable algorithms to make medium-resolution satellite data (e.g., Landsat and Sentinel-2) ready-for-easy, which includes cloud masking, BRDF correction, and compositing. He also conducts research on advancing AI applications for remote sensing, focusing on surface geophysical and biophysical parameter retrieval, as well as land cover mapping for environmental monitoring. He is a Landsat Science Team member. Dr. Zhang has published over 60 SCI papers and serves as an Editorial Board member for Remote Sensing of Environment (RSE) and Remote Sensing. He has also organized a RSE special issue on deep learning applications.

Participants:

Event 1 (16:45-17:00)

Understanding the trade-offs of food, water and ecological securities following large scale agricultural land use changes in China



Jinwei Dong

Professor

Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences

Dr. Jinwei Dong is a professor at the Institute of Geographic Sciences and Natural Resources Research (IGSNRR), Chinese Academy of Sciences (CAS), and director of the Key Laboratory of Resource Utilization and Environmental Restoration. He received his Ph.D. from the IGSNRR, CAS in 2010. Then he worked as a postdoctoral researcher, research scientist, and research assistant professor at the University of Oklahoma from 2010 to 2016, before he came back to work at IGSNRR CAS in 2016. Dr. Dong's studies focus on the land cover and land use change and its consequences by using big earth data and cloud-computing approaches. He has published over seventy SCI-indexed papers as the first or corresponding author in the leading journals such as Nature Sustainability, Nature Communications, and Remote Sensing of Environment. He was continuously recognized as one of the Highly Cited Scientists by Clarivate Analytics in 2021, 2022 and 2023.

Event 2 (16:30-16:45)

An efficient and automated algorithm for full archive Landsat land cover classification and change detection

Hankui Zhang

Assistant Professor

South Dakota State University

Hankui Zhang (he) is an Assistant Professor in the Department of Geography and Geospatial Sciences and a Scientist at the Geospatial Sciences Center of Excellence (GSCE) at South Dakota State University. He earned his Ph.D. in 2013 from the Chinese University of Hong Kong, with a thesis focusing on satellite image fusion. His current research primarily involves developing global-applicable algorithms to make medium-resolution satellite data (e.g., Landsat and Sentinel-2) ready-for-easy, which includes cloud masking, BRDF correction, and compositing. He also conducts research on advancing AI applications for remote sensing, focusing on surface geophysical and biophysical parameter retrieval, as well as land cover mapping for environmental monitoring. He is a Landsat Science Team member. Dr. Zhang has published over 60 SCI papers and serves as an Editorial Board member for Remote Sensing of Environment (RSE) and Remote Sensing. He has also organized a RSE special issue on deep learning applications.

Event 3 (17:00-17:10)

China's ongoing rural to urban transformation benefits the population but is not evenly spread

Xin Chen

Associate professor

Shanxi University

Professor Xin Chen received his BSc and MSc degrees from China University of Mining and Technology (2014, 2017) and his PhD degree from the China Agricultural University (2021). From July 2021 to July 2023, he completed postdoctoral training at the Department of Earth System Science, Tsinghua University. In August 2023, he joined the Institute of Loess Plateau at Shanxi University as an associate professor to start his academic career. He was also honored with the Wen Ying Young Scholars Talent Program award at Shanxi University (2024). His research is highly interdisciplinary including land cover remote sensing mapping, ecological environment remote sensing, territorial spatial governance, and ecosystem service evaluation. In recent years, he has led several research projects, such as the National Natural Science Foundation of China and the China Postdoctoral Science Foundation. To date, he has authored more than 50 academic papers in prestigious journals, such as the International Journal of Applied Earth Observation and Geoinformation, Science of the Total Environment, Land Use Policy, and the Journal of Environmental Management. Several of his research findings have been recognized as ESI Top 1% highly cited papers.

Event 4 (17:10-17:20)

Remote sensing in land cover dynamic monitoring

Zhenrong Du

Associate Professor

Dalian University of Technology

Zhenrong Du received the B.S. degree in geography and Ph.D. degree in agricultural engineering from China Agricultural University, Beijing, China, in 2016 and 2021. From 2018 to 2020, he was a Post-Doctoral Researcher with the Department of Earth System Science, Tsinghua University, Beijing, China. She is currently an Associate Professor with the School of Information and Communication Engineering, Dalian University of Technology, Dalian, China. Her main research interest is the use of remote sensing techniques to monitor global land cover/use change, and to facilitate applications including agricultural and ecological monitoring.

Event 5 (17:20 - 17:30)

Unprecedented climate change challenges faced by informal settlements requires collective efforts to empower urban poor

Chengxiu Li

Research Associate

Tsinghua University, United Nations Industrial Development Organization

Dr. Chengxiu Li is an interdisciplinary scientist passionate about monitoring urban deprivation, environmental changes, including land degradation and ecosystem dynamics and their impacts on livelihoods (food, water, public health), with a focus on sub-Saharan Africa. She has 10 years of experience in big geospatial data processing and analysis, machine learning and conducting fieldwork. She currently serves as a climate adaptation innovation expert at the United Nations Industrial Development Organization, where She translates research findings into actionable solutions to address challenges related to achieving the Sustainable Development Goals (SDGs).

Event 6 (17:30 - 17:40)

Remote sensing in biodiversity conservation and protected areas network construction

Hui Wu

Research Associate

Tsinghua University

Dr. Hui Wu is a Post-doctoral Research Fellow in the Department of Earth System Science at Tsinghua University. Her research focuses on using remote sensing big data for conservation management and understanding the effects of global change on biodiversity. Dr. Wu earned her Ph.D. in Management from the School of Public Administration at China University of Geosciences in June 2023. She has held a visiting researcher position at the University of Salzburg, Austria. Dr. Wu has published as the first or corresponding author in journals such as Biological Conservation, Journal of Environmental Management, Ecological Indicators, etc. She serves as a reviewer for several professional journals, including Environmental Science and Pollution Research, Journal for Nature Conservation, PLOS ONE, etc.

Event 7 (17:40 - 17:50)

3-meter resolution urban land cover mappig of China

Xidong Chen

Research Associate

University of Hong Kong

Dr. Xidong Chen received his PhD degree in cartography and GIS from Aerospace Research Institute, Chinese Academy of Sciences, China. He is currently a Postdoctoral research fellow of the University of Hong Kong. His research interests include large-scale high-resolution (3 m/10 m) land cover mapping, land cover change detection, and water environment monitoring. He is currently the first or corresponding author on 10 publications.

Session Title: Big Earth Data Services for Polar Science

Time: 16:30 - 18:00

Room: 305C

Date: 2024-09-07

Moderator:

Fengming Hui

Professor

Sun Yat-sen University

Fengming Hui received the M.S. degree in geography from Liaocheng Normal University, Liaocheng, China, in 2001, and the Ph.D. degree in cartography and geography information system from Nanjing University, Nanjing, China, in 2007. He is the deputy dean of the School of Geospatial Engineering and Science, Sun Yat-sen University, Guangzhou, China, where he is also a Professor of polar remote sensing and climate change. He has authored more than 100 articles. His research focuses on mapping physical parameters of snow and ice in polar regions using remote sensing data and polar sea ice dynamics changes.

Mohammed Shokr

Professor

Environment and Climate Change Canada

Dr. Shokr has been with Environment and Climate Change Canada since 1982 and retired in 2020 as a scientist emeritus. In 1989, he started his research career on remote sensing of sea ice to support the Canadian Ice Monitoring Program. He led multiple sea ice remote sensing projects as PI, including developing algorithms of essential sea ice parameters and evaluation of the operational use of new remote sensing technologies. He co-authored a book titled “Sea Ice Physics and Remote Sensing”.

Participants:

Event 1 (16:30 - 16:45)

Reconciled Estimation of Antarctic Ice Sheet Mass Balance and Contribution to Global Sea Level Change from 1996 to 2021

Rongxing Li

Professor

Tongji University

Prof. Rongxing Li received the B.S. and M.S. degrees in surveying and mapping from Tongji University, Shanghai, China, in 1982 and 1984, respectively, and the Ph.D. degree in photogrammetry and remote sensing from the Technical University of Berlin, Berlin, Germany, in 1990. He was an Associate Professor with the University of Calgary, Calgary, AB, Canada. He was with the Department of Civil, Environmental and Geodetic Engineering, The Ohio State University, Columbus, OH, USA, where he was the Lowber B. Strange Professor of Engineering and the Director of the Mapping and GIS Laboratory from 1996 to 2014. Since 2014, he has been a Professor and the Director of the Center for Spatial Information Science and Sustainable Development Applications, Tongji University. His research interests include photogrammetry, digital mapping, polar remote sensing, planetary exploration, and coastal and marine geographic information systems. Prof. Li is a fellow of the American Society for Photogrammetry and Remote Sensing and the American Society for Civil Engineers. He is the Editor-in Chief of the Marine Geodesy journal (Taylor & Francis).

Event 2 (16:45 - 17:00)

Spatial Variations in Ground Surface Temperature and Permafrost Detection on the Third Pole

Raul-David Șerban

Senior Researcher

Free University of Bozen-Bolzano

Dr. Raul-David Șerban, researcher at the Faculty of Agricultural, Environmental, and Food Sciences, Free University of Bozen-Bolzano, completed his academic qualification with a PhD in Periglacial Geomorphology at the West University of Timisoara, Romania. His PhD has been awarded in 2018 with the prestigious national prize “Simion Mehedinti” of the Romanian Academy of Science. His major research is focused on ground temperature, examining the permafrost occurrence, and quantifying the landscape changes and present-day periglacial processes in alpine environments. His approach is multidisciplinary integrating concepts from Spatial Analysis, Geographical Information Systems, Applied Geomorphology, and Remote Sensing. Currently, he is working on modeling ground subsurface temperature using remote sensing and numerical models.

During his educational formation, he achieved research fellowships at the Chinese Academy of Science (President’s International Fellowship Initiative Grant); University of Innsbruck, Austria (Ernst Mach Grant - Austrian Federal Ministry of Science); Lanzhou University, China (Bilateral state cooperation scholarship); University Savoie Mont Blanc, Chambery, France (Erasmus Placement Grant - European Commission). In 2021 he was awarded the European Union Marie-Curie fellowship under the Seal of Excellence program of the Province of Bolzano, Italy.

Event 3 (17:00 - 17:15)

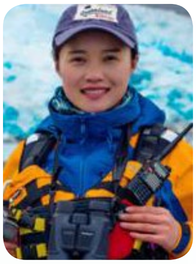
Towards a Gapless High Resolution Fractional Snow Cover Estimation under All-Weather Conditions

Xiongxin Xiao
Postdoctoral researcher
University of Bern

Dr. Xiongxin Xiao is a postdoctoral researcher at the Institute of Geography, University of Bern, Switzerland. His work focuses on leveraging data-driven methods, such as machine learning and deep learning, alongside with data fusion techniques, to extract valuable insights from in-situ observations, satellite remote sensing, and reanalysis datasets. Dr. Xiao has developed state-of-the-art algorithms for estimating snow cover properties utilizing the data from microwave and optical satellite. His research aims to address critical knowledge gaps in snow/ice hydrology and contributing to solutions for water-related challenges.

Event 4 (17:15 - 17:30)

Subglacial Water Pressure Reshapes Antarctic Contributions to Sea-Level Rise



Chen Zhao
Senior Researcher
University of Tasmania

Dr. Chen Zhao is an ARC DECRA Fellow and ice sheet modeler under the Australian Antarctic Program Partnership at IMAS. She is interested in exploring the sea level contributions from the Antarctic Ice Sheet in a changing climate and assessing the impact of climate systems on large ice sheets with numerical modeling. Her areas of expertise focus on the use of computer models in ice sheet modeling and coupled ice sheet-ocean modeling, ice sheet dynamics and basal processes, subglacial hydrology, ice-ocean interactions, and sea level rise.

Event 5 (17:30 - 17:45)

Mapping Antarctic Grounding Zone with ICESat-2 Laser Altimetry

Tian Li
Senior Researcher
University of Bristol

Dr. Tian Li’s research interests lie in leveraging machine learning and data science methodologies to analyze ice dynamics in polar glaciers and quantify their contributions to global sea-level rise using extensive satellite data archives. Throughout her PhD at the Bristol Glaciology Centre, she developed novel methodologies for mapping the grounding zone of the Antarctic Ice Sheet, utilizing data from the NASA ICESat-2 satellite. This research led to the development of the first ICESat-2-derived Antarctic Ice Sheet grounding zone data product, published in the NASA National Snow and Ice Data Center Distributed Active Archive Center.

Event 6 (17:45 - 18:00)

Rapid Increases in Satellite-Observed Meltwater Production over Polar Ice Sheets

Lei Zheng

Associate professor

Sun Yat-sen University

Lei Zheng received the Ph.D. degree in photogrammetry and remote sensing from Wuhan University, China, in 2019. He has participated in the 38th Chinese National Antarctic Expedition (CHINARE). He has authored or co-authored more than 40 publications in refereed journals. His research interests include remote sensing of snow and ice, and surface process modeling in cold regions, with a focus on the ice sheet mass balance and polar climate change.

Session Title: Data Infrastructure Technologies and Systems

Time: 16:30 - 18:00

Room: 305D

Date: 2024-09-07

Moderator:

Guoqing Li

Prof.

Aerospace Information Research Institute, Chinese Academy of Sciences

Dr. Guoqing Li, is the director of National Earth Observation Data Center of China (NODA), the director of ChinaGEOSS Data Sharing Network, and a professor of Aerospace Information Research Institute in the Chinese Academy of Sciences. His favorite research areas concern high-performance remote-sensing image-processing technology and the big earth data. His main focus is currently on next-generation spatial data infrastructure and nature disaster data management. He has served as the Member of the Science Committee of World Data System and also the co-chair of CODATA Task Group on Linked Open Data for Global Disaster Risk Research since 2012. He was the winner of 2021 GEO Individual Excellent Award.

Yuqi Bai

Prof.

Tsinghua University

Dr. Bai is a tenured professor and PhD supervisor in the Department of Earth System Science at Tsinghua University and serves as the Vice Dean of the Institute for China Urban Studies at Tsinghua University. His research focuses on the theory and methodology of Earth and space science data infrastructure and its application in environmental health. Recently, he has concentrated on developing methods, systems, and standards for making Earth and space science data "discoverable, accessible, interoperable, and reusable." He has achieved significant innovations in discovering and acquiring massive spatial data, understanding and aggregating heterogeneous data systems, and coordinating distributed information services. These efforts have led to large-scale international sharing services for Earth space data, significantly supporting China's role in various international collaborations and academic organizations such as the Group on Earth Observations (GEO), the International Organization for Standardization (ISO), the World Climate Research Programme (WCRP), the International Lunar Research Station, and the Space Climate Observatory (SCO).

Participants:

Event 1 (17:05-17:20)

The UNDRR/ISC Hazard Information Profiles – Standardized hazard definition and information to support hazard understanding and data analytics

Virginia Murray

Prof.

Global Disaster Risk Reduction, UK Health Security Agency

Professor Virginia Murray was appointed as Consultant in Global Disaster Risk Reduction for Public Health England in April 2014. This appointment is to take forward her work as vice-chair of the UN International Strategy for Disaster Reduction (ISDR) Scientific and Technical Advisory Group and as the Chair of the Science & Technology Organising Committee for the UNISDR Science and Technology Conference on the implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030 January 27-29 2016

Prior to this she was appointed as Head of Extreme Events and Health Protection, Public Health England in January 2011. With the Extreme Events team, she helped to develop evidence base information and advice on flooding, heat, cold, volcanic ash, and other extreme weather and natural hazards events.

Appointed as Visiting Professor in Health Protection, MRC-HPA Centre for Environment and Health, Imperial College and King's College, London (2004) and Honorary Professor at University College London (2013), she has published widely.

Event 2 (17:20-17:35)

Digital Governance Catalyzing Transformative Actions to Advance Prioritized Sustainable Development Goals in China

Haixia Yuan

MS.

School of Public Policy and Administration,Chongqing University

Haixia Yuan is a Ph.D. candidate at the School of Public Policy and Administration at Chongqing University. Her research concentrates on sustainable development, with an emphasis on the Sustainable Development Goals (SDGs) within the context of China.

Event 3 (17:35-17:45)

Summary Report

Yuqi Bai

Prof.

Tsinghua University

Dr. Bai is a tenured professor and PhD supervisor in the Department of Earth System Science at Tsinghua University and serves as the Vice Dean of the

Institute for China Urban Studies at Tsinghua University. His research focuses on the theory and methodology of Earth and space science data infrastructure and its application in environmental health. Recently, he has concentrated on developing methods, systems, and standards for making Earth and space science data "discoverable, accessible, interoperable, and reusable." He has achieved significant innovations in discovering and acquiring massive spatial data, understanding and aggregating heterogeneous data systems, and coordinating distributed information services. These efforts have led to large-scale international sharing services for Earth space data, significantly supporting China's role in various international collaborations and academic organizations such as the Group on Earth Observations (GEO), the International Organization for Standardization (ISO), the World Climate Research Programme (WCRP), the International Lunar Research Station, and the Space Climate Observatory (SCO).

Session Title: Earth Big Data in Support of Coastal Sustainable Development

Time: 16:30 - 18:00

Room: 305E

Date: 2024-09-07

Moderator:

Genyun Sun

Professor

China University of Petroleum

I conduct research on intelligent processing and application of remote sensing big data, tropical and subtropical remote sensing, and multi-source remote sensing environmental monitoring. In recent years, I have published more than 40 first-author/ corresponding author papers in authoritative international journals in the fields of geoscience, remote sensing, and information processing, including IEEE TCYB, ISPRS, and IEEE TGRS. One of our papers was selected as a highly cited paper among the top 1% of ESI papers. We have won one second prize and one third prize for Surveying and Mapping Technology Progress Award. Our guidance has led to many student awards such as National Scholarships, "Excellent Doctoral/Master's Thesis in Shandong Province," "Outstanding Graduates in Shandong Province." In 2021, we were awarded the first prize for excellent guidance in the National Aerospace HongtuPIE Development Competition. Many of our graduates have gone on to work or further their studies at well-known domestic and foreign universities, as well as prestigious public institutions such as the Satellite Environment Application Center of the Ministry of Ecology and Environment."

Yu Li

Associate Professor

Beijing University of Technology

Dr. Yu LI received a B.S. degree in electronic and information engineering and an M.E. degree in Information and Communication Engineering from Beihang University (Beijing University of Aeronautics and Astronautics), Beijing, China, in 2009 and 2012 respectively, and the Ph.D degree in Earth System and Geo-Information Science (microwave remote sensing) from The Chinese University of Hong Kong, Hong Kong, China, in 2015. Currently, he is an associate professor of Artificial Intelligence and Automation at Beijing University of Technology, Beijing, China. His research interests involve image and signal processing, pattern recognition, and remote sensing applications. He is the PI of several major programs including General Funds of the National Science Foundation of China, and main participator of the National Key Research and Development Program of China. He authored more than 30 journal papers on

IEEE JSTARS, IEEE GSL, IEEE HMI, IEEE TMAG, JAG, RS, IET Image processing, etc., and hosts more than 10 patents in China. He is the guest editor of several special issues in Journals including Remote Sensing and the Chinese Journal of Electronics & Information Technology.

Mingming Jia

Associate Professor

Northeast Institute of Geography and Agroecology, CAS

I conduct remote sensing research on coastal wetlands and I have been selected for the Youth Innovation Promotion Association, Chinese Academic of Sciences and the Hong Kong Special Administrative Region Government's Plan to Attract and Support Young Talents from Overseas. I serve as an associate editor for Frontiers in Marine Science and an editorial board member for the Journal of Remote Sensing (Chinese). I have published over 50 papers as the first or corresponding author, including 32 SCI papers. My research has been highly cited, with six papers included in ESI Highly Cited Papers and two papers included in ESI Hotspot Papers. I have been granted a first prize in the Jilin Provincial Natural Science Awards.

Sarfraz Ahmed

Ph.D. Student

Northeast Normal University; Northeast Institute of geography and Agroecology, CAS

My area of expertise is using remote sensing to study vegetation dynamics, particularly mangrove ecosystems. I focus on assessing mangrove distribution, cover, and health changes over time by applying advanced modeling approaches, GIS, and remote sensing techniques. My research leverages various satellite data sources, including Landsat, Sentinel, and MODIS imagery, to derive vegetation indices like NDVI that are well-suited for mapping and monitoring mangroves. To monitor mangrove extent and health using remote sensing, my research also focuses on applying landscape metrics better to understand the spatial patterns and dynamics of mangrove habitats. By calculating landscape-level metrics such as patch size, shape, area, fragmentation, etc., I can gain insights into the underlying drivers of mangrove change over time. This allows me to monitor the impacts of both natural and human-induced stressors on these critical coastal habitats. It also allows me to map where mangrove loss or degradation occurs and identify the key factors, whether natural disturbances, human activities, or a combination, shaping the spatial configuration of these coastal forests.

Participants:

Event 1 (16:30-16:45)

Temporal-spectral-semantic-aware convolutional transformer network for multi-class tidal wetland change detection in Greater Bay Area

Zhaohui Xue

Professor

Hohai University

I mainly engaged in the theory and application of advanced machine learning models in wetland hyperspectral remote sensing. As the first or corresponding authors, I published 32 SCI papers, including 16 TOP1 papers in ISPRS J P&RS and IEEE TGRS, etc. I have presided three projects of the National Natural Science Foundation of China and two projects of the Natural Science Foundation of Jiangsu Province. I'm employed as an editorial board member of the National Remote Sensing Bulletin. I has been awarded the Best Reviewer of IEEE JSTARS in 2015 and the Best Reviewer of National Remote Sensing Bulletin in 2019, 2020, and 2022. I have been granted a first prize of Geographic Information Science and Technology Progress Award and a third prize in the Jiangsu Provincial Natural Science Awards.

Event 2 (16:45-17:00)

Multimodal remote sensing of coastal environments for its sustainability

Hongsheng Zhang

Associate Professor

The University of Hong Kong

Dr. Zhang is an Associate Professor at the University of Hong Kong and an IEEE senior member who serves as Associate Editor in multiple journals, including IEEE TGRS and JAG. He has received multiple awards for research excellence, including the NSFC Excellent Young Scientists Fund and the ACM SIGSPATIAL China Rising Star Award. His research mainly focuses on remote sensing applications in coastal environments and sustainability. He has published over 40 SCI/SSCI papers as the first/corresponding author.

Event 3 (17:00-17:15)

Sentinel-1 dual-polarized SAR oil spill detection with object detection and segmentation networks

Qingli Luo

Associate Professor

Tianjin University

Dr. Luo is an Associate Professor at State Key laboratory of Precision Measurement Technology and Instrument, Tianjin University. Her research interests include deformation monitoring, SAR oil spill detection and change detection. She has published 47 research works in journals and conference proceedings. She has received research awards, including Elite Scholar of Tianjin University and 131 Innovative Talents Program of Tianjin. She is the PI of 17 major programs including 2 National Science Foundation of China, and 7 provincial foundation projects. She is the guest editor of several special issues in Remote Sensing.

Event 4 (17:15-17:25)

Marine oil spill classification based on fusing single and quad polarimetric SAR features

Jamal Sohail

Ph.D. Student

Beijing University of Technology, BJUT

I am a Ph.D. student at Beijing University of Technology, specializing in Remote Sensing with a focus on marine oil spill detection. My research introduces a novel approach by integrating single-polarization (single-pol) and quad-polarization (quad-pol) datasets to enhance detection efficiency and accuracy. This innovative method paves the way for new techniques in handling quad-pol data. I have developed a unique dataset for this research, utilizing scenes captured by the UAVSAR satellite for quad-pol data and generating corresponding single-pol data using PolSAR Pro and SNAP. The dataset was meticulously labeled using ImageJ Fiji software. The initial phase of my experiments has yielded promising results, demonstrating significant advancements in combining features from both dataset types. This approach leverages the strengths of single-pol and quad-pol data, leading to higher accuracy in detecting and distinguishing marine oil spills from lookalikes. The primary objective of my research is to improve the detection and differentiation of oil spills in oceans, contributing to more effective environmental monitoring and management.

Event 5 (17:25-17:35)

Rapid degradation of mangrove forests along the coasts of Pakistan: A 33 years comparative study

Sarfraz Ahmed

Ph.D. Student

Northeast Normal University; Northeast Institute of geography and Agroecology, CAS

My area of expertise is using remote sensing to study vegetation dynamics, particularly mangrove ecosystems. I focus on assessing mangrove distribution, cover, and health changes over time by applying advanced modeling approaches, GIS, and remote sensing techniques. My research leverages various satellite data sources, including Landsat, Sentinel, and MODIS imagery, to derive vegetation indices like NDVI that are well-suited for mapping and monitoring mangroves. To monitor mangrove extent and health using remote sensing, my research also focuses on applying landscape metrics better to understand the spatial patterns and dynamics of mangrove habitats. By calculating landscape-level metrics such as patch size, shape, area, fragmentation, etc., I can gain insights into the underlying drivers of mangrove change over time. This allows me to monitor the impacts of both natural and human-induced stressors on these critical coastal habitats. It also allows me to map where mangrove loss or degradation occurs and identify the key factors, whether natural disturbances, human activities, or a combination, shaping the spatial configuration of these coastal forests.

Event 6 (17:35-17:45)

Integrated Remote Sensing monitoring of Ecosystem over Asia-Oceania hot areas

Faisal Mumtaz

Secretary of Task Group 7 "Environmental Monitoring and Protection" at AOGEO

Aerospace Information Research Institute, CAS

My area of expertise is Vegetation Remote Sensing. Using modeling approaches, GIS, and Remote Sensing, we focus mainly on Vegetation Dynamics, Human Activities, Ecosystem Change, and Carbon Emissions. I have authored 50+ research articles and also served as an associate editor for "Discover Sustainability" and "Frontiers in Sustainable Cities."

Panel Discusion Tile:Earth Big Data in Support of Coastal Sustainable Development

Time: 17:45-18:00

Moderator:

Genyun Sun

Professor

China University of Petroleum

I conduct research on intelligent processing and application of remote sensing big data, tropical and subtropical remote sensing, and multi-source remote sensing environmental monitoring. In recent years, I have published more than 40 first-author/ corresponding author papers in authoritative international journals in the fields of geoscience, remote sensing, and information processing, including IEEE TCYB, ISPRS, and IEEE TGRS. One of our papers was selected as a highly cited paper among the top 1% of ESI papers. We have won one second prize and one third prize for Surveying and Mapping Technology Progress Award. Our guidance has led to many student awards such as National Scholarships, "Excellent Doctoral/Master's Thesis in Shandong Province," "Outstanding Graduates in Shandong Province." In 2021, we were awarded the first prize for excellent guidance in the National Aerospace HongtuPIE Development Competition. Many of our graduates have gone on to work or further their studies at well-known domestic and foreign universities, as well as prestigious public institutions such as the Satellite Environment Application Center of the Ministry of Ecology and Environment."

Yu Li

Associate Professor

Beijing University of Technology

Dr. Yu LI received a B.S. degree in electronic and information engineering and an M.E. degree in Information and Communication Engineering from Beihang University (Beijing University of Aeronautics and Astronautics), Beijing, China, in 2009 and 2012 respectively, and the Ph.D degree in Earth System and Geo-Information Science (microwave remote sensing) from The Chinese University of Hong Kong, Hong Kong, China, in 2015. Currently, he is an associate professor of Artificial Intelligence and Automation at Beijing University of Technology, Beijing, China. His research interests involve image and signal processing, pattern recognition, and remote sensing applications. He is the PI of several major programs including General Funds of the National Science Foundation of China, and main participator of the National Key Research and Development Program of China. He authored more than 30 journal papers on IEEE JSTARS, IEEE GSL, IEEE HMI, IEEE TMAG, JAG, RS, IET Image processing, etc., and hosts more than 10 patents in China. He is the guest editor of several special issues in Journals including Remote Sensing and the Chinese Journal of

Electronics & Information Technology.

Mingming Jia
Associate Professor
Northeast Institute of Geography and Agroecology, CAS

I conduct remote sensing research on coastal wetlands and I have been selected for the Youth Innovation Promotion Association, Chinese Academic of Sciences and the Hong Kong Special Administrative Region Government's Plan to Attract and Support Young Talents from Overseas. I serve as an associate editor for Frontiers in Marine Science and an editorial board member for the Journal of Remote Sensing (Chinese). I have published over 50 papers as the first or corresponding author, including 32 SCI papers. My research has been highly cited, with six papers included in ESI Highly Cited Papers and two papers included in ESI Hotspot Papers. I have been granted a first prize in the Jilin Provincial Natural Science Awards.

Zhaohui Xue
Professor
Hohai University

I mainly engaged in the theory and application of advanced machine learning models in wetland hyperspectral remote sensing. As the first or corresponding authors, I published 32 SCI papers, including 16 TOP1 papers in ISPRS J P&RS and IEEE TGRS, etc. I have presided three projects of the National Natural Science Foundation of China and two projects of the Natural Science Foundation of Jiangsu Province. I’m employed as an editorial board member of the National Remote Sensing Bulletin. I has been awarded the Best Reviewer of IEEE JSTARS in 2015 and the Best Reviewer of National Remote Sensing Bulletin in 2019, 2020, and 2022. I have been granted a first prize of Geographic Information Science and Technology Progress Award and a third prize in the Jiangsu Provincial Natural Science Awards.

Hongsheng Zhang
Associate Professor
The University of Hong Kong

Dr. Zhang is an Associate Professor at the University of Hong Kong and an IEEE senior member who serves as Associate Editor in multiple journals, including IEEE TGRS and JAG. He has received multiple awards for research excellence, including the NSFC Excellent Young Scientists Fund and the ACM SIGSPATIAL China Rising Star Award. His research mainly focuses on remote sensing applications in coastal environments and sustainability. He has published over 40 SCI/SSCI papers as the first/corresponding author.

Qingli Luo

Associate Professor

Tianjin University

Dr. Luo is an Associate Professor at State Key laboratory of Precision Measurement Technology and Instrument, Tianjin University. Her research interests include deformation monitoring, SAR oil spill detection and change detection. She has published 47 research works in journals and conference proceedings. She has received research awards, including Elite Scholar of Tianjin University and 131 Innovative Talents Program of Tianjin. She is the PI of 17 major programs including 2 National Science Foundation of China, and 7 provincial foundation projects. She is the guest editor of several special issues in Remote Sensing.

Jamal Sohail

Ph.D. Student

Beijing University of Technology, BJUT

I am a Ph.D. student at Beijing University of Technology, specializing in Remote Sensing with a focus on marine oil spill detection. My research introduces a novel approach by integrating single-polarization (single-pol) and quad-polarization (quad-pol) datasets to enhance detection efficiency and accuracy. This innovative method paves the way for new techniques in handling quad-pol data. I have developed a unique dataset for this research, utilizing scenes captured by the UAVSAR satellite for quad-pol data and generating corresponding single-pol data using PolSAR Pro and SNAP. The dataset was meticulously labeled using ImageJ Fiji software. The initial phase of my experiments has yielded promising results, demonstrating significant advancements in combining features from both dataset types. This approach leverages the strengths of single-pol and quad-pol data, leading to higher accuracy in detecting and distinguishing marine oil spills from lookalikes. The primary objective of my research is to improve the detection and differentiation of oil spills in oceans, contributing to more effective environmental monitoring and management.

Sarfraz Ahmed

Ph.D. Student

Northeast Normal University; Northeast Institute of geography and Agroecology, CAS

My area of expertise is using remote sensing to study vegetation dynamics, particularly mangrove ecosystems. I focus on assessing mangrove distribution, cover, and health changes over time by applying advanced modeling approaches, GIS, and remote sensing techniques. My research leverages various satellite data sources, including Landsat, Sentinel, and MODIS imagery, to derive vegetation indices like NDVI that are well-suited for mapping and monitoring mangroves. To monitor mangrove extent and health using remote sensing, my research also focuses on applying landscape metrics better to understand the spatial patterns and dynamics of mangrove habitats.

By calculating landscape-level metrics such as patch size, shape, area, fragmentation, etc., I can gain insights into the underlying drivers of mangrove change over time. This allows me to monitor the impacts of both natural and human-induced stressors on these critical coastal habitats. It also allows me to map where mangrove loss or degradation occurs and identify the key factors, whether natural disturbances, human activities, or a combination, shaping the spatial configuration of these coastal forests.

Faisal Mumtaz

Secretary of Task Group 7 “Environmental Monitoring and Protection” at AOGEO

Aerospace Information Research Institute, CAS

My area of expertise is Vegetation Remote Sensing. Using modeling approaches, GIS, and Remote Sensing, we focus mainly on Vegetation Dynamics, Human Activities, Ecosystem Change, and Carbon Emissions. I have authored 50+ research articles and also served as an associate editor for “Discover Sustainability" and "Frontiers in Sustainable Cities."

Session Title: Digital industry Promoting Sustainable Development

Time: 10:15 - 11:45

Room: 307

Date: 2024-09-08

Moderator:

DU Juan

Deputy Chief Editor

China Sustainability Tribune

Participants:

Event 1 (11:00 - 11:10)

Release of the Report on Digital Industry's Contribution to the SDGs

YU Zhihong

President and Chief Editor

China Sustainability Tribune

Panel Discusion Tile:How Does Digital Industry Contribune Sustainable Development?

Discussants:

YUAN Yuan

Executive Dean of AliResearch

Alibaba

FU Jianfeng

Tencent SSV

Tencent

Session Title: Big Data and Good Practices in Support of Land Degradation Neutrality

Time: 12:45 - 14:50

Room: 305E

Date: 2024-09-08

Moderator:

Xiaosong Li

Professor

International Research Center of Big Data for Sustainable Development Goals, Aerospace Information Research Institute, CAS

Li Xiaosong, Ph.D., researcher of the International Research Center of Big Data for Sustainable Development Goals, Aerospace Information Research Institute, Chinese Academy of Sciences, member of Expert Group on UNEP Sustainable Development Goals progress measuring report, SDG 15 coordinator of "Big Earth Data Supporting the Sustainable Development Goals", member of the Working Group of the International Earth Observation Organization-Land Degradation Neutrality Initiative, and member of the Expert Group on China's voluntary LDN targets setting. He has been mainly engaged in research work in the direction of big earth data to promote the realization of sustainable development goals, remote sensing big data analysis and land degradation monitoring, and hosted over more than 20 major national science and technology projects. As an associate editor, he has published 4 books, published more than 70 research articles, and won 3 National and Ministerial and Provincial-Level Science and Technology Award.

Amos Tiereyangn Kabo-bah

Associate Professor

University of Energy and Natural Resources, Ghana

Amos Tiereyangn Kabo-bah is currently a Visiting Scientist under the CAS President's International Fellowship Initiative, PIFI. He is the Focal Person for the DBAR ICoE-Sunyani, Ghana. He is an Associate Professor for the Department of Civil and Environmental Engineering and the Dean for International Relations Office for the University of Energy and Natural Resources (UENR) in Ghana. He co-chairs the GEO Programme Board and the GEO Land Degradation Flagship. He has led to the hosting of a number of strategic conferences in Ghana such as: GEO Week 2022, Accra and UNOOSA Conference for Water Management Accra, 2022. He was Programme Committee Member for UNWDF 2023 in Hangzhou, China and Ocean Observations Conference 2019 in Hawaii, USA. He is also a steering committee member of the Global Climate Observing System (GCOS). He led to establishment of the Earth Observation Research and Innovation Centre in Ghana. He has a Doctoral Degree in Water Resources and Hydrology at Hohai University in Nanjing, China: Masters in Environmental Hydrology from University of Twente, the Netherlands, and BSc in Civil Engineering from the Kwame Nkrumah University of Science and Technology. He has 100+ publications in reputable international journals. He co-edited two books published with Elsevier - ''Sustainable Hydropower in West Africa: Planning, Operation, and Challenges 2018'' and ''Pumped Hydro Energy Storage for Hybrid Systems 2022''. His research interests spans between water-energy-food nexus, climate change, land degradation and restoration, varied satellite applications in support of the SDGs.

Participants:

Event 1 (13:00-13:10)
GEO-LDN Flagship: Missions for Global Monitoring on Land

Amos Tiereyangn Kabo-bah

Associate Professor

University of Energy and Natural Resources, Ghana

Amos Tiereyangn Kabo-bah is currently a Visiting Scientist under the CAS President's International Fellowship Initiative, PIFI. He is the Focal Person for the DBAR ICoE-Sunyani, Ghana. He is an Associate Professor for the Department of Civil and Environmental Engineering and the Dean for International Relations Office for the University of Energy and Natural Resources (UENR) in Ghana. He co-chairs the GEO Programme Board and the GEO Land Degradation Flagship. He has led to the hosting of a number of strategic conferences in Ghana such as: GEO Week 2022, Accra and UNOOSA Conference for Water Management Accra, 2022. He was Programme Committee Member for UNWDF 2023 in Hangzhou, China and Ocean Observations Conference 2019 in Hawaii, USA. He is also a steering committee member of the Global Climate Observing System (GCOS). He led to establishment of the Earth Observation Research and Innovation Centre in Ghana. He has a Doctoral Degree in Water Resources and Hydrology at Hohai University in Nanjing, China: Masters in Environmental Hydrology from University of Twente, the Netherlands, and BSc in Civil Engineering from the Kwame Nkrumah University of Science and Technology. He has 100+ publications in reputable international journals. He co-edited two books published with Elsevier - ''Sustainable Hydropower in West Africa: Planning, Operation, and Challenges 2018'' and ''Pumped Hydro Energy Storage for Hybrid Systems 2022''. His research interests spans between water-energy-food nexus, climate change, land degradation and restoration, varied satellite applications in support of the SDGs.

Event 2 (13:10-13:20)
Land Productivity Dynamics: algorithms and tools for a key indicator to monitor Land Degradation

Cesar Luis Garcia

Doctor

GEO-LDN and Apacheta

Dr. Cesar Luis Garcia is an environmental scientist and technologist with extensive expertise in land degradation, sustainable land management, and geo-informatics. With over 20 years of experience in research, project development, and implementation, he has worked with renowned organizations such as FAO, UNCCD, GIZ, IFAD, WOCAT, and CONICET. Dr. Garcia has contributed to numerous projects across South America, the Caribbean, Eastern Europe, Africa, and Central Asia. He specializes in leveraging technology to address environmental challenges, and he is passionate about disseminating his knowledge through publications, training sessions, and educational roles. As co-lead of GEO-LDN Working Group 4, CEO of Apacheta, and as international consultant, Dr. Garcia's primary focus is on supporting Parties implement the UNCCD. He assists many countries with reporting under PRAIS, setting LDN targets, and establishing Decision Support Systems (DSS) based on the convergence of evidence, seeking holistic approaches that promote synergy with biodiversity and climate change.

Event 3 (13:30-13:40)

The use of GEE platform for monitoring dynamics of sand and dust storms and its sources

Mandakh Nyamtseren

Senior researcher

Institute of Geography and Geoecology, Mongolian Academy of Sciences

Ms.Mandakh Nyamtseren is graduated from the Irkutsk State University, Russia in 2001 and since then worked at the Institute of Geography and Geoecology from research assistant to senior researcher. The major field of her research is desertification mapping and assessment, landscape ecology, land degradation and restoration, and land policy. In 2018 she defended her Ph.D. degree at the National University of Mongolia majoring in physical geography. During her research career, she published 8 books and more than 20 research papers, have participated in the implementation of the international and bilateral projects and programs. The major outcomes include the development of National Action Plan to Combat Desertification in Mongolia, National reports to UNCCD and UNFCCC, and various thematic maps supporting planning and implementation actions for biodiversity conservation, restoring land degradation and mitigating climate change targets. The latest accomplishment is related to developing National Target to Achieve Land Degradation Neutrality in Mongolia.

Event 4 (13:40-13:50)

Monitoring Desertification Dynamics in Punjab, Pakistan: A Pathway to Achieving LDN

Nausheen Mazhar

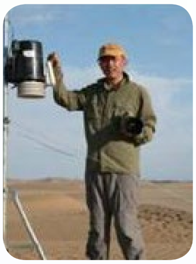
Associate Professor

Department of Geography, Lahore College for Women University

Dr. Nausheen Mazhar is a Physical Geographer and climate activist, currently serving as an Associate Professor in the Geography Department, and Heading the International Resource Center in DFDI, at Lahore College for Women University, Pakistan. With a fellowship from the University of Leeds, UK, she has focused her research on desert ecosystems, dryland ecology, rural livelihoods, reservoir sedimentation and climate change. She is now into the provincial policymaking as a Member of the Panel of Experts for Punjab Climate Change Policy. She is a member of the USAID HESSA Pak-Climate RCN and has pleaded the case of Pakistan's desertification in IPCC's 6th Assessment Report. As a climate activist, she is a Climate Fresk facilitator and has spoken at national and international conferences, including the Oxford Desert Conference and TEDx LCWU. Dr. Mazhar is dedicated to advancing SDG 15.3, focusing on combating desertification and promoting sustainable land management, as a member of UNCCD's Desert Net International. Her research aims to strengthen global cooperation and develop innovative solutions to restore degraded ecosystems.

Event 5 (13:50-14:00)

Implementation Path and Strategic Planning of Winning the Battle of "Three-North" and Reconstructing "New Three-North"



Qi Lu

Professor

Institute of Great Green Wall

Lu Qi is currently the Chief Scientist of the Chinese Academy of Forestry, the founding President of the Institute of Great Green Wall (iGGW), and the Counselor of the State Council of China. He began his career in 1995 working on ecosystem conservation and combating desertification in the drylands of China. Dr. Lu Qi played an effective role in major strategic studies such as the "Three North Regions Shelterbelt Development Programme" (TNRSDP) and the Beijing-Tianjin Sandstorm Control Project, which is the most ambitious and effective ecological restoration project in China. He regular contributes to the global efforts of Green Belt Construction and worldwide mitigation of DLDD. This Green Belt Construction project aims to carry out the national ecological restoration plan with the main objectives of afforestation and revegetation of degraded grassland, poverty alleviation, rural development and revitalization.

Event 6 (14:00-14:10)

Governance of Sustainable Land Management in the context of the Great Green Wall

Marcelin Sanou

Chief

M&E Office, Pan-African Agency of the Great Green Wall

Marcelin Sanou, Monitoring-Evaluation and Information management officer of the Pan African Agency of the Great green Wall, he is responsible for coordinating, monitoring and providing advisory support in the implementation not only of land conservation and restoration actions, Green house Gas sequestration in the eleven member states of the GGW which are Burkina Faso, Chad, Djibouti, Eritrea, Ethiopia, Mali, Mauritania, Niger, Nigeria, Senegal and Sudan; but also of local economic development actions, green job creation, Climate Change resilience and capacity building of staff of National GGW Agencies. He plays a key role in monitoring and reporting on field achievements in the implementation of GMV on the objectives of the ten-year Priority Investment Plan (2021-2030). He is responsible in particular for (i) the strategic and operational planning of GGW activities, monitoring and evaluation of programs and projects, in collaboration with the National Structures of the member states of the Great Green Wall (ii) the implementation and operation of the GGW Geographic Information System/Database. Water and Forestry Engineer and holder of a Diploma of Advanced Studies in Agricultural Sciences and Biological Engineering from the Catholic University of Louvain in Belgium, with extensive experience in the management of land restoration and local economic development projects, Marcelin Sanou would like to share his experiences and receive feedback from his peers through high-level exchanges in the field.

Event 7 (14:10-14:20)

Down to Earth--Green Solution Demonstration to Mitigate DLDD in Pan-Africa Region

Jiaqiang Lei

Professor

Xinjiang Institute of Ecology and Geography, CAS

Lei Jiaqiang, male, born in July, 1961, is the Supervisor of PH.D student of Xinjiang Institute of Ecology and Geography, Chinese Academy of Sciences. Director of the Pan-African “Great Green Wall” Research Center, Xinjiang Institute of Ecology & Geography, Chinese Academy of Sciences. Director of the Base for International Science & Technology Cooperation of "Silk Road Economic Belt" Ecological Construction Technology Demonstration. Director of Alliance of International Science Organizations on Association for Combating Desertification (ANSO-ACD). Lei's primary research focus lies in aeolian sand environments and sand prevention and control. He has been responsible for overseeing the completion of more than 30 national, Chinese Academy of Sciences, and Xinjiang science and technology projects. He has been honored with 2 second-class National Science and Technology Progress Awards, 10 first and second-class provincial and ministerial science and technology progress awards, the National May Day Labor Medal, the National Model Worker in Sand Control, the National Excellent Scientific and Technological Worker award, the National Innovation Competition Award, the Chinese Academy of Sciences "Science Garden Famous Craftsman" title, the Xinjiang Science and Technology Progress Special Prize, and other honorary distinctions. He is also a recipient of the State Council's special government allowance.

Event 8 (14:20-14:30)
Great Green Wall-Big Data Facilitator

Xiaosong Li

Professor

International Research Center of Big Data for Sustainable Development Goals, Aerospace Information Research Institute, CAS

Li Xiaosong, Ph.D., researcher of the International Research Center of Big Data for Sustainable Development Goals, Aerospace Information Research Institute, Chinese Academy of Sciences, member of Expert Group on UNEP Sustainable Development Goals progress measuring report, SDG 15 coordinator of "Big Earth Data Supporting the Sustainable Development Goals", member of the Working Group of the International Earth Observation Organization-Land Degradation Neutrality Initiative, and member of the Expert Group on China's voluntary LDN targets setting. He has been mainly engaged in research work in the direction of big earth data to promote the realization of sustainable development goals, remote sensing big data analysis and land degradation monitoring, and hosted over more than 20 major national science and technology projects. As an associate editor, he has published 4 books, published more than 70 research articles, and won 3 National and Ministerial and Provincial-Level Science and Technology Award.

Session Title: Digital Technology Supporting Sustainable Development in Central Asia

Time: 13:00 - 14:30

Room: 305B

Date: 2024-09-08

Moderator:

Chen Xi

Academic dean

Zhejiang University of Technology

Prof. Chen is the Leading scientist of the discipline of arid zone ecology and environment research. He has been engaged in research on hydrology and water resources, ecology and resources and remote sensing and GIS in arid zones. He has achieved systematic and innovative research results in the coupling research of water and ecosystem in arid zones, and played an important role in national ecological integrated management projects and international cooperation in Central Asia, providing scientific basis for ecological and environmental management, natural disaster prevention and control, and regional sustainable development in Central Asia and other arid zones around the world. He has published 88 SCI-recorded papers as the first and corresponding authors, 18 monographs, and 18 Web of Science SCI-recorded papers. He has published 88 SCI papers as the first and corresponding authors, and 18 monographs, 8227 citations and 7609 citations in SCI papers retrieved by Web of Science (retrieved on 5 June 2023), and has been selected as one of the top 2% scientists in the world in 2022 by Elsevier.

Zhou Qiming

Professor

Hong Kong Baptist University

Prof. Zhou is the early research in GIS standardization promoted the application of GIS and remote sensing to natural resources and the environment in the Asia-Pacific region. In terms of GIS methodology, the first raster data structure based on relational databases was proposed, which was cited in the international authoritative work on GIS, Geographic Information Systems: Principles and Applications, as a masterpiece of the integration of GIS and remote sensing.

He has published 3 monographs, 9 edited monographs, 20 edited chapters, and more than 70 papers in various academic journals (including about 50 papers in SCI and SSCI, and more than 10 papers in EI, with 2309 citations and h-index of 23), and the book Digital Terrain Analysis published by the Science Press in 2006 is the first book in China that comprehensively describes the theories and methods of digital terrain analysis. In 2008, the monograph "Advances in Digital Terrain Analysis" was published by Springer, a famous international publishing group (at that time, there were only three internationally published works on the progress of digital terrain analysis research). He has presided over more than 40 research projects in Australia, Hong Kong, Mainland China and international organizations (including more than 10 national fund projects, 4 research and consulting projects of international organizations, and 7 research and consulting projects of Australian and Hong Kong governments).

Majid Gulayozov

Executive director

Research Center for Ecology and Environment of Central Asia of Tajikistan Academy of Sciences

Participants:

Event 1 (13:00 - 13:10)

Impact of ecosystem services in the Aral Sea basin on the achievement of Sustainable Development Goals over the past two decades

Chen Chaoliang

Lecturer

Wuyi University

Event 2 (13:10-13:20)

Water use modes significantly affect hydrological cycle and agriculture development in temperate dryland regions: Case of Central Asia

Alphonse Kayiranga

PostDoc researcher

University of Lay Adventists of Kigali

Event 3 (13:20-13:30)

Multiscale Evaluation of Gridded Precipitation Datasets Across Varied Elevation Zones in Central Asia's Hilly Region

Gulakhmadov Manuchekhr

Doctoral student

Hydrometeorological Agency of the Committee for Environmental Protection under the Government of the Republic of Tajikistan

Event 4 (13:30-13:40)

Spatial and temporal variation and driving factors of wetland in the Amu Darya River Delta, Central Asia

Zan Chanjuan

Doctoral student

Xinjiang Institute of Ecology and Geography of the Chinese Academy of Sciences

Event 5 (13:40-13:50)

Evaluation of the water conservation function in the Ili River Delta of Central Asia based on the InVEST model

Cao Yijie

Doctoral student

Xinjiang University

Event 6 (13:50-14:00)

Modern monitoring systems for safety on Lake Sarez, Tajikistan

Majid Gulayozov

Executive director

Research Center for Ecology and Environment of Central Asia of Tajikistan Academy of Sciences

Event 7 (14:00-14:10)

Research on intelligent retrieval of water environmental risk object from UAV imagery ——A case study of outfalls into rivers

Wu Chengbin

Doctoral student

nstitute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences

Event 8 (14:10-14:20)

Evaluating the impact of landscape fragmentation on ecosystem services provided by wind power development using high-resolution remote sensing

Xiang Jianyuan

Doctoral student

Zhejiang University of Technology

Session Title: Energy Transition and Sustainable Development

Time: 13:00 - 14:30

Room: 305C

Date: 2024-09-08

Moderator:

Mengyao Han

Institute of Geographic Sciences and Natural Resources Research, CAS

Mengyao Han is an Associate Professor at the Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences (IGSNRR, CAS) and a Member of the Youth Innovation Promotion Association, Chinese Academy of Sciences. She has also been a Visiting Fellow at the Cambridge Centre for Environment, Energy and Natural Resource Governance (C-EENRG), University of Cambridge, since 2022. Her main research interests are Energy Geography, Low-carbon Transition, and Sustainable Development. Up to now, she has published more than 80 peer-reviewed SCI/SSCI articles in the aspects of energy geography, low-carbon transition, and sustainable development, and participated in about 30 research projects supported by the Ministry of Science and Technology and the National Natural Science Foundation of China.

Mingquan Wu

Aerospace Information Research Institute, CAS

Wu Mingquan is an associate researcher of the Aerospace Information Innovation Research Institute of the Chinese Academy of Sciences, a member of the Youth Innovation Promotion Association of the Chinese Academy of Sciences, who has long been engaged in research on engineering remote sensing and agricultural remote sensing, and presided over more than 20 national and departmental projects such as the National Natural Science Foundation of China, the annual report of global ecological environment remote sensing monitoring, etc. He systematically carried out research on Earth big data monitoring and analysis for overseas engineering projects in China and published over 100 papers, including nearly 30 SCI papers by the first author/corresponding author, and contributed as reviewers for international mainstream magazines such as Remote Sensing of Environment.

Participants:

Event 1 (13:00-13:15)

Synergies between REEs, Renewable Energy, and Economic Complexities for Green Growth

Khizar Abbas

Peking University

Khizar Abbas has done his PhD in Applied Economics and is currently affiliated with Peking University as a Boya Post-doctoral Fellow. His research interests include Resources and Environmental Economics. During his doctoral tenure, he has published several research articles as a first author in reputed journals including Applied Energy, Energy, Energy Policy, et al. Besides, he collaborated on a research project [NO. KF2020-15] with the Institute of Geographic and Natural Resources Research, Chinese Academy of Sciences. He also contributed to several significant projects funded by prestigious organizations, including the NSFC (No. 72074197, 71991482, 71991480 & 72164002), the NSSFC (No. 21&ZD106), Hubei Provincial Research Base for Regional Innovation Capacity Monitoring and Analysis Soft Science (No. HBQY2022z11), and Guangxi Department of Natural Resources (Sub-bid C) (No. GXZC2019-G3-25122-GXGL-C).

Event Event 2 (13:15-13:30)

Remote Sensing Identification and Analysis of Global Building Electrification Status from 2012 to 2023

Shengya Ou

Aerospace Information Research Institute, CAS

Shengya Ou earned a Bachelor of Science degree from Shaanxi Normal University, where she led or participated in several research projects and practical activities, and was recognized as a Provincial Outstanding Graduate. She is currently a master's student at the University of the Chinese Academy of Sciences, specializing in global sustainable energy development. During her graduate studies, she contributed to the writing of Big Earth Data Monitoring and Analysis for Overseas Engineering and Big Earth Data in Support of the Sustainable Development Goals.

Event 3 (13:30-13:45)

Deploying Large-scale Photovaltaic Power Stations within China

Weilong Li

University of Chinese Academy of Sciences

Weilong Li is a postgraduate student at the University of the Chinese Academy of Sciences. His research interests concentrate on renewable energy transition, expecting to provide implications for achieving an equitable and sustainable transition. His previous studies traced the geographic trajectory of the global renewable energy transition, identified the transition contribution of different income levels, and examined the inequality level of the transition process. His research also concentrated on exogenous risk prevention within global renewable energy supply chains and revealed the impact of multiple exogenous risks on supply chains. His recent research interest concentrated on the spatial distribution optimization of renewable energy deployment and the eco-environmental effect of renewable energy transition.

Event 4 (13:45-14:00)

The Trade-off between Biodiversity Conservation and the Surgy of Wind Power Dispatch

Ao Qing

University of Chinese Academy of Sciences

Ao Qing is a graduate student in geography at the University of Chinese Academy of Sciences (UCAS). She holds an undergraduate degree in human geography from Nanjing University of Information Science & Technology (NUIST). Her research primarily focuses on understanding the impacts of energy transition. She is specifically engaged in modeling the spatial layout of wind power, assessing its ecological risks, and comparing the characteristics and impacts related to the construction of various types of power plants, and presented her work at notable conferences, including the 3rd Workshop of Asian Young Geographers and the 9th Youth Geoscience.

Panel Discusion Tile: Opportunities and Challenges for a Sustainable Energy Future

Time: 14:00-14:30

Host:

Discussants:

Mengyao Han

Institute of Geographic Sciences and Natural Resources Research, CAS

Mengyao Han is an Associate Professor at the Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences (IGSNRR, CAS) and a Member of the Youth Innovation Promotion Association, Chinese Academy of Sciences. She has also been a Visiting Fellow at the Cambridge Centre for Environment, Energy and Natural Resource Governance (C-EENRG), University of Cambridge, since 2022. Her main research interests are Energy Geography, Low-carbon Transition, and Sustainable Development. Up to now, she has published more than 80 peer-reviewed SCI/SSCI articles in the aspects of energy geography, low-carbon transition, and sustainable development, and participated in about 30 research projects supported by the Ministry of Science and Technology and the National Natural Science Foundation of China.

Mingquan Wu

Aerospace Information Research Institute, CAS

Wu Mingquan is an associate researcher of the Aerospace Information Innovation Research Institute of the Chinese Academy of Sciences, a member of the Youth Innovation Promotion Association of the Chinese Academy of Sciences, who has long been engaged in research on engineering remote sensing and agricultural remote sensing, and presided over more than 20 national and departmental projects such as the National Natural Science Foundation of China, the annual report of global ecological environment remote sensing monitoring, etc. He systematically carried out research on Earth big data monitoring and analysis for overseas engineering projects in China and published over 100 papers, including nearly 30 SCI papers by the first author/corresponding author, and contributed as reviewers for international mainstream magazines such as Remote Sensing of Environment.

Michael Dunford

University of Sussex

Michael Dunford is Emeritus Professor, School of Global Studies, University of Sussex, Visiting Professor, Institute of Geographical Sciences and Natural Resources Research, Chinese Academy of Sciences, and Managing Editor of Area Development and Policy. He graduated with B.Sc in Geography and M.Sc in Quantitative Economics from the University of Bristol. In 2000, he was elected to the Academy of Learned Societies for the Social Sciences (AcSS). In 2003, he was awarded the Royal Geographical Society's Edward Heath Award for geographical research in Europe and is a Fellow of the Regional Studies Association (FERSA). His interests are in global development (at multiple geographical scales and with special reference at different times to Europe and the western world, China, Eurasia and the wider world system) drawing on materialist conceptions of history and geography and on theories of uneven and combined development, regulation and geopolitical economy.

Shen Xu

Huazhong University of Science and Technology

Shen Xu is a professor at School of Urban Planning and Architecture, Huazhong University of Science and Technology (HUST), with research interests mainly in the fields of green architectural design, sustainable urban design, building energy efficiency, and low carbon cities He is a national level registered architect, a national level registered planner, the director of the Architectural Technology Research Center, and the presiding officer of the National Natural Science Foundation of China (NNSF), with projects from the Ministry of Housing and Urban-Rural Development of Hubei Province and Wuhan Urban and Rural Construction Commission. He is also a member of several academic organizations, including the China Green Building Council (CGBC), with five publications and translations as well as more than 50 academic papers published in domestic and international journals.

Khizar Abbas

Peking University

Khizar Abbas has done his PhD in Applied Economics and is currently affiliated with Peking University as a Boya Post-doctoral Fellow. His research interests include Resources and Environmental Economics. During his doctoral tenure, he has published several research articles as a first author in reputed journals including Applied Energy, Energy, Energy Policy, et al. Besides, he collaborated on a research project [NO. KF2020-15] with the Institute of Geographic and Natural Resources Research, Chinese Academy of Sciences. He also contributed to several significant projects funded by prestigious organizations, including the NSFC (No. 72074197, 71991482, 71991480 & 72164002), the NSSFC (No. 21&ZD106), Hubei Provincial Research Base for Regional Innovation Capacity Monitoring and Analysis Soft Science (No. HBQY2022z11), and Guangxi Department of Natural Resources (Sub-bid C) (No. GXZC2019-G3-25122-GXGL-C).

Shengya Ou

Aerospace Information Research Institute, CAS

Ou Shengya earned a Bachelor of Science degree from Shaanxi Normal University, where she led or participated in several research projects and practical activities, and was recognized as a Provincial Outstanding Graduate. She is currently a master's student at the University of the Chinese Academy of Sciences, specializing in global sustainable energy development. During her graduate studies, she contributed to the writing of Big Earth Data Monitoring and Analysis for Overseas Engineering and Big Earth Data in Support of the Sustainable Development Goals.

Weilong Li

University of Chinese Academy of Sciences

Weilong Li is a postgraduate student at the University of the Chinese Academy of Sciences. His research interests concentrate on renewable energy transition, expecting to provide implications for achieving an equitable and sustainable transition. His previous studies traced the geographic trajectory of the global renewable energy transition, identified the transition contribution of different income levels, and examined the inequality level of the transition process. His research also concentrated on exogenous risk prevention within global renewable energy supply chains and revealed the impact of multiple exogenous risks on supply chains. His recent research interest concentrated on the spatial distribution optimization of renewable energy deployment and the eco-environmental effect of renewable energy transition.

Session Title: Enhancing SDGs in the Hindu Kush Himalaya (HKH) region through Advanced Big Earth Data Technologies

Time: 13:00 - 14:30

Room: 305D

Date: 2024-09-08

Moderator:

Birendra Bajracharya

Senior Remote Sensing and Geoinformation Specialist

International Centre For Integrated Mountain Development (ICIMOD)

Birendra Bajracharya serves as the Chief of Party of SERVIR-Hindu Kush Himalaya. He has been with the International Centre for Integrated Mountain Development (ICIMOD) since 1995 and has worked extensively on spatial data infrastructure, decision-support systems, and geospatial and remote-sensing applications in relation to disasters, natural resources, biodiversity, and conservation planning and management. He holds an MSc in geoinformatics, an MBA, and a BE in civil engineering. He represents ICIMOD at the Group on Earth Observations (GEO).

Shanlong Lu

Professor

International Research Center of Big Data for Sustainable Development Goals (CBAS), Aerospace Information Research Institute, CAS

He is the SDG 6 international coordinator of CBAS, and a member of the freshwater resources expert group of the IUCN World Commission on protected areas. He specializes in surface water remote sensing. In recent years, he responsible for more than 20 projects, including the National Key Research and Development Program of China, the National Natural Science Foundation of China, the Second Tibetan Plateau Scientific Expedition and Research Program, etc. He has published more than 70 academic papers, and successfully applied for more than 15 software copyrights and patents.

Participants:

Event 1 (13:00-13:12)

Remote Sensing Assessment of Sustainable Development in the Hindu Kush-Himalayan (HKH) Region

Harrison Odion Ikhumhen

Research Assistant Professor

International Research Center of Big Data for Sustainable Development Goals (CBAS), Aerospace Information Research Institute, CAS

Dr. Harrison Odion Ikhumhen serves as a Research Assistant Professor at the Aerospace Information Research Institute, Chinese Academy of Sciences, having earned his PhD in Environmental Science and Engineering from the University of Science and Technology Beijing in 2021. With a background as a postdoctoral researcher at Xiamen University from 2021 to 2023, his research focuses extensively on the impacts of climate change on hydrological systems, agricultural productivity, species distribution, and human societies. His recent leadership in analyzing the socio-ecological vulnerability of the Fujian Coast to extreme climate events, such as flooding, involved integrating large datasets from satellite imagery, ecological surveys, social data, and oceanographic data. This work yielded critical insights into the temporal dynamics of human-nature interactions, guiding strategies for enhancing community resilience and sustainable development practices.

Event 2 (13:12-13:24)

Changes and impacts of glacial lakes in the Himalaya

Professor Guoqing Zhang

Professor

Institute of Tibetan Plateau Research, CAS

Dr. Zhang's primary research interest has been focused on lake changes including area, level and volume over the Tibetan Plateau using passive multispectral/optical remote sensing data including Landsat/Sentinel-2, and active remote sensing data including laser altimeters, ICESat/ICESat-2, and space-borne gravimetry data from the Gravity Recovery and Climate Experiment, GRACE; and GRACE-Followon twin-satellite missions. His research is leading to answers to some critical scientific questions about how the lakes have changed, what factors are contributing to these changes, and what the future holds for these lakes and water resources on the Tibetan Plateau in a warming climate. He has also mapped glacial lakes and conducted hazard assessments of glacial lake outburst floods (GLOFs) across the Himalayas and beyond, particularly in combination with field investigations such as lake bathmetry measurements and remote sensing.

Event 3 (13:24-13:36)

Satellite Remote Sensing-based Soil Salinity Assessment in the Coastal Region of Bangladesh

G M Tarekul Islam

Professor

Institute of Water and Flood Management (IWFM) Bangladesh University of Engineering and Technology (BUET)

G M Tarekul Islam is a Professor at the Institute of Water and Flood Management (IWFM), Bangladesh University of Engineering and Technology

(BUET). He graduated in Civil Engineering in 1994 and did his Master's in Water Resources Engineering in 1996 from BUET. He received his PhD from the University of Tokyo in 2000. He was awarded the prestigious JSPS fellowship for post-doctoral research at Hiroshima University, Japan, from 2006 to 2008. He was a Visiting Professor at the Department of Disaster Risk Management and Sustainable Development of Bahir Dar University, Ethiopia, in 2011, where he immensely contributed to updating and developing new course curricula for introducing a Master's program in Disaster Risk Reduction under the sponsorship of UNDP. He played a pivotal role in introducing the post-graduate academic program on humanitarian engineering at BUET. He was awarded by the University Grants Commission (UGC) of Bangladesh as the best researcher in Engineering and Technology category in 2003. He has served on various committees of national and international organizations and has provided consultancy and advisory services to numerous projects for government and non-government entities. He has published over 150 papers in international journals and conference proceedings.

Event 4 (13:36-13:48)

Progress in land cover monitoring in the Hindu Kush Himalaya

Rajesh Bahadur Thapa

Senior Remote Sensing and Geoinformation Specialist

International Centre for Integrated Mountain Development (ICIMOD)

Dr. Rajesh Bahadur Thapa is a Senior Remote Sensing and Geoinformation Specialist and provides scientific leadership to the geospatial theme at ICIMOD. He is the Science and Data Lead for SERVIR-HKH (a joint NASA and USAID partnership) Initiative at ICIMOD, and previously worked as Theme Leader for Geospatial Theme, Group Lead for Land Use Land Cover Group, and Capacity Building Lead for SERVIR-HKH. Dr. Rajesh has over 25 years of experience working in Asia. Prior to joining ICIMOD, he has served at Japan Aerospace Exploration Agency (JAXA) and was a visiting professor at the University of Tsukuba, Japan. His research focus is on monitoring and assessment of terrestrial environments, including forest, agriculture, urban, disasters, and capacity building areas, as well as the dissemination of Earth observation findings to policy makers, practitioners and stakeholders through education, capacity building workshops, conferences, and publications. He has served over 40+ highly prestigious international journals as scientific reviewers and editorial board member. He holds a PhD in Geoenvironmental Science from the University of Tsukuba and completed post-doctorate research with JSPS Fellowship in Japan.

Website: https://www.icimod.org/team/rajesh-bahadur-thapa/

Event 5 (13:48-14:00)

Persistent terrestrial water resource reduction across High Mountain Asia and its downstream basins through end-century

Shudong Wang

Professor

State Key Laboratory of Remote Sensing Science, Aerospace Information Research Institute, Chinese Academy of Sciences (AIRCAS)

Shudong Wang is a full Professor of State Key Laboratory of Remote Sensing Science, Aerospace Information Research Institute (AIR), Chinese Academy of Sciences (CAS). His primary research interests include ecological hydrological remote sensing, ecological water carbon coupling and global change, spatial big data and intelligent mining. He has been in charge of multiple National Natural Science Foundation of China projects and national key research and development projects.The relevant achievements have been reported by multiple authoritative media outlets such as CCTV News. He is also a visiting professor of Nanjing Institute of Environmental Sciences, Ministry of Ecology and Environment (MME), and a professor of Collaborative Innovation Center on Forecast and Evaluation of Meteorological Disasters (CIC-FEMD), Nanjing University of Information Science & Technology.

Panel Discusion Tile:Bridging Policy and Research for Sustainable Development in the HKH Region

Time: 14:00 - 14:30

Host:

Discussants:

Birendra Bajracharya

Senior Remote Sensing and Geoinformation Specialist

International Centre For Integrated Mountain Development (ICIMOD)

Birendra Bajracharya serves as the Chief of Party of SERVIR-Hindu Kush Himalaya. He has been with the International Centre for Integrated Mountain Development (ICIMOD) since 1995 and has worked extensively on spatial data infrastructure, decision-support systems, and geospatial and remote-sensing applications in relation to disasters, natural resources, biodiversity, and conservation planning and management. He holds an MSc in geoinformatics, an MBA, and a BE in civil engineering. He represents ICIMOD at the Group on Earth Observations (GEO).

A K M Saiful Islam

Professor

Institute of Water and Flood Management (IWFM) Bangladesh University of Engineering and Technology (BUET)

Dr. A.K.M. Saiful Islam is a professor at the Institute of Water and Flood Management at Bangladesh University of Engineering and Technology (BUET). He has received a Bachelor of Science in Civil Engineering (1989) from BUET, a Master of Science in Water Resources Engineering (1999) from BUET, and a Ph.D. in Civil Engineering (2004) from Drexel University, USA. His research interests aim at climate change's impact on hydrology, water resources management, urban and coastal flood management, and remote sensing for disaster risk reduction. His research adopted regional climate modelling, basin-scale hydrological modelling, river hydrodynamic modelling, urban flood modelling, coastal and storm surge modelling, weather forecast modelling, satellite remote sensing for environmental monitoring, hydroinformatics for disaster risks reduction and climate change adaption. He has published over 70 peer-reviewed journal articles and over 100 conference papers and contributed to 9 book chapters. Over the past decade, Dr. Islam has led several major international scientific climate change assessments and reports by the Intergovernmental Panel on Climate Change (IPCC). He contributed to the IPCC's Fifth Assessment Report and IPCC Special Report on Global Warming of 1.5°C as an Expert Reviewer. He was a Lead Author on the IPCC's Sixth Assessment Report for the Working Group I. He also currently serves as the Coordinator of the Climate Change Study Cell at IWFM, BUET.

Xiang Zhou

Professor

Institute of Electrical Engineering (IEE) of Chinese Academy of Sciences (CAS)

Prof. Zhou's research interests focus on open EO data processing & standardization, geospatial information analysis & data mining, remote sensing product validation. He has been the project leader for more than 10 national projects, published over 20 papers, proposed three recommended national standards, applied for more than 10 patents. He is dedicated to international cooperation and capacity building in the field of earth observation applications. He has severed as co-chair of CODATA Task Group in Preservation of and Access to Scientific Data in/for/with Developing Countries, and is also the member of AOGEO Coordination Board.

Dr. Sharad Kumar Sharma

Deputy Chief Statistician

National Statistics Office Thapathali, Nepal

Dr. Sharad Kumar Sharma holds a PhD degree in Demography. Dr. Sharma has more than 25 years of experience as a Demographer and Statistician in the field of Population and Reproductive Health program planning, budgeting, monitoring and evaluation in Nepal. He is currently working as Deputy Chief Statistician at National Statistics Office in Nepal. While working with the Government and Non-Government sector, he has carried out various primary and evaluation studies, particularly in the field of Population, Reproductive Health and Health System Research. Dr. Sharma has published papers in the national as well as international peer reviewed journals and he has presented several oral and poster presentations in national and international conferences.

7

General Information

The International Forum on Big Data for Sustainable Development Goals (FBAS)

FBAS is an annual international conference initiated and hosted by the International Research Center of Big Data for Sustainable Development Goals (CBAS). In 2021, President Xi Jinping sent a congratulatory letter to the founding conference of CBAS and the first FBAS, expressing hope that all parties would fully utilize the CBAS platform and the forum to support sustainable development through big data, enhance international cooperation, and contribute to the implementation of the 2030 Agenda and the promotion of a shared future for humanity.

The FBAS aims to establish a global high-level exchange platform, promote the sharing of methodologies, technical research, application cases, and experiences related to big data and digital technologies, and support mechanisms that facilitate the achievement of global sustainable development goals.

To date, the FBAS has successfully held three sessions, attracting over 2,000 experts from 81 countries. It has become a vital international exchange platform for relevant UN agencies, domestic and international research institutes, government departments, enterprises, and international organizations to engage in scientific and technological cooperation.

International Research Center of Big Data for Sustainable Development Goals (CBAS)

In 2020, XI Jinping, President of the People's Republic of China at the General Debate of the 75th Session of The UN General Assembly announced that China will set up an International Research Center of Big Data for Sustainable Development Goals (CBAS) to facilitate the implementation of the 2030 Agenda. At the founding conference of CBAS on September 6th, 2021, Chinese President XI Jinping sent a congratulatory letter, expressing the hope that all sides can make full use of the platform provided by CBAS to explore ways of sustainable development supported by big data, strengthen

international cooperation, and make joint efforts to contribute to the implementation of the UN 2030 Agenda and the building of a community with a shared future for humanity. UN Secretary-General, António Guterres delivered a video speech, fully affirmed the role of CBAS, and hoped that CBAS would support the UN Global Platform and achieve the sustainable development goals.

CBAS (http://www.cbas.ac.cn/en/) aims to harness big data to serve the United Nations 2030 Agenda for Sustainable Development, featuring multidisciplinary research related to Earth system science, social and economic sciences, as well as sustainability science. It is devoted to the monitoring and evaluation of SDG indicators in the areas where big data plays a key role, including environmental commons, urban and peri-urban development, food security, and energy decarbonization.

Development Concept

To address the most challenging problems in the implementation of the SDGs, such as technological barriers and lack of data, CBAS provides a range of essential services including data sharing, technology solutions, decision-making support, a think tank, and capacity building for developing countries. CBAS works towards a vision where data is open and accessible across borders and disciplines, technology is available to support the entire policymaking process, and knowledge and ideas are communicated and grown, especially among developing countries.

Aerospace Information Research Institute (AIR), CAS

The Aerospace Information Research Institute (AIR) under the Chinese Academy of Sciences (CAS) was established in 2017 to promote the development of the aerospace information and to inspire technology innovations that can solve issues related to sustainable development. Currently AIR hosted 3,200 employees and runs two schools under the University of the Chinese Academy of Sciences, namely, the School of Electronic, Electrical and Communication Engineering and the School of Optoelectronics, with some 1,500 postgraduate students in total. AIR has 21 national-/ CAS- level key laboratories as well as research centers, and conducts research from following aspects: payload and device technology; global Satellite Data Receiving Ground Station Network; remote sensing science and Digital Earth; BeiDou navigation and positioning technology; aerospace information and technology applications. The international S&T cooperation platform hosted by AIR includes: the International Society for Digital Earth (ISDE), the International Centre on Space Technologies for Natural and Cultural Heritage (HIST) under the auspices of UNESCO, the International Programme Office for Integrated Research on Disaster Risk (IRDR IPO) and the CASTWAS Centre of Excellence on Space Technology for Disaster Mitigation (SDIM).

8

Basic convention information

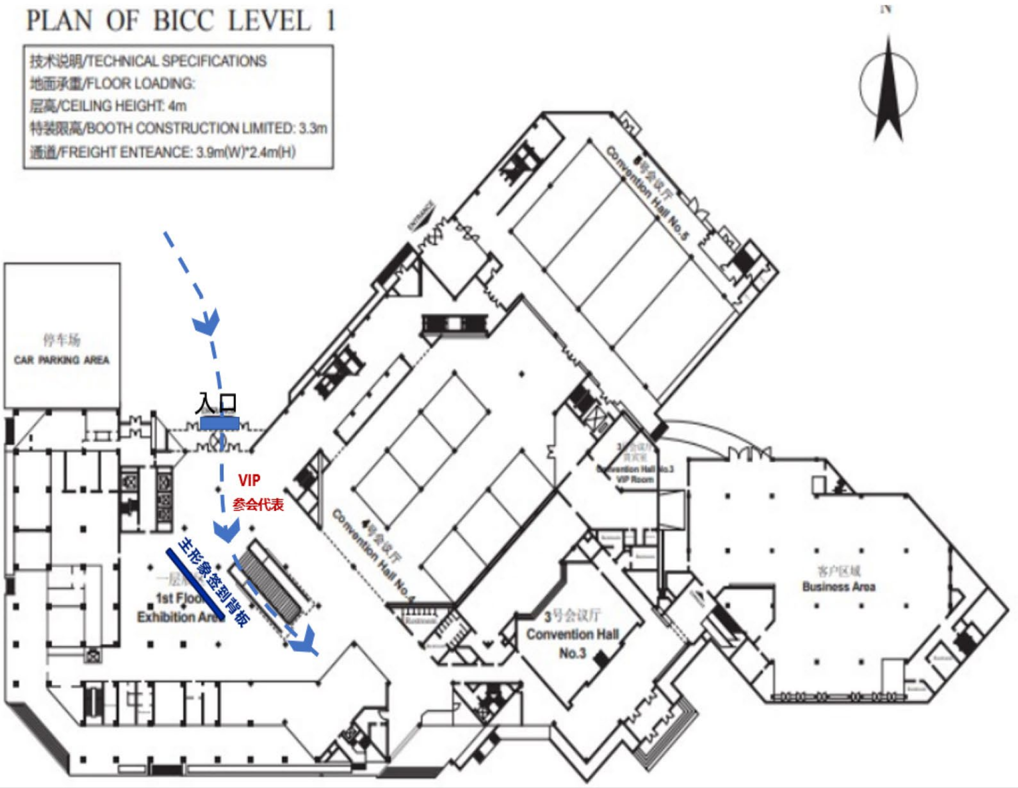
Convention Venue: Beijing International Convention Center

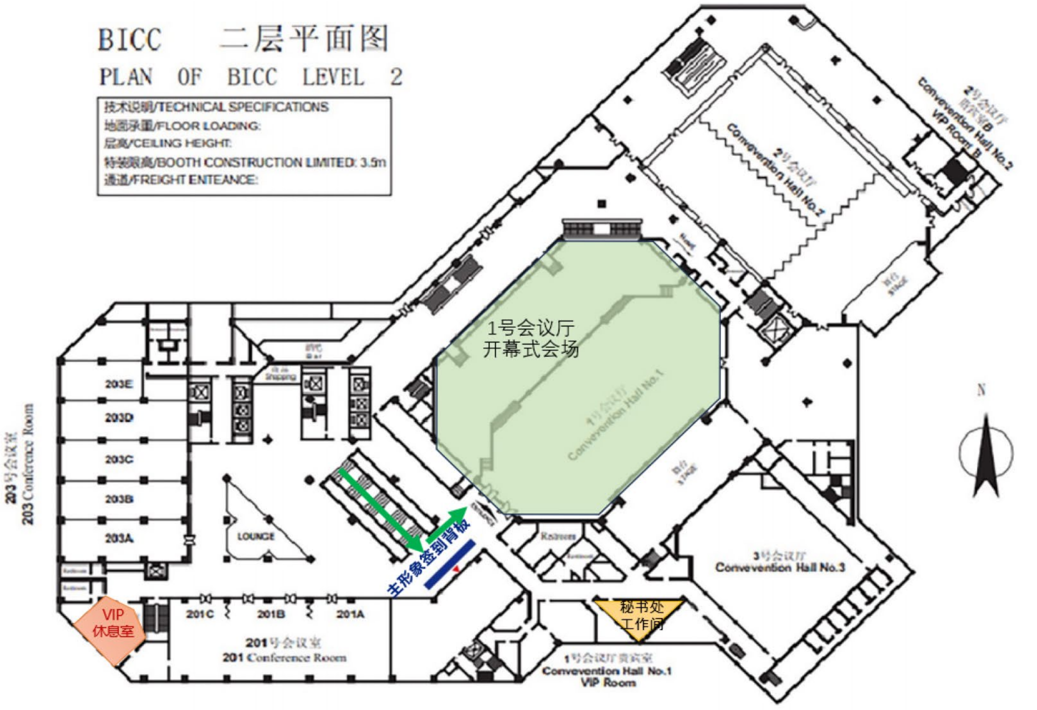
Address: No. 8 Beichen East Road, Chaoyang District, Beijing

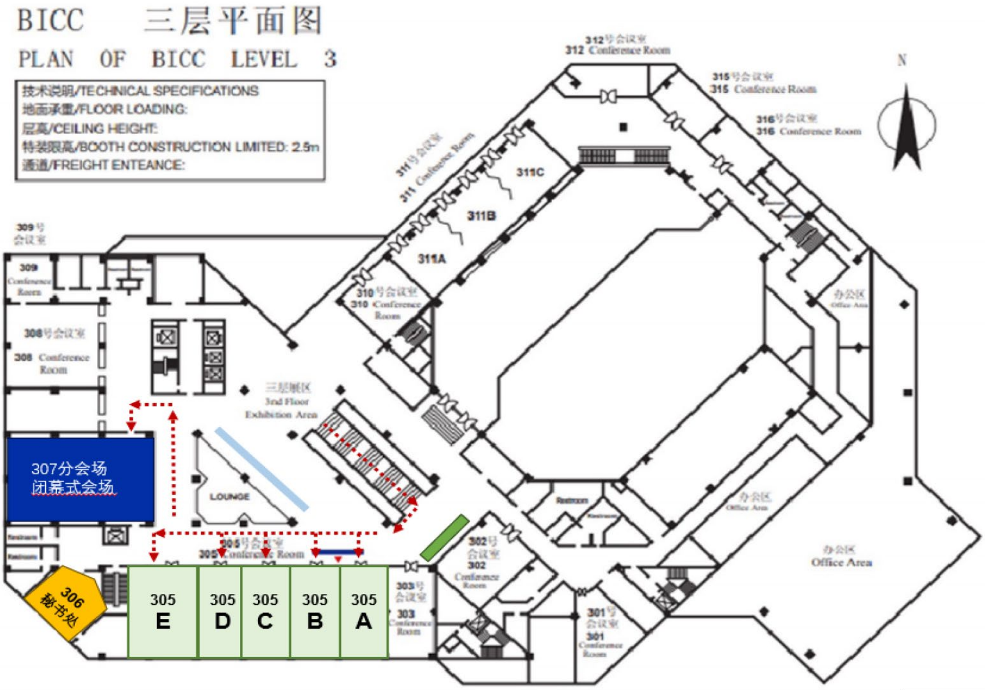
Beijing International Convention Center opened in 1990. Since its establishment, it has provided services for nearly 1,000 different international and domestic conventions and exhibitions every year.

In 2002, the Convention Center was merged into Beijing North Star Industrial Group Co., Ltd., creating a stronger reputation with more effective management. The center is located in the bustling Asian Games Village in Beijing, combining a convention center, a commercial and shopping center and an entertainment venue. Located on the Fourth Ring Road in Beijing, it is only 20 kilometers away from the Beijing Capital International Airport and 9 kilometers away from the city center. The center is also very close to the central area of the Olympic Games, including the Bird's Nest (officially known as the National Stadium).

Beijing International Convention Center provides five-star service and has 48 different convention rooms. The exhibition hall of the center covers an area of 5,000 square meters. Beijing Continental Grand Hotel is a four-star hotel with 538 rooms and 5 restaurants serving different types of food, which is an ideal place to hold international and domestic conferences, display cultural events and hold business meetings.


PLAN OF BICC LEVEL 1
技术说明/TECHNICAL SPECIFICATIONS
地面承重/FLOOR LOADING:
层高/CEILING HEIGHT: 4m
特装限高/BOOTH CONSTRUCTION LIMITED: 3.3m
通道/FREIGHT ENTEANCE: 3.9m(W)*2.4m(H)
N
停车场
CAR PARKING AREA
入口
VIP
参会代表
主形象签到背板
一层展区
1st Floor Exhibition Area
ENTRANCE
5号会议厅
Convention Hall No.5
4号会议厅
Convention Hall No.4
3号会议厅贵宾室
Convention Hall No.3 VIP Room
3号会议厅
Convention Hall No.3
客户区域
Business Area


BICC 二层平面图
PLAN OF BICC LEVEL 2
技术说明/TECHNICAL SPECIFICATIONS
地面承重/FLOOR LOADING:
层高/CEILING HEIGHT:
特装限高/BOOTH CONSTRUCTION LIMITED: 3.5m
通道/FREIGHT ENTEANCE:
2号会议厅贵宾室B
Convention Hall No.2 VIP Room B
2号会议厅
Convention Hall No.2
1号会议厅
开幕式会场
1号会议厅
Convention Hall No.1
N
203E
203D
203C
203B
203A
203号会议室
203 Conference Room
LOUNGE
主形象签到背板
Restroom
3号会议厅
Convention Hall No.3
VIP
休息室
201C
201B
201A
201号会议室
201 Conference Room
秘书处
工作间
1号会议厅贵宾室
Convention Hall No.1 VIP Room


BICC 三层平面图
PLAN OF BICC LEVEL 3
技术说明/TECHNICAL SPECIFICATIONS
地面承重/FLOOR LOADING:
层高/CEILING HEIGHT:
特装限高/BOOTH CONSTRUCTION LIMITED: 2.5m
通道/FREIGHT ENTEANCE:
312号会议室
312 Conference Room
315号会议室
315 Conference Room
316号会议室
316 Conference Room
N
311号会议室
311 Conference Room
311C
311B
311A
310号会议室
310 Conference Room
309号会议室
309 Conference Room
308号会议室
308 Conference Room
三层展区
3rd Floor Exhibition Area
307分会场
闭幕式会场
LOUNGE
办公区
Office Area
Restroom
305号会议室
305 Conference Room
302号会议室
302 Conference Room
306
秘书处
305 E
305 D
305 C
305 B
305 A
303号会议室
303 Conference Room
301号会议室
301 Conference Room
办公区
Office Area

Convention Secretariat

On September 6th, the Convention Secretariat was located in the VIP room of the first conference hall on the second floor of Beijing International Convention Center.
On September 7th-8th, the Convention Secretariat was located in Conference Room 305A on the third floor of Beijing International Convention Center.

Conference Sign-in:

The on-site sign-in is located in the lobby on the first floor of Beijing International Convention Center. The opening hours are as follows:

Date of On-site Sign-in	Time for On-site Sign-in
September 6	08:00-17:00
September 7	08:30-17:00
September 8	08:30-17:00

Conference Pass

Registered representatives before September 5:
For the representative who has registered and paid fees, please sign in through the registered channel at the sign-in to get the representative card and conference materials.
For the representative who has registered but not paid fees, please pay the fees through the registered channel at the sign-in and sign in to get the representative card and conference materials then.
Please be sure to wear the representative card when entering the conference room.

Registered representatives on September 5 and the meeting site:
If you register on the day of the event, please scan and register through the unregistered channel at the sign-in, show the registration completion page and pay the conference registration fee. After the on-site staffs check that the information is correct, please sign in the sign-in form and get the representative card and conference materials.
Please be sure to wear the representative card when entering the conference room.

Conference Language

Opening Ceremony: Bilingual (Chinese and English)
Offline Branch: English

WiFi network

The name of Beijing International Convention Center (BICC) free WiFi is “BICC WLAN”. And you can log in with your mobile phone number to get free WiFi.

Webcasting

Live content: The opening ceremony of the conference on September 6th, 2023
Live viewing website: Get the live address from FBAS 2023 official website, and the official website is https://fbas2023.scimeeting.cn/en/web/index/

Reporting PPT

In order to ensure the smooth progress of the conference, the reporter is requested to copy the reporting PPT to the PPT playback player at the venue at the latest one hour before the conference starts.

Transportation and Accommodation

Hotel Reservation

The following hotels are contract hotels for the conference. During the conference, due to the number of hotel rooms is limited, please reserve in advance. All reservations are subject to the confirmation of successful payment. Please illustrate that you will attend the conference upon payment for reservation.

1. Beijing Continental Grand Hotel
2. VIP Building of Huiyuan Apartment Hotel
3. Asian Games Village Hotel
4. National Convention Center Grand Hotel

Transportation and Surroundings

(1) From the Beijing Capital International Airport to Beijing International Convention Center.
a) Taxi. There is a taxi service at Beijing Capital International Airport and you can take a taxi to the conference venue. Taxi boarding location: outside Gate 1 on the first floor of Terminal 1.
Outside Gates 5-9 on the first floor of Terminal 2.
Terminal 3: Please follow the guiding signs inside the building.
The fare is about RMB120 (equal to USD20, including the highway toll fees), which varies with the traffic conditions.

b) Airport Shuttle
Take the Airport Shuttle Line 5 (terminus: Zhongguancun Station) and get off at Anhui Bridge Station of the Asian Games Village, then walk about 400 meters west to Beijing International Convention Center.
The faire is RMB24 (equal to USD4)

c) Airport Express
Take the airport express and get off at Dongzhimen Station, and then take Bus No. 2 and get off at Anhui Bridge North Station.
Take the airport express and get off at Sanyuan Bridge Station, then transfer to Metro Line 10 to Beitucheng Station, and then transfer to Metro Line 8 and get off at the Olympic Sports Center Station.

(2) From the railway station to Beijing International Convention Center
A) From Beijing Railway Station to Beijing International Convention Center
Take Metro Line 2 and get off at Gulou Street Station, and then transfer to Line 8 and get off at the Olympic Sports Center Station.
Take Metro Line 2 and get off at Yonghegong Station, and then transfer to Line 5 and get off at the Huixin West Street North Exit Station.
Take bus No. 2 and get off at Anhui Bridge North Station.

b) Departing from Beijing West Railway Station

Take Metro Line 9 and get off at Baishi Bridge South Station, then transfer to Line 6 and get off at Nanluogu Alley, Subway Station, and then transfer to Line 8 and get off at Olympic Sports Center Station.

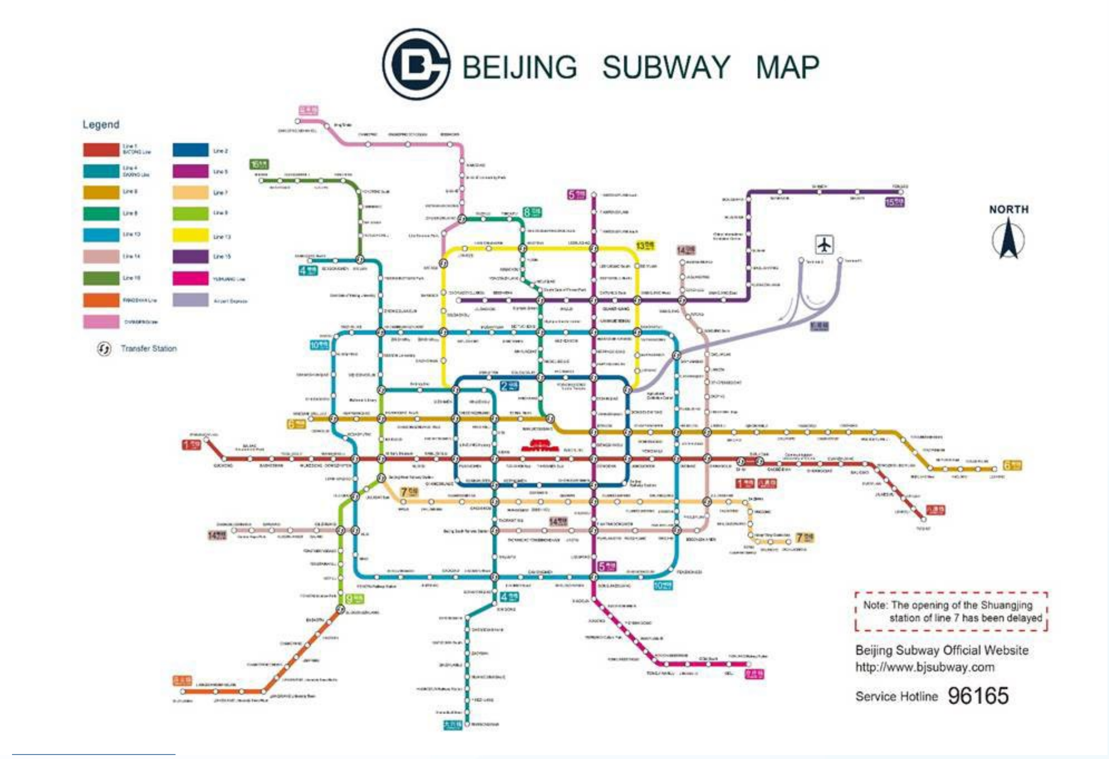
Take bus No.387 and get off at Anhui Bridge North Station.

c) Departing from Beijing South Railway Station

Take Metro Line 14 and get off at Puhuangyu Station, then transfer to Line 5 and get off at the Huixin West Street North Exit Station, and then transfer to Bus No.983/658/386/490 and get off at the Asian Games Village Station.

Take Metro Line 4 Daxing Line and get off at Xuanwumen Station, then transfer to Line 2 and get off at Gulou Street Station, and then transfer to Line 8 and get off at Olympic Sports Center Station.

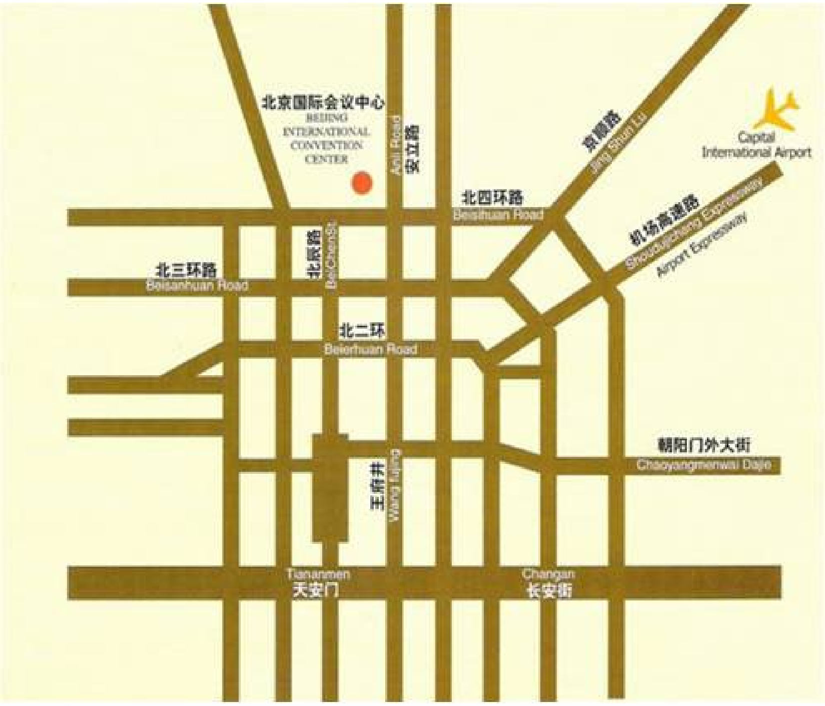
Take Metro Line 4 Daxing Line and get off at Ping'anli Station, then transfer to Line 6 and get off at Nanluogu Alley Station, and then transfer to Line 8 and get off at Olympic Sports Center Station.


BEIJING SUBWAY MAP
Legend
Transfer Station
NORTH
Note: The opening of the Shuangjing station of line 7 has been delayed
Beijing Subway Official Website
http://www.bjsubway.com
Service Hotline 96165

Remarks:

1. Due to the need for taking public transportation in RMB, you can exchange the money at the bank or foreign currency exchange counter at the airport in advance.

2. If you take the airport shuttle, airport express or subway to Beijing International Convention Center, there will be many uphill and downhill slopes or stairs on the way. We have received comments on the inconvenience of taking the airport express and subway in previous events, therefore, we suggest that you take a taxi to Beijing International Convention Center.


北京国际会议中心
BEIJING
INTERNATIONAL
CONVENTION
CENTER
Anli Road
安立路
京顺路
Jing Shun Lu
Capital
International Airport
北四环路
Beisihuan Road
机场高速路
Shoudujichang Expressway
Airport Expressway
北三环路
Beisanhuan Road
北辰路
BeiChenSt.
北二环
Beierhuan Road
朝阳门外大街
Chaoyangmenwai Dajie
王府井
Wang Fujing
Tiananmen
天安门
Changan
长安街

Conference Meals

Buffet or Western lunch will be provided during the conference.

1. On September 6th, please enjoy the buffet with the meal vouchers. Restaurant: café on the first floor and Lijiang Hall on the second floor of Beijing Continental Grand Hotel.
2. On September 7th and 8th, please enjoy the Western lunch with the meal vouchers. The place for the meal is the public area on the third floor, and the dining is in the venue.
3. The dining time: 12:00-13:00.

Safety of Goods in the Venue

The Forum Secretariat will not be responsible for the damage or loss of your personal safety and personal belongings. Please take your personal valuables with you at any time during the conference.

Notes

Notes

Notes

Notes

Notes

Notes

Notes

Notes

The 4th International Forum on Big Data for Sustainable Development Goals
(FBAS 2024)

Theme: Next 7 Years: Big Data Driving Transformative Actions to Achieve SDGs

Secretariat of the 4th International Forum on
Big Data for Sustainable Development Goals (FBAS 2024)
Website: https://www.fbas.org.cn/fbas2024/en/index/index.html
Email: fbas@cbas.ac.cn
Tel.: +86 10 82178356