

The following is the list of sessions and session types for the 2022 AIM. Directly below, you will find the three different types of oral sessions being held and their definitions. As of April 21. *Schedule is subject to change.

Oral Technical Sessions: All presentations will have 12-13 minutes to talk at the podium with 2-3 minutes following for Q&A.

Lightning Oral Technical Sessions: In these sessions, presenting authors will have the opportunity to deliver a 3-minute summary presentation. The 12-minute pre-recorded videos of these presentations will NOT be played during the lightning session but presenters can link the audience to them. The full presentation videos will be viewable to all AIM registered guests on our meeting app.

Spotlight Oral Technical Sessions: These sessions will be a mixture of lightning presentations and standard oral presentations.

101 ASABE-ABET Accreditation for ASABE Engineering, Technology and Management Programs

ASABE Special Interest Panel Discussion

Monday, 7/18/2022 9:30am - 12:00pm

Moderator(s): Tom Brumm;

Sponsoring Committee(s): EOPD-204 Engineering & Technology Accreditation

Panelists: Andy Hale, NC State, Raleigh, North Carolina; Peter Livingston, Cal Poly, San Luis Obispo, California; Monica Gray, Coastal Carolina University, Conway, South Carolina; Tom Brumm, Iowa State University, Ames, Iowa

102 EOPD-Engineering Ethics in Academic and Research Settings

EOPD - Education, Outreach, & Professional Development Guest Speaker Session

Monday, 7/18/2022 9:30am - 12:00pm

Moderator(s): Dana Porter;

Sponsoring Committee(s): EOPD-412 Professional Ethics

103 Value-Added Chemicals and Materials

ES - Energy Systems Oral Technical Session

Monday, 7/18/2022 9:30am - 12:00pm

Moderator(s): Sushil Adhikari; Stephen Chmely

Sponsoring Committee(s): ES-220 Biomass Energy & Industrial Products

104 AI-Driven Tools and Technologies for High Throughput Phenotyping

ITSC - Information Technology, Sensors & Control Systems Lightning Oral Technical Session

Monday, 7/18/2022 9:30am - 12:00pm

Moderator(s): Afef Marzougui; Sindhuja Sankaran

Sponsoring Committee(s): ITSC-348 Electromagnetics & Spectroscopy

105 Computational Fluid Dynamics (CFD) Applications in Agriculture

ITSC - Information Technology, Sensors & Control Systems Oral Technical Session

Monday, 7/18/2022 9:30am - 12:00pm

Moderator(s): Christopher Choi;

Sponsoring Committee(s): ITSC-217 Computational Methods, Simulations & Applications

106 Connectivity, Cloud Computing, and Internet of Things in Agriculture and Natural Resources

ITSC - Information Technology, Sensors & Control Systems Spotlight Oral Technical Session

Monday, 7/18/2022 9:30am - 12:00pm

Moderator(s): Hasan Seyyedhasani;

Sponsoring Committee(s): ITSC-254 Emerging Information Systems, ITSC-217 Computational Methods, Simulations & Applications, NRES-21 Hydrology Group

107 Hyperspectral Imaging: Advances in Technologies, Analytics, and Applications

ITSC - Information Technology, Sensors & Control Systems Spotlight Oral Technical Session

Monday, 7/18/2022 9:30am - 12:00pm

Moderator(s): Dongyi Wang; Haibo Yao

Sponsoring Committee(s): ITSC-348 Electromagnetics & Spectroscopy

108 ITSC-Overview of Entrepreneurship and Commercialization-PANEL

ITSC - Information Technology, Sensors & Control Systems Panel Discussion

Monday, 7/18/2022 9:30am - 12:00pm

Moderator(s): Evangelyn Alocilja; Xinge Xi

Sponsoring Committee(s): ITSC-230 Biosensors, ITSC-348 Electromagnetics & Spectroscopy, ITSC-254 Emerging Information Systems, NRES-28 Ecological Engineering; NRES-24 Irrigation Group

Panelists: Evangelyn Alocilja, Michigan State University, East Lansing, Michigan; John Chamberlin, Chamberlin Research, Little Rock, Arkansas

109 Machine Learning in Agriculture and Natural Resources I

ITSC - Information Technology, Sensors & Control Systems Lightning Oral Technical Session

Monday, 7/18/2022 9:30am - 12:00pm

Moderator(s): Zhou Zhang; Zhou Zhang

Sponsoring Committee(s): ITSC-254 Emerging Information Systems, PAFS-30 Plant Systems Group, NRES-21 Hydrology Group

110 Advances in Cotton Engineering

MS - Machinery Systems Oral Technical Session

Monday, 7/18/2022 9:30am - 12:00pm

Moderator(s): Jason Ward;

Sponsoring Committee(s): MS-23/7/3 Cotton Engineering

111 Advances in Seeding and Tillage Technology

MS - Machinery Systems Oral Technical Session

Monday, 7/18/2022 9:30am - 12:00pm

Moderator(s): Jason Werning; Virk Simerjeet

Sponsoring Committee(s): MS-49 Crop Production Systems, Machinery, and Logistics, MS-45 Soil-Plant-Machine Dynamics

112 Advances in Soil-Plant-Machine Dynamics and Systems Simulation I

MS - Machinery Systems Oral Technical Session

Monday, 7/18/2022 9:30am - 12:00pm

Moderator(s): Rayhan Shaheb;

Sponsoring Committee(s): MS-45 Soil-Plant-Machine Dynamics

113 UAS Applications in Precision Agriculture I

MS - Machinery Systems Oral Technical Session

Monday, 7/18/2022 9:30am - 12:00pm

Moderator(s): Lav Khot;

Sponsoring Committee(s): MS-60 Unmanned Aerial Systems, MS-54 Precision Agriculture

114 NRES Distinguished Lecture Series

NRES - Natural Resources & Environmental Systems Guest Speaker Session

Monday, 7/18/2022 9:30am - 12:00pm

Moderator(s): Adel Shirmohammadi;

Sponsoring Committee(s):

115 Environmental Management and Biosecurity

PAFS - Plant, Animal, & Facility Systems Oral Technical Session

Monday, 7/18/2022 9:30am - 12:00pm

Moderator(s): Morgan Hayes;

Sponsoring Committee(s): PAFS-40 Facilities & Systems Group

116 Biochemical Conversion and Bioprocess Modeling

PRS - Processing Systems Oral Technical Session

Monday, 7/18/2022 9:30am - 12:00pm

Moderator(s): Hasan Atiyeh; Yi Wang

Sponsoring Committee(s): PRS-280 Bioconversion and Bioprocesses, ES-220 Biomass Energy & Industrial Byproducts

117 Food Process Engineering

PRS - Processing Systems Oral Technical Session

Monday, 7/18/2022 9:30am - 12:00pm

Moderator(s): Griffiths Atungulu;

Sponsoring Committee(s): PRS-703 Food Processing

118 PRS-Grain Safety Invited Session

PRS - Processing Systems Guest Speaker Session

Monday, 7/18/2022 9:30am - 12:00pm

Moderator(s): Ashim Datta;

Sponsoring Committee(s): PRS-702 Crop & Feed Processing & Storage

119 PRS-Processing Systems POSTER SESSION

PRS - Processing Systems Poster Technical Session

Monday, 7/18/2022 9:30am - 12:00pm

Moderator(s): Juliana Vasco-Correa; Deepak Kumar

Sponsoring Committee(s): PRS-01 POSTER SESSION, PRS-06 General Program

120 Tips for Success in Grant Funding-PANEL

ASABE Special Interest Panel Discussion

Monday, 7/18/2022 2:30pm - 5:00pm

Moderator(s): Shafiqur Rahman; Ganesh Bora

Sponsoring Committee(s):

Panelists: Steven Thomson, Hongda Chen, Ganesh Bora, Shafiqur Rahman. In this session, a brief presentation of various significant competitive grants opportunities at NIFA will be presented to set a stage for a panel discussion by experienced National Pr

121 AOCABFE China Exchange Forum: Collaborative Research in Sustainable Agriculture during COVID Pandemic

E-2050 - Global Engagement Guest Speaker Session

Monday, 7/18/2022 2:30pm - 5:00pm

Moderator(s): Sarah Wu;

Sponsoring Committee(s): AOCABFE

122 Post Pandemics Lesson Learned, Opportunities and Challenges in Developing Economies

E-2050 - Global Engagement Guest Speaker Session

Monday, 7/18/2022 2:30pm - 5:00pm

Moderator(s): Kaushik Luthra; Luc Hebou

Sponsoring Committee(s): E-2050 Global Engagement

123 EOPD-What is Extension Engineering?

EOPD - Education, Outreach, & Professional Development Panel Discussion

Monday, 7/18/2022 2:30pm - 5:00pm

Moderator(s): Gary Hawkins;

Sponsoring Committee(s): EOPD-208 Extension

Panelists: Douglas W. Hamilton, Ph.D., P.E., Oklahoma State University; Fouad Jaber, Ph.D., P.E., Texas A&M AgriLife Extension, Dallas, Texas

124 Thermochemical Conversion of Biomass to Biofuels

ES - Energy Systems Oral Technical Session

Monday, 7/18/2022 2:30pm - 5:00pm

Moderator(s): Mi Li; Sandun Fernando

Sponsoring Committee(s): ES-220 Biomass Energy & Industrial Products

125 Agricultural Automation, Robotics, and Technology: New Risks & Safety Opportunities

ESH - Ergonomics, Safety & Health Oral Technical Session

Monday, 7/18/2022 2:30pm - 5:00pm

Moderator(s): John Shutske;

Sponsoring Committee(s): ESH-04 Technology Exchange, ITSC-318 Mechatronics & Biorobotics, EOPD-205 Engineering Technology & Management Education, ESH-04/1 Journal of Agricultural Safety and Health, ESH-04/2 Farmers With Disabilities Technology Exchange, MS-58 Agricultural Equipme

126 Machine Learning in Agriculture and Natural Resources II

ITSC - Information Technology, Sensors & Control Systems Lightning Oral Technical Session

Monday, 7/18/2022 2:30pm - 5:00pm

Moderator(s): Zhou Zhang; Zhou Zhang

Sponsoring Committee(s): ITSC-254 Emerging Information Systems, PAFS-30 Plant Systems Group, NRES-21 Hydrology Group

127 Machine Vision Applications on Mobile Devices for Agricultural Systems-HYBRID

ITSC - Information Technology, Sensors & Control Systems Lightning Oral Technical Session

Monday, 7/18/2022 2:30pm - 5:00pm

Moderator(s): Josh Peschel;

Sponsoring Committee(s): ITSC-254 Emerging Information Systems, MS-23/19/3 Electronics for Identification (Animal), MS-23/19/1 Electronics for Mobile Equipment (ISOBUS), MS-23/19/5 Standards for Wireless Communications in Agr., PAFS-30 Plant Systems Group

128 Robotics and AI-Enabled Robotics for Agriculture, Food and Natural Resources

ITSC - Information Technology, Sensors & Control Systems Lightning Oral Technical Session

Monday, 7/18/2022 2:30pm - 5:00pm

Moderator(s): Dongyi Wang; Santosh Pitla

Sponsoring Committee(s): ITSC-318 Mechatronics & Biorobotics

129 Spectroscopic Sensing and Imaging for Agriculture and Food Systems

ITSC - Information Technology, Sensors & Control Systems Lightning Oral Technical Session

Monday, 7/18/2022 2:30pm - 5:00pm

Moderator(s): Shih-Fang Chen; Peter Larbi

Sponsoring Committee(s): ITSC-348 Electromagnetics & Spectroscopy

130 Machinery Systems for Crop Production I

MS - Machinery Systems Oral Technical Session

Monday, 7/18/2022 2:30pm - 5:00pm

Moderator(s): Virk Simerjeet; Virk Simerjeet

Sponsoring Committee(s): MS-49 Crop Production Systems, Machinery, and Logistics

131 UAS Applications in Precision Agriculture II

MS - Machinery Systems Oral Technical Session

Monday, 7/18/2022 2:30pm - 5:00pm

Moderator(s): Lav Khot;

Sponsoring Committee(s): MS-60 Unmanned Aerial Systems, MS-54 Precision Agriculture

132 Advances in Drainage Design and Modeling

NRES - Natural Resources & Environmental Systems Oral Technical Session

Monday, 7/18/2022 2:30pm - 5:00pm

Moderator(s): Ehsan Ghane;

Sponsoring Committee(s): NRES-23 Drainage Group

133 Advances in Sprinkler and Variable Rate Irrigation

NRES - Natural Resources & Environmental Systems Oral Technical Session

Monday, 7/18/2022 2:30pm - 5:00pm

Moderator(s): Xin Qiao; Burdette Barker

Sponsoring Committee(s): NRES-24 Irrigation Group, NRES-241 Sprinkler Irrigation

134 Anaerobic Digestion

NRES - Natural Resources & Environmental Systems Oral Technical Session

Monday, 7/18/2022 2:30pm - 5:00pm

Moderator(s): Doug Hamilton;

Sponsoring Committee(s): NRES-27 Ag Byproducts & Animal Mortality Systems, PRS-707 Food & Organic Waste Management & Utilization

135 Digital Water- Management, Analysis, Modeling, and Hydrological Assets-HYBRID

NRES - Natural Resources & Environmental Systems Hybrid Session

Monday, 7/18/2022 2:30pm - 5:00pm

Moderator(s): Sherry Hunt; Debabrata Sahoo

Sponsoring Committee(s): NRES-21 Hydrology Group

136 Evapotranspiration in Irrigation Management

NRES - Natural Resources & Environmental Systems Oral Technical Session

Monday, 7/18/2022 2:30pm - 5:00pm

Moderator(s): Vivek Sharma;

Sponsoring Committee(s): NRES-24 Irrigation Group

137 Green Infrastructure and Emerging Contaminants

NRES - Natural Resources & Environmental Systems Oral Technical Session

Monday, 7/18/2022 2:30pm - 5:00pm

Moderator(s): Caleb Mitchell;

Sponsoring Committee(s): NRES-25 Streams, Reservoirs, and Wetlands Group

138 Nutrient Removal, Recovery, and Recycle: Manure and Wastewater Treatment

NRES - Natural Resources & Environmental Systems Oral Technical Session

Monday, 7/18/2022 2:30pm - 5:00pm

Moderator(s): Jaime Thissen;

Sponsoring Committee(s):

139 Vulnerability of Land Resources for Sustainable Development: Stressors and Responses-HYBRID

NRES - Natural Resources & Environmental Systems Hybrid Session

Monday, 7/18/2022 2:30pm - 5:00pm

Moderator(s): Aavudai Anandhi; Tushar Sinha

Sponsoring Committee(s): NRES-26 Sustainable Land Resources

140 Agri-Industrial Facility Design and Operation

PAFS - Plant, Animal, & Facility Systems Lightning Oral Technical Session

Monday, 7/18/2022 2:30pm - 5:00pm

Moderator(s): Greg Williams;

Sponsoring Committee(s): PAFS-20 Structures Group, PRS-703 Food Processing, PRS-701 Physical Properties of Ag & Biological Products, PRS-702 Crop & Feed Processing & Storage

141 Precision (SMART) Animal Management

PAFS - Plant, Animal, & Facility Systems Lightning Oral Technical Session

Monday, 7/18/2022 2:30pm - 5:00pm

Moderator(s): Joshua Sander;

Sponsoring Committee(s): PAFS-40 Facilities & Systems Group

142 Food Safety Engineering

PRS - Processing Systems Oral Technical Session

Monday, 7/18/2022 2:30pm - 5:00pm

Moderator(s): Stephen Walker;

Sponsoring Committee(s): PRS-703 Food Processing

143 Management and Upcycling of Organic Wastes and Byproducts

PRS - Processing Systems Oral Technical Session

Monday, 7/18/2022 2:30pm - 5:00pm

Moderator(s): Kenneth Hellevang;

Sponsoring Committee(s): PRS-707 Food & Organic Waste Management & Utilization, PRS-280 Bioconversion and Bioprocesses

144 NRES-Natural Resources & Environmental Systems POSTER SESSION

NRES - Natural Resources & Environmental Systems Poster Technical Session

Monday, 7/18/2022 4:30pm - 7:00pm

Moderator(s): Anita Thompson;

Sponsoring Committee(s): NRES-01 POSTER SESSION, NRES-28 Ecological Engineering, NRES-21 Hydrology Group, NRES-22 Erosion Control Group, NRES-23 Drainage Group, NRES-24 Irrigation Group, NRES-25 Streams, Reservoirs, and Wetlands Group, NRES-26 Sustainable Land Resources, NRES-27

201 ASABE-Administrators' Facilitated Rap Session: Fostering a Culture Toward Greater IDEA

ASABE Special Interest Rap Session

Tuesday, 7/19/2022 9:30am - 10:30am

Moderator(s): Kati Migliaccio; Sue Nokes

Sponsoring Committee(s):

202 Wood-Based Energy and Products

ASE - Applied Science & Engineering Oral Technical Session

Tuesday, 7/19/2022 9:30am - 12:00pm

Moderator(s): Toufiq Reza;

Sponsoring Committee(s): ASE-12 Forest Engineering

203 E-2050-Alliance for Modernizing African Agri-Food System

E-2050 - Global Engagement Guest Speaker Session

Tuesday, 7/19/2022 9:30am - 12:00pm

Moderator(s): Ajit Srivatsava; Margaret Gitau

Sponsoring Committee(s): E-2050 Global Engagement

204 Innovation and Integration of Instruction

EOPD - Education, Outreach, & Professional Development Lightning Oral Technical Session

Tuesday, 7/19/2022 9:30am - 12:00pm

Moderator(s): Tom Brumm;

Sponsoring Committee(s): EOPD-205 Engineering Technology & Management Education, EOPD-203 Undergraduate & Graduate Instruction, EOPD-204 Engineering & Technology Accreditation

205 ES-Recent Advancement in Renewable Energy Resources and Technologies

ES - Energy Systems Guest Speaker Session

Tuesday, 7/19/2022 9:30am - 12:00pm

Moderator(s): Xianhui Zhao; Jaya Tumuluru

Sponsoring Committee(s): ES-210 Renewable Power Generation Committee, ES-220 Biomass Energy & Industrial Byproducts

206 Techno-Economic and Life Cycle Assessment of Biomass Conversion and Agricultural Systems

ES - Energy Systems Oral Technical Session

Tuesday, 7/19/2022 9:30am - 12:00pm

Moderator(s): Deepak Kumar; Brendan Higgins

Sponsoring Committee(s): ES-220 Biomass Energy & Industrial Products, PRS-280 Bioconversion and Bioprocesses

207 Safety Modifications and Assistive Technologies for Agricultural Production

ESH - Ergonomics, Safety & Health Oral Technical Session

Tuesday, 7/19/2022 9:30am - 12:00pm

Moderator(s): Bill Field; Michael Pate

Sponsoring Committee(s): ESH-04/2 Farmers With Disabilities Technology Exchange, ESH-04/1 Journal of Agricultural Safety and Health, EOPD-205 Engineering Technology & Management Education, EOPD-208 Extension, ESH-04 Technology Exchange

208 ITSC-Information Technology, Sensors & Control Systems POSTER SESSION

ITSC - Information Technology, Sensors & Control Systems Poster Technical Session

Tuesday, 7/19/2022 9:30am - 12:00pm

Moderator(s): Lav Khot; Jiang Yu Jiang

Sponsoring Committee(s): ITSC-All

209 Machinery Data and Task Optimization I

MS - Machinery Systems Oral Technical Session

Tuesday, 7/19/2022 9:30am - 12:00pm

Moderator(s): Mark Siemens; Mark Siemens

Sponsoring Committee(s): MS-49 Crop Production Systems, Machinery, and Logistics

210 Machinery Systems for Crop Production II

MS - Machinery Systems Oral Technical Session

Tuesday, 7/19/2022 9:30am - 12:00pm

Moderator(s): Jianfeng Zhou; Virk Simerjeet

Sponsoring Committee(s): MS-49 Crop Production Systems, Machinery, and Logistics

211 Advances in Hydrologic Modeling of Agroecosystems of various Complexities

NRES - Natural Resources & Environmental Systems Oral Technical Session

Tuesday, 7/19/2022 9:30am - 12:00pm

Moderator(s): Devendra Amatya; Sushant Mehan

Sponsoring Committee(s): NRES-21 Hydrology Group, NRES-253 Riparian Zones, Floodplains, & Wetlands, NRES-23 Drainage Group

212 Agricultural Conservation Practice Implementation and Assessment

NRES - Natural Resources & Environmental Systems Oral Technical Session

Tuesday, 7/19/2022 9:30am - 12:00pm

Moderator(s): Paula Steiner; Laxmi Prasad

Sponsoring Committee(s): NRES-22 Erosion Control Group, NRES-225 Conservation Systems

213 Applied Ecological Engineering in Water Systems-HYBRID

NRES - Natural Resources & Environmental Systems Hybrid Session

Tuesday, 7/19/2022 9:30am - 12:00pm

Moderator(s): John McMaine;

Sponsoring Committee(s): NRES-28 Ecological Engineering, NRES-25 Streams, Reservoirs, and Wetlands Group

214 Conservation Drainage Practices for Reducing Nutrient Loss

NRES - Natural Resources & Environmental Systems Oral Technical Session

Tuesday, 7/19/2022 9:30am - 12:00pm

Moderator(s): Vinayak Shedekar;

Sponsoring Committee(s): NRES-23 Drainage Group

215 Dam-Why Should You Care?

NRES - Natural Resources & Environmental Systems Oral Technical Session

Tuesday, 7/19/2022 9:30am - 12:00pm

Moderator(s): Sherry Hunt;

Sponsoring Committee(s): NRES-25 Streams, Reservoirs, and Wetlands Group

216 Emerging Contaminants, Pathogens, and Antibiotic Resistance

NRES - Natural Resources & Environmental Systems Oral Technical Session

Tuesday, 7/19/2022 9:30am - 12:00pm

Moderator(s): Tiffany Messer; Lindsey Hartfiel

Sponsoring Committee(s): NRES-28 Ecological Engineering, NRES-25 Streams, Reservoirs, and Wetlands Group

217 Erosion in Fields and Streams, Research, Modeling and Case Studies

NRES - Natural Resources & Environmental Systems Oral Technical Session

Tuesday, 7/19/2022 9:30am - 12:00pm

Moderator(s): Gary Hawkins; Vahid Rahmani

Sponsoring Committee(s): NRES-25 Streams, Reservoirs, and Wetlands Group, NRES-252 Geomorphology, Streambank Stability & In-Stream Processes

218 Machine Learning and Process-Based Models for Hydrologic Simulation

NRES - Natural Resources & Environmental Systems Oral Technical Session

Tuesday, 7/19/2022 9:30am - 12:00pm

Moderator(s): Clement Sohoulade;

Sponsoring Committee(s): NRES-21 Hydrology Group

219 NRES-Regional Manure Nutrient Balance

NRES - Natural Resources & Environmental Systems Guest Speaker Session

Tuesday, 7/19/2022 9:30am - 12:00pm

Moderator(s): Clifford Fedler; Zong Liu

Sponsoring Committee(s): NRES-27 Ag Byproducts & Animal Mortality Systems

220 PAFS-Plant, Animal & Facilities POSTER SESSION

PAFS - Plant, Animal, & Facility Systems Poster Technical Session

Tuesday, 7/19/2022 9:30am - 12:00pm

Moderator(s): Shafiqur Rahman; Ademola Ajayibanji

Sponsoring Committee(s): PAFS-01 POSTER SESSION, PAFS-50 Environmental Air Quality, PAFS-20 Structures Group, PAFS-30 Plant Systems Group, PAFS-40 Facilities & Systems Group

221 AI and Data Science Application in Food and Biological Material Processing-HYBRID

PRS - Processing Systems Hybrid Session

Tuesday, 7/19/2022 9:30am - 12:00pm

Moderator(s): Sarah Wu; Juliana Vasco-Correa

Sponsoring Committee(s): PRS-06 General Program, ITSC-217 Computational Methods, Simulations & Applications, PRS-280 Bioconversion and Bioprocesses, PRS-701 Physical Properties of Ag & Biological Products, PRS-703 Food Processing

222 ASABE-Listening Session – BIPOC Community-RAP Session

ASABE Special Interest Rap Session

Tuesday, 7/19/2022 10:30am - 11:30am

Moderator(s): Janie Moore;

Sponsoring Committee(s):

223 ASABE-Becoming Inclusive: A Worthy Pursuit in Cultivating Access

ASABE Special Interest Guest Speaker Session

Tuesday, 7/19/2022 2:30pm - 5:00pm

Moderator(s): Sue E Nokes; Mark Riley

Sponsoring Committee(s): EOPD-416 Continuing Professional Development

Invited talk open to all conference attendees, Becoming Inclusive: A Worthy Pursuit in Cultivating Access with Dr. Helen Fagan

224 ASE-Applied Science and Engineering POSTER SESSION

ASE - Applied Science & Engineering Poster Technical Session

Tuesday, 7/19/2022 2:30pm - 5:00pm

Moderator(s): Catie Brewer;

Sponsoring Committee(s):

225 Modernizing African Agriculture

E-2050 - Global Engagement Oral Technical Session

Tuesday, 7/19/2022 2:30pm - 5:00pm

Moderator(s): Kumar Mallikarjunan; Margaret Gitau

Sponsoring Committee(s): E-2050 Global Engagement

226 EOPD-Education, Outreach, & Professional Development POSTER SESSION

EOPD - Education, Outreach, & Professional Development Poster Technical Session

Tuesday, 7/19/2022 2:30pm - 5:00pm

Moderator(s): Jennifer Keshwani;

Sponsoring Committee(s): EOPD-203 Undergraduate & Graduate Instruction, EOPD-205 Engineering Technology & Management Education, EOPD-206 Ag Technology & Mgmt Curriculum Review & Program Recog

227 ES-Energy Systems POSTER SESSION

ES - Energy Systems Poster Technical Session

Tuesday, 7/19/2022 2:30pm - 5:00pm

Moderator(s): Jaya Shankar Tumuluru; Ganti Murthy

Sponsoring Committee(s): ES-220 Biomass Energy & Industrial Products

228 ESH-Ergonomics, Safety, & Health POSTER SESSION

ESH - Ergonomics, Safety & Health Poster Technical Session

Tuesday, 7/19/2022 2:30pm - 5:00pm

Moderator(s): Michael Pate;

Sponsoring Committee(s): ESH-04 Technology Exchange, ESH-04/2 Farmers With Disabilities Technology Exchange, ESH-01 POSTER SESSION, ESH-04/1 Journal of Agricultural Safety and Health

229 Innovations in Precision Agriculture

MS - Machinery Systems Oral Technical Session

Tuesday, 7/19/2022 2:30pm - 5:00pm

Moderator(s): Michael Sama;

Sponsoring Committee(s): MS-54 Precision Agriculture, ITSC-353 Instrumentation & Controls

230 Machinery Data and Task Optimization II

MS - Machinery Systems Oral Technical Session

Tuesday, 7/19/2022 2:30pm - 5:00pm

Moderator(s): John Long; Mark Siemens

Sponsoring Committee(s): MS-49 Crop Production Systems, Machinery, and Logistics

231 Robotics & Mechanization for Production and Postharvest of Specialty Crops I

MS - Machinery Systems Oral Technical Session

Tuesday, 7/19/2022 2:30pm - 5:00pm

Moderator(s): Jianfeng Zhou; Long He

Sponsoring Committee(s): MS-48 Specialty Crop Engineering, MS-01 POSTER SESSION, ITSC-01 POSTER SESSION, ITSC-312 Machine Vision, 318 Mechatronics & Biorobotics, MS-23/6/4 Spray Application Modeling, MS-54 Precision Agriculture

232 Agricultural Water Management: Monitoring and Modeling

NRES - Natural Resources & Environmental Systems Oral Technical Session

Tuesday, 7/19/2022 2:30pm - 5:00pm

Moderator(s): ;

Sponsoring Committee(s):

233 Application of Data Driven Models in Irrigation System Design, Analysis and Management

NRES - Natural Resources & Environmental Systems Oral Technical Session

Tuesday, 7/19/2022 2:30pm - 5:00pm

Moderator(s): Brad King; Sandra Guzman

Sponsoring Committee(s): NRES-24 Irrigation Group, ITSC-254 Emerging Information Systems

234 Barriers and Opportunities of Adoption of Manure and Agricultural Byproducts Management

NRES - Natural Resources & Environmental Systems Oral Technical Session

Tuesday, 7/19/2022 2:30pm - 5:00pm

Moderator(s): Linda Schott;

Sponsoring Committee(s): NRES-27 Ag Byproducts & Animal Mortality Systems

235 Extreme Event Hydrologic and Water Quality Modeling

NRES - Natural Resources & Environmental Systems Oral Technical Session

Tuesday, 7/19/2022 2:30pm - 5:00pm

Moderator(s): Jasmeet Lamba; Hemendra Kumar

Sponsoring Committee(s): NRES-22 Erosion Control Group, NRES-28 Ecological Engineering, NRES-21 Hydrology Group, NRES-224 Sediment and Associated Pollutants, NRES-23 Drainage Group, NRES-26 Sustainable Land Resources

236 Monitoring Standards: Applications, Methods and Technologies-HYBRID

NRES - Natural Resources & Environmental Systems Hybrid Session

Tuesday, 7/19/2022 2:30pm - 5:00pm

Moderator(s): Adel Shirmohammadi; Darren Harmel

Sponsoring Committee(s): NRES-21 Hydrology Group

237 NRES-Drainage Education in the 21st century – Honoring the Career of Dr. Larry Brown & Andy Ward

NRES - Natural Resources & Environmental Systems Guest Speaker Session

Tuesday, 7/19/2022 2:30pm - 5:00pm

Moderator(s): Vinayak Shedekar; Lindsay Pease

Sponsoring Committee(s): NRES-23 Drainage Group

238 Nutrient Removal, Recovery, and Recycle

NRES - Natural Resources & Environmental Systems Oral Technical Session

Tuesday, 7/19/2022 2:30pm - 5:00pm

Moderator(s): Clifford Fedler;

Sponsoring Committee(s): NRES-28 Ecological Engineering, NRES-23 Drainage Group

239 Water Reuse in Agriculture

NRES - Natural Resources & Environmental Systems Oral Technical Session

Tuesday, 7/19/2022 2:30pm - 5:00pm

Moderator(s): Carolyn Jones;

Sponsoring Committee(s): NRES-27 Ag Byproducts & Animal Mortality Systems, NRES-24 Irrigation Group

240 Air Emission from Livestock and Poultry Production

PAFS - Plant, Animal, & Facility Systems Oral Technical Session

Tuesday, 7/19/2022 2:30pm - 5:00pm

Moderator(s): Mindy Spiehs;

Sponsoring Committee(s): PAFS-50 Environmental Air Quality

241 ASABE - New Standards for HVAC in Indoor Plant Environments Without Sunlight - and CEA Session-HYBRID

PAFS - Plant, Animal, & Facility Systems Hybrid Session

Tuesday, 7/19/2022 2:30pm - 5:00pm

Moderator(s): Jonathan Maisonneuve; Mark Lefsrud

Sponsoring Committee(s): PAFS-30 Plant Systems Group

242 Technology Trends and Career Opportunities in the U.S. and Korea

E-2050 - Global Engagement Guest Speaker Session

Tuesday, 7/19/2022 5:15pm - 7:00pm

Moderator(s): Young Gu Her;

Sponsoring Committee(s): E-2050 Global Engagement

301 ASABE-BIPOC Issues Related to ASABE and Biosystems and Agricultural Engineering as a Profession

ASABE Special Interest Guest Speaker Session

Wednesday, 7/20/2022 7:30am - 10:00am

Moderator(s): Janie Moore;

Sponsoring Committee(s): EOPD-203 Undergraduate & Graduate Instruction, E-2050 Global Engagement

302 Global Engagement through the Appropriate Scale Mechanization Consortium (ASMC)

E-2050 - Global Engagement Guest Speaker Session

Wednesday, 7/20/2022 7:30am - 10:00am

Moderator(s): Monjurul Alam;

Sponsoring Committee(s): E-2050 Global Engagement, ASE-16 Engineering for Sustainability

Panelists: Gajendra Singh, ASMC, University of Illinois, Urbana, Illinois; Monjurul Alam, Bangladesh Agricultural University, Mymensingh, Bangladesh; Subrata Das, ACI Motors LTD, Dhaka, Bangladesh; Kerry Clark, University of Missouri, Columbia, Missouri.

303 EOPD-Practical Tips to Create Inclusive Classrooms

EOPD - Education, Outreach, & Professional Development Rap Session

Wednesday, 7/20/2022 7:30am - 10:00am

Moderator(s): Deepak Keshwani;

Sponsoring Committee(s): EOPD-203 Undergraduate & Graduate Instruction

Are you interested in creating an inclusive learning environment and supporting the needs of diverse learners? Plan to attend this informal RAP session and engage with your peers to share and learn practical strategies to create inclusive learning environ

304 Biomass Feedstock Supply Logistics and Modeling

ES - Energy Systems Oral Technical Session

Wednesday, 7/20/2022 7:30am - 10:00am

Moderator(s): Jaya Shankar Tumuluru; Ajay Shah

Sponsoring Committee(s): ES-220 Biomass Energy & Industrial Products, ASE-12 Forest Engineering, MS-23/7/2 Forage & Biomass Engineering

305 Renewable Energy Resources and Technologies

ES - Energy Systems Oral Technical Session

Wednesday, 7/20/2022 7:30am - 10:00am

Moderator(s): Fei Yu; Lin Wei

Sponsoring Committee(s): ES-210 Renewable Power Generation Committee, ES-220 Biomass Energy & Industrial Byproducts

306 State of Energy Efficiency and Value Added Chemicals

ES - Energy Systems Oral Technical Session

Wednesday, 7/20/2022 7:30am - 10:00am

Moderator(s): Bobby Hardin;

Sponsoring Committee(s): ES-300 Electrical Utilization & Energy Apps, ES-310 Ag Lighting Group, PAFS-30 Plant Systems Group

307 Advanced Computations in Agricultural and Biological Engineering

ITSC - Information Technology, Sensors & Control Systems Oral Technical Session

Wednesday, 7/20/2022 7:30am - 10:00am

Moderator(s): Hugo Milan; Oluwafemi Oyedeki

Sponsoring Committee(s): ITSC-217 Computational Methods, Simulations & Applications

308 Biosensors and Bioelectronics in Food and Agriculture

ITSC - Information Technology, Sensors & Control Systems Oral Technical Session

Wednesday, 7/20/2022 7:30am - 10:00am

Moderator(s): Xinge Xi; Fei Jia

Sponsoring Committee(s): ITSC-230 Biosensors

309 Mechatronics and Actuation in Unmanned Aerial and Ground Vehicles

ITSC - Information Technology, Sensors & Control Systems Oral Technical Session

Wednesday, 7/20/2022 7:30am - 10:00am

Moderator(s): Vinay Vijayakumar; Yiannis Ampatzidis

Sponsoring Committee(s): ITSC-318 Mechatronics & Biorobotics

310 Precision Application for Crop Protection Product and Fertilizer I

MS - Machinery Systems Oral Technical Session

Wednesday, 7/20/2022 7:30am - 10:00am

Moderator(s): Dan Cederberg;

Sponsoring Committee(s): MS-23 & US TAG ISO/TC23, MS-54 Precision Agriculture

311 Robotics & Mechanization for Production and Postharvest of Specialty Crops II

MS - Machinery Systems Oral Technical Session

Wednesday, 7/20/2022 7:30am - 10:00am

Moderator(s): Xin Zhang; Long He

Sponsoring Committee(s): MS-48 Specialty Crop Engineering, MS-01 POSTER SESSION, ITSC-01 POSTER SESSION, ITSC-312 Machine Vision, 318 Mechatronics & Biorobotics, MS-23/6/4 Spray Application Modeling, MS-54 Precision Agriculture

312 Nutrient Cycling, Transport and Management

NRES - Natural Resources & Environmental Systems Oral Technical Session

Wednesday, 7/20/2022 7:30am - 10:00am

Moderator(s): Rabin Bhattarai; Kritika Malhotra

Sponsoring Committee(s): NRES-22 Erosion Control Group, NRES-28 Ecological Engineering, NRES-21 Hydrology Group, NRES-224 Sediment and Associated Pollutants, NRES-23 Drainage Group, NRES-26 Sustainable Land Resources

313 Surface Irrigation and Water Supplies

NRES - Natural Resources & Environmental Systems Oral Technical Session

Wednesday, 7/20/2022 7:30am - 10:00am

Moderator(s): Mary Love Tagert; Saleh Taghvaeian

Sponsoring Committee(s): NRES-24 Irrigation Group, NRES-242 Surface Irrigation & Water Supply

314 Animal Response to Environment

PAFS - Plant, Animal, & Facility Systems Oral Technical Session

Wednesday, 7/20/2022 7:30am - 10:00am

Moderator(s): John Linhoss;

Sponsoring Committee(s): PAFS-40 Facilities & Systems Group

315 Measurement, Mitigation and Modeling of Air Pollution from Livestock and Poultry Facilities

PAFS - Plant, Animal, & Facility Systems Oral Technical Session

Wednesday, 7/20/2022 7:30am - 10:00am

Moderator(s): Lilong Chai;

Sponsoring Committee(s): PAFS-50 Environmental Air Quality

316 Modeling Crop and Feed Drying, Handling and Storage

PRS - Processing Systems Oral Technical Session

Wednesday, 7/20/2022 7:30am - 10:00am

Moderator(s): Toufiq Reza;

Sponsoring Committee(s): PRS-702 Crop & Feed Processing & Storage, ITSC-217 Computational Methods, Simulations & Applications

317 Physical and Chemical Properties of Food, Agricultural, and Biological Materials

PRS - Processing Systems Oral Technical Session

Wednesday, 7/20/2022 7:30am - 10:00am

Moderator(s): John Lawrence; Mohammad Kamruzzaman

Sponsoring Committee(s): PRS-701 Physical Properties of Ag & Biological Products, PRS-702 Crop & Feed Processing & Storage

318 ASABE-Brainstorming and IDEA Session on Diversity and Inclusion

ASABE Special Interest Guest Speaker Session

Wednesday, 7/20/2022 10:15am - 11:45am

Moderator(s): Sue Nokes;

Sponsoring Committee(s): EOPD-416 Continuing Professional Development, E-2050 Global Engagement Roundtable discussion with Dr. Fagan

319 Advances in Biomass Preprocessing and Pretreatment

ES - Energy Systems Oral Technical Session

Wednesday, 7/20/2022 10:15am - 12:15pm

Moderator(s): Nurun Nahar; Juliana Vasco-Correa

Sponsoring Committee(s): ES-220 Biomass Energy & Industrial Products, ASE-12 Forest Engineering, MS-23/7/2 Forage & Biomass Engineering

320 Big Data Management and Visualization

ITSC - Information Technology, Sensors & Control Systems Oral Technical Session

Wednesday, 7/20/2022 10:15am - 12:15pm

Moderator(s): Ziwen Yu; Sami Khanal

Sponsoring Committee(s): ITSC-254 Emerging Information Systems, MS-23/19/3 Electronics for Identification (Animal), MS-23/19/1 Electronics for Mobile Equipment (ISOBUS), NRES-21 Hydrology Group

321 Discrete Element Modelling (DEM) Applications in Agriculture

ITSC - Information Technology, Sensors & Control Systems Oral Technical Session

Wednesday, 7/20/2022 10:15am - 12:15pm

Moderator(s): Mehari Tekeste; John Fielke

Sponsoring Committee(s): ITSC-217 Computational Methods, Simulations & Applications

322 Emerging Technologies for Biological Sensing

ITSC - Information Technology, Sensors & Control Systems Oral Technical Session

Wednesday, 7/20/2022 10:15am - 12:15pm

Moderator(s): Xinge Xi; Fei Jia

Sponsoring Committee(s): ITSC-230 Biosensors

323 MS-Machinery Systems POSTER SESSION

MS - Machinery Systems Poster Technical Session

Wednesday, 7/20/2022 10:15am - 12:15pm

Moderator(s): Yu Jiang; Yu Jiang

Sponsoring Committee(s): MS-48 Specialty Crop Engineering, MS-01 POSTER SESSION, ITSC-01 POSTER SESSION, 318 Mechatronics & Biorobotics, MS-48 Specialty Crop Engineering, MS-58 Agricultural Equipment Automation

324 Precision Application for Crop Protection Product and Fertilizer II

MS - Machinery Systems Oral Technical Session

Wednesday, 7/20/2022 10:15am - 12:15pm

Moderator(s): Dan Cederberg;

Sponsoring Committee(s): MS-23 & US TAG ISO/TC23, MS-54 Precision Agriculture

325 Robotics & Mechanization for Production and Postharvest of Specialty Crops III

MS - Machinery Systems Oral Technical Session

Wednesday, 7/20/2022 10:15am - 12:15pm

Moderator(s): Long He; Long He

Sponsoring Committee(s): MS-48 Specialty Crop Engineering, MS-01 POSTER SESSION, ITSC-01 POSTER SESSION, ITSC-312 Machine Vision, 318 Mechatronics & Biorobotics, MS-23/6/4 Spray Application Modeling, MS-54 Precision Agriculture

326 Agricultural Conservation Practices under Changing Climate and Urbanization

NRES - Natural Resources & Environmental Systems Oral Technical Session

Wednesday, 7/20/2022 10:15am - 12:15pm

Moderator(s): Yuan Yongping; Brock Kamrath

Sponsoring Committee(s): NRES-26 Sustainable Land Resources

327 Data and Water Management: Volume, Velocity, and Variety

NRES - Natural Resources & Environmental Systems Oral Technical Session

Wednesday, 7/20/2022 10:15am - 12:15pm

Moderator(s): Sushant Mehan; Abhinav Sharma

Sponsoring Committee(s): NRES-21 Hydrology Group

328 Hydraulic Structures & Rehab in the Gulf Coast and Beyond

NRES - Natural Resources & Environmental Systems Oral Technical Session

Wednesday, 7/20/2022 10:15am - 12:15pm

Moderator(s): Vahid Rahmani; Richard Scholtz

Sponsoring Committee(s): NRES-25 Streams, Reservoirs, and Wetlands Group

329 Microirrigation Applications in Agriculture and Landscape Irrigation

NRES - Natural Resources & Environmental Systems Oral Technical Session

Wednesday, 7/20/2022 10:15am - 12:15pm

Moderator(s): Haimanote Bayabil; Charles Swanson

Sponsoring Committee(s): NRES-24 Irrigation Group, NRES-246 Turf & Landscape Irrigation, NRES-245 Microirrigation

330 Sustainable Agriculture and Natural Resource Management

NRES - Natural Resources & Environmental Systems Oral Technical Session

Wednesday, 7/20/2022 10:15am - 12:15pm

Moderator(s): Sanjay Shukla; Meredith Brock

Sponsoring Committee(s): NRES-22 Erosion Control Group, NRES-225 Conservation Systems

331 Soil and Water Conservation Engineering and Management

NRES - Natural Resources & Environmental Systems Oral Technical Session

Wednesday, 7/20/2022 10:15am - 12:15pm

Moderator(s): Vivek Sharma; Uday Vaddevolu

Sponsoring Committee(s): NRES-25 Streams, Reservoirs, and Wetlands Group

332 PAFS Distinguished Lecture Series

PAFS - Plant, Animal, & Facility Systems Guest Speaker Session

Wednesday, 7/20/2022 10:15am - 12:15pm

Moderator(s): Josh Jackson;

Sponsoring Committee(s): PAFS-40 Facilities & Systems Group

333 Drying, Handling, and Storage of Grain Crops

PRS - Processing Systems Spotlight Oral Technical Session

Wednesday, 7/20/2022 10:15am - 12:15pm

Moderator(s): Ma. Cristine Ignacio;

Sponsoring Committee(s): PRS-702 Crop & Feed Processing & Storage

334 Emerging Techniques for Measuring Properties of Biological Material

PRS - Processing Systems Oral Technical Session

Wednesday, 7/20/2022 10:15am - 12:15pm

Moderator(s): Lamin Kassama; Seth Acquah

Sponsoring Committee(s): PRS-701 Physical Properties of Ag & Biological Products, PRS-703 Food Processing