

<i>Session Title</i>	Harnessing Big Data for Sustainable Food Security
<i>Session Description</i>	<p>Agriculture is central to global sustainability but faces growing challenges from climate change, resource depletion, population growth, and food security concerns. Implementing smart technology can enhance productivity, optimize resources, and ensure sustainability. Precision agriculture, driven by AI, IoT, and Big Data, allows farmers to monitor soil health, predict pests, and optimize fertilizer use. Smart irrigation systems automate water distribution based on crop needs, improving water efficiency and preserving resources. Big Data analytics support policymakers in designing sustainable agricultural policies to enhance national food security.</p> <p>The session will highlight how Big Data, AI, and smart technologies can transform agriculture into a climate-resilient, data-driven sector. By integrating satellite imagery, IoT sensors, and AI-powered analytics, real-time crop monitoring, precision irrigation, and predictive yield modelling become possible. These technologies improve water conservation, soil health, and climate adaptation strategies, ensuring sustainable land management and higher productivity. Blockchain and machine learning enhance agricultural supply chains, reduce post-harvest losses, and strengthen food security (SDG 2). Experts, policymakers, and Agri-tech innovators will discuss geospatial and AI-driven solutions, focusing on climate-smart agriculture, AI decision-support systems, and digital governance. Case studies will highlight how Big Data and AI drive sustainable agricultural transformation, ensuring food security and long-term resilience.</p>