

**MONDAY, JULY 13**

**TUESDAY, JULY 14**

**WEDNESDAY, JULY 15**

	ASABE SPECIAL INTEREST, YPC APPLIED SCIENCE & ENGINEERING (ASE) EDUCATION, OUTREACH & PROFESSIONAL DEVELOPMENT (EOPD)	ENERGY SYSTEMS (ES) ERGONOMICS, SAFETY & HEALTH (ESH) INTERNATIONAL (E-2050) CIRCULAR BIOECONOMY SYSTEMS INSTITUTE (CBSI)	INFORMATION TECHNOLOGY, SENSORS & CONTROL SYSTEMS (ITSC)	MACHINERY SYSTEMS (MS)	NATURAL RESOURCES & ENVIRONMENTAL SYSTEMS (NRES)	PLANT, ANIMAL AND FACILITY SYSTEMS (PAFS)	PROCESSING SYSTEMS (PRS)	
9:30AM to 12 NOON	101 ASE-Value Added Products from Bioprocessing 103 EOPD- Innovations in Agricultural Education: AI, IoT, and Data-Driven Farming Skills	102 Advancing Circular Bioeconomy Systems (CBS): Opportunities and Challenges-HYBRID 104 Energy Systems POSTER SESSION 105 ES-Feedstock Engineering for Sustainable Bioenergy 106 ES-Innovations in Anaerobic Digestion: Feedstock to Fuel 107 ESH-Navigating Safety in Autonomous Agriculture: Risk & Regulation-HYBRID	108 3D Plant Geometry and Trait Extraction: Next-Gen Agricultural Insights 109 AI-Powered Remote Sensing for Precision Crop Disease Management 110 Data-Driven Agriculture: From High-Throughput Phenotyping to Yield Forecasting-LIGHTNING SESSION 111 From Ideas to Commercialization-PANEL SESSION 112 Robotics for Precision Agriculture and Renewable Energy Automation	113 Advances in Cotton Engineering 114 Efficiency in Agricultural Work and Machinery 115 Machinery Systems POSTER SESSION	116 Innovations in Agricultural Nutrient and Water Management 117 Remote Estimation of Evapotranspiration in Natural and Agricultural Systems-HYBRID 118 Sustainable Treatment of Contaminated Stormwater and Agricultural Wastewaters 119 Artificial Intelligence and Precision Phenotyping and Detection	120 Engineering Solutions for Sustainable Livestock Production Systems 121 Livestock Identification, Location, and Tracking	122 Upcycling & Bio-based Materials: From Waste to Value-LIGHTNING SESSION	9:30 AM to 12 NOON
2:30PM to 5:00 PM	123 ASE-National Agricultural Producers Data Cooperative: All Things Data Data-GUEST SPEAKERS 125 EOPD-Engineering Agricultural Education & Workforce Development for Next-Gen AgTech 144 YPC-Industry Panel Discussion for Young Professionals	124 E-2050-AOCABFE Exchange Forum: Research and Technology Transfer-GUEST SPEAKERS 126 ES-Agrivoltaics and Renewable Energy Pathways to Develop Resilient Energy Systems 127 ES-Sustainable Thermochemical and Biochemical Conversion of Biomass 128 ESH-Designing for Stability: Simulation and Testing of Agricultural Vehicles	129 AI-Powered Vision for Precision Agriculture: Enhancing Detection and Segmentation 130 Information Technology, Sensors and Control Systems POSTER SESSION 131 Smart Sensing: AI and Spectroscopic Technologies for Agricultural Product Quality	132 Edge AI for Precision Agriculture: Sensors to Decisions 133 Integrated Robotic Systems for Selective Harvesting and Crop Interaction	134 Agricultural Water and Nutrient Management 135 Artificial Intelligence and Machine Learning in Crop Growth and Yield Prediction 136 Green Stormwater Infrastructure and Water Resource Management in Nature-Based Solutions 137 Innovations in Agricultural Drainage: Reducing Phosphorus Loss and Protecting Water Quality 138 Irrigation Management-HYBRID 139 Sensors, Food Safety and Controlled Environmental Agriculture	140 Livestock Manure and Poultry Litter Characteristics and Management 141 Precision Livestock Monitoring, Management, and Prediction 142 Precision Nutrient, Water, and Plant Management in Hydroponics	143 Sustainable Biogas & Nutrient Management Strategies	2:30 PM to 5:00 PM
9:30 AM to 12 NOON	201 ASE-Innovations in Sensing and Modeling for Sustainable Agriculture 203 EOPD-The Faculty of the Future - Evolving Faculty Roles in the Higher Education Landscape-PANEL SESSION	202 CBSI-Integrating Circularity, AI, and Systems Design for Sustainable Bioeconomies 204 ES-Optimizing Agricultural Material Processing: Quality, Yield, and Efficiency 205 ES-Thermochemical Conversion of Biomass: Innovations in Hydrogen and Bio-products 206 ESH-Heat and Environmental Exposures: Impacts on Worker Safety-HYBRID	207 Advancing Agricultural Robotics: From Simulation to Field Deployment 208 AI, IoT, and Digital Twins for Next-Generation Agricultural Systems 209 AI-Powered Precision Agriculture: Early Pest Detection and Monitoring 210 Harnessing Machine Vision and AI-Powered Prediction for Plant Phenotyping	211 Advancements in Drone-Based Agricultural Sensing and Application 212 Autonomous Robotic and Sensing Systems for Precision Farming Applications 213 Data Orchestration and Governance for Trust and Transparency in Agri-Food Data Systems	214 Engineering Resilience: Lessons from Failures and Innovations-LIGHTNING SESSION 215 Failed Research: Challenges and Opportunities-HYBRID 216 Hydrological Modeling, Crop Yield and Climate Change 217 Indiana Manure Perspectives-GUEST SPEAKERS 218 Modeling Runoff, Sediment, and Nutrient Transport 219 Natural Resources and Environmental Systems POSTER SESSION A 220 Water Use Efficiency and Agricultural Engineering in Precision Irrigation	221 Plant, Animal and Facility Systems POSTER SESSION	222 Biomass to Bioplastics: Materials, Processing, and Performance 223 Microbial Engineering for Bioreactor Performance	9:30 AM to 12 NOON
2:30 PM to 5:00 PM		224 E-2050-Foster Collaboration on Current Ag-Engineering Trends in Korea & the U.S.-HYBRID 225 ES-Biofuels, Bioproducts, and Bioservices 226 ES-Biomass Valorization: From Waste to High-Value Products 227 ES-Current Achievements and New R&D Trends in Renewable Energy Resources and Tech-GUEST SPEAKERS 228 ESH-Modernizing Agricultural Injury Prevention Through Analytics and Emerging Technologies	229 Applications of DEM and MBD in Agricultural Engineering 230 From Signal to Accuracy: Next-Gen Sensing for Agricultural Diagnostics 231 Perception and Navigation in Ag Environments 232 Spectroscopic Sensing and Imaging for Quality Assessment in Agriculture and Food Systems	233 Advances in Robotic Sensing, Manipulation, and Autonomous Systems in Agriculture 234 Perception for Precision Harvesting: From 3D Reconstruction to Pose Estimation	235 Advanced Imaging and Machine Learning for Precision Agriculture-LIGHTNING SESSION 236 Climate Mitigation and Crop Rotation in Cover Crops 237 Hydrological Modeling and Sediment Transport in Stream Restoration 238 Irrigation Scheduling and Precision Agriculture in Soil Moisture 239 Natural Resources and Environmental Systems POSTER SESSION B 240 Water Balance Models and Irrigation Scheduling in Evapotranspiration Management	241 Computer Vision for Livestock: Behavior, Kinematics, and Health-LIGHTNING SESSION 242 Optimizing Controlled Indoor Plant Environments and Greenhouses 243 Precision Livestock Ventilation Design, Control, and Validation	244 Advanced Imaging for Plant Stress Detection-LIGHTNING SESSION	2:30 PM to 5:00 PM
7:30 AM to 10:00 AM	301 Applied Sciences & Engineering POSTER SESSION 302 Education, Outreach & Professional Development POSTER SESSION 303 Ethics of AI Tools and Large Language Models for Learning-PANEL SESSION	304 Ergonomics Safety & Health POSTER SESSION	305 Advanced Nanomaterials for Targeted Delivery in Agriculture-LIGHTNING SESSION 306 Advanced Wireless Sensing for Precision Agriculture 307 AI, Machine Vision, and Intelligent Sensing for Agricultural Systems 308 AI-Powered Robotics for Precision Agriculture	309 Advancements in Spray Technology and Application 310 Precision Seeding and Planting: Enhancing Efficiency and Yield 311 Tractor Design: Conventional and Advanced Powertrains and Structures	312 Artificial Intelligence in Nutrient and Watershed Management and Modeling 313 Emerging Technologies in Agricultural Water Management 314 Resilient Agricultural Water Management: Drainage, Reuse, and Recharge 315 Precision Agriculture and Crop Monitoring in UAV Imaging 316 Remote Sensing in Water Quality Monitoring and Modeling Applications 317 Water Use Efficiency and Groundwater Conservation in Irrigation Management	318 Innovations in Livestock Biosecurity and Health Monitoring	319 Advanced Food Processing: From Ingredients to 3D Structures 320 Innovations in Sustainable Agri-Food Drying and Storage Technologies-LIGHTNING SESSION 321 Valorization of Agricultural Waste: From Manure to Materials	7:30 AM to 10:00 AM
10:15 AM to 12:15 PM	322 ASE-Engineering Aquatic Ecosystem Health 324 Human-Centered Design and Ethical Frameworks for Digital Agriculture 341 Panel Discussion on US Federal Funding Scenarios	323 CBSI-Resource Recovery, Production, and Resilience in Circular Bioeconomies POSTER SESSION	325 Advanced Sensing and AI Processing for Data-Driven Agriculture Decisions 326 Advancing Agricultural Intelligence: Combining Vision, Language, and Simulation 327 Data Analytics, AI, and Digital Technologies for Smart Agricultural Management 328 Imaging Spectroscopy and Multimodal AI Systems for Automated Crop Quality Evaluation	329 Innovations in Harvested Crop Materials and Machines 330 Intelligent Weeding Systems: Precision and Autonomy in Action 331 Precision Agriculture Data: From Raw Signals to Reliable Insights	332 Artificial Intelligence and Precision Agriculture in Nitrogen Management-LIGHTNING SESSION 333 Distribution Uniformity and Precision Agriculture in Canopy Temperature 334 Modeling Soil Erosion and Water Quality in Agricultural Watersheds 335 Recirculating Aquaculture Systems and Resource Management in Circular Economy 336 Soil Hydraulic Properties and Agricultural Resilience in Geophysical Methods 337 Soil Property Predictions using Imagery and Machine Learning-LIGHTNING SESSION	338 R.S. Gates Memorial Lecture Series-GUEST SPEAKERS	339 Bio-Augmented Systems for Resource Recovery from Wastewater-LIGHTNING SESSION 340 Processing Systems POSTER SESSION	10:15 AM to 12:15 PM