

# 2019 Annual International Meeting

## Technical Schedule

Subject to change. As of 3-1-19

### MONDAY, JULY 8 – 9:30AM – 12:00PM

<u>Technical Community</u>	<u>Session # and Title</u>
ASE	101 Carbon Materials: Biochar—Hydrochar—Activated Carbons
E-2050	102 Conservation Agriculture for Sustainable Intensification
EOPD	103 Educational Approaches for Facilitating Digital Agriculture
EOPD	104 Thinking Outside the Furrows: Startup Companies are Changing the World
ES	105 Current Achievements and New R&D Trends in Renewable Energy Resources and Technologies
ES	106 Production, Processing and Conversion of Algae
ES	107 Value-Added Chemicals and Products and Lignin Valorization
ESH	108 Safety Considerations in Agriculture
ITSC	109 Big Data and Data Analysis for Agricultural Applications
ITSC	110 Computational Fluid Dynamics (CFD) Applications in Agriculture
ITSC	111 Discrete Element Modelling (DEM) Applications in Agriculture
ITSC	112 Imaging Technologies for High Throughput Phenotyping -Part I
ITSC	113 Machine Vision Applications in Vegetables and Fruits
ITSC	114 Machine Vision for Precision Agriculture and Robotics
MS	115 MS POSTERSESSION
NRES	116 Natural Resources and Environmental Systems Distinguished Lecture Series <i>9:30am-11:00am</i>
NRES	117 ABE Curriculum and Industry Needs in Ecological/Water Resources Engineering: A Panel Discussion <i>11:00am-12:30pm</i>
PAFS	118 Air Emission from Livestock and Poultry Production
PAFS	119 Emerging Information Systems for Animal Production Systems
PAFS	120 Indoor Production of Cannabis and Other Medicinal Plants
PRS	121 Biochemical Conversion Processes
PRS	122 Food Process Engineering
PRS	123 Food Safety Engineering
PRS	124 Modeling and Optimization in Food Processing and Storage

### MONDAY, JULY 8 – 2:30PM – 5:00PM

<u>Technical Community</u>	<u>Session # and Title</u>
AABFEIO	125 Sustainable Food- Water- Energy Nexus
ACOABFE	126 AOCABFE & NERCITA China Exchange Forum
ASE	127 Wood-based Processing, Conversion, and Products
EOPD	128 The Future of Ag Systems Management & Technology Programs
ES	129 Advanced and Drop-In Biofuels Production-Biochemical Approach
ES	130 Thermochemical Conversions of Biomass
ITSC	131 Advanced Computational Approaches for Solving Agricultural and Biological Engineering Problems
ITSC	132 Imaging Technologies for High Throughput Phenotyping -Part II
ITSC	133 Machine Vision Applications in Agriculture and Food
ITSC	134 Material and Molecular Innovations for Chemical and Biological Sensing
ITSC	135 Sensors and Control Systems for Precision Agricultural Equipment
MS	136 Machinery Data and Task Optimization
MS	137 Precision Aerial Spray Applications: UAV/Drones and Manned Aircraft
NRES	138 Advances in Aquacultural Engineering

NRES	139 Agricultural Drainage Water Management: Honoring the Career of Dr. Chin S. Tan
NRES	140 Challenges and Solutions to Declining Water Supplies for Irrigation
NRES	141 Environmental and Applied Tracers in Groundwater and Surface Water Systems
NRES	142 Implementing Water, Energy, and Food Sustainable Development Goals
NRES	143 Innovations in Irrigation Systems
NRES	144 Manure Treatment Systems
NRES	145 National Basin-Scale Water Quality Review: Targets, Trends and Takeaways 2:30pm-5:30pm
PAFS	147 Agri-Industrial Facility Design and Operation
PAFS	148 Precision Animal Management
PRS	149 Spectral Scattering, Fluorescence, and Raman Technology for Food Quality and Safety
PRS	150 Use of Models to Study Crop Drying, Handling and Storage
NRES	151 NRES POSTERSESSION 5:00pm-7:00pm

## TUESDAY, JULY 9 – 9:30AM – 12:00PM

### Technical Community Session # and Title

ASE	201 Biologically Inspired Micro- and Nanoengineering Systems for Agriculture and Biological Applications
EOPD	202 Curriculum Design and Student Success
ES	203 Advances in Biomass Preprocessing
ES	204 Renewable Energy Resources and Technologies
ESH	205 Strategies for Safety Communication and Education
ITSC	206 ITSC POSTERSESSION
MS	207 Automated Agricultural Field Machinery Data Collection, Analysis, and Utilization
MS	208 Crop and Soil Sensing
MS	209 Pesticide and Fertilizer Application Technology, Formulation, and Environmental Effects
MS	251 Soil-Plant-Machine Dynamics and Systems Simulation
NRES	210 Advances in Applying and Evaluating Hydrologic and Water Quality Models
NRES	211 Advances in Drainage Design, Monitoring, and Modeling
NRES	212 Anaerobic Digestion
NRES	213 BMPs and Water Quality: Modeling
NRES	214 Erosion Control Research and Case Studies
NRES	215 Innovative Water Quality and Hydrologic Monitoring and Analysis
NRES	216 Nutrient Removal, Recovery and Recycle
NRES	217 Sustainable Irrigation Management
NRES	218 Vulnerability Assessment of Land Resources for Sustainable Development
PAFS	219 Biosecurity for Livestock and Poultry Production Systems
PAFS	220 Greenhouse and Nursery Technology
PRS	221 Building Successful Collaborations to Address Challenges in Food and Bioprocess Engineering
PRS	222 Microwave and Radio-Frequency Energy for Processing
PRS	223 Physical Properties Related to Drying and Storage

## TUESDAY, JULY 9 – 2:30PM – 5:00PM

<u>Technical Community</u>	<u>Session # and Title</u>
ASE	224 ASE POSTERSESSION
E-2050	225 Resource Development for Agricultural and Biological Engineering Challenges in Africa, China, and India
EOPD	226 Improving Student Learning One Course At A Time
ES	227 ES POSTERSESSION
ESH	228 ESH POSTERSESSION
ITSC	229 3D Machine Vision for Sensing and Automation
ITSC	230 Advances in Spectroscopy and Hyperspectral Properties of Biological Products
ITSC	231 Cloud Computing and Internet of Things in Agriculture
ITSC	232 Machine Vision Applications in Animals and Animal Products
ITSC	233 UAV for Sensing, Imaging, and Agricultural Aquacultural Applications- Part I
MS	234 Advances in Cotton Engineering
MS	235 Automation and Robotics for Fruit, Vegetables, and Other Specialty Crops
MS	236 Automation Systems for Agricultural Field Machinery
MS	237 Innovations in Precision Agriculture
NRES	238 Advances in Ecosystem Evapotranspiration Research
NRES	239 Advances in Irrigation Management
NRES	240 Benefits and Challenges of Microirrigation
NRES	241 BMPs and Water Quality: Measurements
NRES	242 Erosion and Water Quality in Urban Streams and Wetlands
NRES	243 Grand Challenges Session"- Pesticides in Freshwater Systems: Effects and Mitigation"
NRES	244 Managing Manure and Agricultural Byproducts for Sustainability
NRES	245 Real-Time Systems to Manage Natural Resources and Environmental Systems
NRES	246 Waterborne Pathogens and Emerging Contaminants
PAFS	247 Animal Response to Environment
PAFS	248 Measurement, Mitigation and Modeling of Air Pollution from Livestock and Poultry Facilities
PRS	249 PRS POSTERSESSION
E-2050	250 Technical Trends and Career Opportunities in the U.S. and Korea <i>5:00pm-7:00pm</i>

## WEDNESDAY, JULY 10 – 7:30AM – 10:00AM

<u>Technical Community</u>	<u>Session # and Title</u>
EOPD	301 Best Practices in Graduate Programming and Professional Preparation
EOPD	302 Dealing with Ethical Issues in Engineering Standards
ES	303 Techno-Economic and Life Cycle Assessment of Biomass Conversion
ES	324 Energy Utilization and Lighting in Agricultural Operations and Facilities
ITSC	304 Novel Data-Intensive Methods to Support Precision Agriculture
ITSC	305 Robotics and Co-Robotics for Agriculture - Part I
ITSC	306 UAV for Sensing, Imaging, and Agricultural Aquacultural Applications- Part II

MS	307 Precision Application of Chemicals and Fertilizers
NRES	308 Climate Change Impacts and Adaptation: Water Availability and Quality, and Agricultural Production
NRES	309 Flooding and Dams: Keeping Communities Safe
NRES	310 Hydrologic and Climate Data: Challenges and Opportunities
NRES	311 Irrigation Management in Humid and Sub-Humid Regions
NRES	312 Low Impact Development and Ecohydrology
NRES	313 Modeling of Water Quality and Hydrology
NRES	314 Nutrient Transport and Cycling: Measurements
NRES	315 Practices for Nutrient Loss Reduction in Drained Landscapes
NRES	316 Precision Irrigation
PAFS	317 PAFS Distinguished Lecture Series
PRS	318 Artificial Intelligence and Data Science (Big Data) in Processing
PRS	319 Food Process Engineering Part II
PRS	320 Grain Drying, Storage and Aeration Systems
PRS	321 Physical Properties Related to Processing and Handling

## WEDNESDAY, JULY 10 – 10:15AM – 12:15PM

<u>Technical Community</u>	<u>Session # and Title</u>
EOPD	322 EOPD POSTERSESSION
ES	323 Biomass Feedstock Supply Logistics and Modeling
ES	325 Lighting Systems for Plant Production-Standards, Systems, and Science
ITSC	326 Apps in Agricultural Applications
ITSC	327 Biosensor and Bioelectronics
ITSC	328 Robotics and Co-Robotics for Agriculture - Part II
ITSC	329 Sensors and Control Systems for Food Production and Processing
MS	330 Handling, Storage, Transport and Processing of Forages and Biomasses
MS	331 ISO Standards Training
MS	332 Precision Agricultural Utilization in Chemical and Fertilizer Applications
NRES	333 Applications of Remote Sensing and UAVs in Irrigation Management
NRES	334 CN Hydrology and Alternative Approaches for Runoff Volume or Runoff Rate
NRES	335 Defining Ecological Engineering through Practice
NRES	336 Denitrifying Bioreactors: Present State and Future Opportunities
NRES	337 Drought and Water Security
NRES	338 Measurement and Modeling of Ecosystem Services
NRES	339 Nutrient Transport and Cycling: Modeling
NRES	345 Sustainability Metrics – Concept, Evaluation, and Advances
PAFS	340 PAFS POSTERSESSION
PRS	341 Bioprocess Modeling, Sustainability and Technoeconomic Analysis
PRS	342 System Approach to Develop Sustainable Food and Organic Wastes/Byproducts Management Solutions
Publication Council	343 Publishing in the ASABE Journals: Navigating the Publishing Process and the Future of the Journals
MS	344 Autonomous Field Equipment - The Future of Standardization 2:30pm-6:30pm