



## MEETINGS & SESSIONS

SUBJECT TO CHANGE

### SUNDAY, JULY 29

#### **ASABE Silent Auction & Pick-a-Prize**

Opening Reception through Tuesday

Don't miss the fun! Place a bid on unique items and take a chance to win a high-value raffle prize, all in support of YOUR Foundation. Proceeds benefit the KEYS Fund for Student Development and Humanitarian Outreach.

#### **ASABE Board of Trustees**

Sunday, July 29 – 10:30AM-1:30PM

Location:

#### **AIM Meeting Orientation**

Sunday, July 29 – 11:00AM-11:30AM

Location:

Join YPC/IPC for an orientation on the Annual International Meeting. What should you do, who should you talk to, and what should you take away from the meeting? Also, take this opportunity to learn about the Young Professional Community and International Preprofessional Community. This is a great event for the first time attendees!

#### **ABET Outcomes Assessment and Criterion Updates**

Sunday, July 29 - 1:30PM 3:30PM

Location:

Moderator: Gary Clark, Kansas State University, Manhattan, KS

This session will cover the assessment of program student outcomes including the development of rubrics and how to use the capstone course for multiple outcomes assessment. Transitioning from the current ABET EAC Criteria 3 and 5 to the new elements of these criterion will also be discussed. - panel

### **ASABE Publications Council, Meetings Council, Standards Council and Membership Council**

Sunday, July 29 – 1:30PM-3:30PM

Location:

### **Fountain Wars Presentation Judging**

Sunday, July 29 – 2:30PM-4:30PM

Location:

Are you interested in the preparation and creative behind the scenes efforts of the different Fountain Wars teams? Come listen to the oral presentation phase of the competition and get a heads up on what is going to be displayed at the building-testing phase that takes place on Monday.

### **Committee Leadership Training**

Sunday, July 29 – 3:00PM-4:30PM

Location:

What to expect as part of the leadership team of an ASABE committee. Discussion on Bylaws, Agendas, Rosters and general expectations as well as question and answer.

### **Alpha Epsilon Annual Meeting**

Sunday, July 29 – 4:00PM-5:30PM

Location:

Alpha Epsilon will be having their annual meeting again! Each chapter is encouraged to have at least one member attend. We will have door prizes!

### **ASABE Welcome Reception**

Sunday, July 29 – 4:30PM-6:00PM

Location:

All meeting registrants are invited to attend our welcome reception. This is a good time to network with other attendees and to make further plans for dinner after the reception. The Detroit Visitors Bureau will have a representative available to assist you in making your dining reservations.

### **International Preprofessional Community (IPC) Business Meeting and Social**

Sunday, July 29 – 5:30PM-7:00PM

Location:

This is the main event of the International Preprofessional Community at AIM 2018. The current IPC officers will focus on networking with other students, electing new IPC officers, and briefly reviewing what sessions IPC members should plan to attend to make the most of the conference. Attendance to this meeting is expected for all students and especially those in undergraduate competitions. Come represent your school and preprofessional chapter! All students are highly encourage to come to this function. All pre-professional are invited to attend our social which follows our business meeting. This is a good time to network with other attendees and to make further plans for dinner after the reception. Refreshments will be served. Registration is required but there is no charge for this event.

COST: Preregistration is required

E#4

### **Women in ASABE Speed Networking**

Sunday, July 29 – 6:30PM-7:30PM

Location

Would you like to visit with other women who participate in the annual meeting and perhaps share some of your same interests? This is the opportunity for you! Participants are divided into mentors and mentees. When the cowbell rings, mentees move to another table to meet other women while the mentors stay at a table to host and encourage conversation. The hour allows enough time to sit at 7-9 tables; arrive on time to maximize the benefit.

COST: Attendee – preregistration is required; Mentor - preregistration is required

## **MONDAY, JULY 30**

### **Guide to Professional Licensure**

Monday, July 30 – 7:00AM-8:00AM

Location:

Studying for a Professional Licensure Exam? Or just have questions about which Professional Licensure Exam is right for you? Come join us to ask our panel of experts questions and get answers on questions like: why take a licensure exam? which exam is right for you? what is covered on a licensure exam? and how can ASABE help you prepare for the exam?

### **ASABE General Session / Recognitions / Keynote Speaker**

Monday, July 30 - 8:00AM-9:30AM

Location:

ASABE President Stephen Searcy welcomes each of you to the 2018 ASABE Annual International Meeting. Our Keynote Speaker is Margaret Catley-Carlson, Patron and Past Chair of the Global Water Partnership.

### **Producing More Food with Less Water: Does technology, management, or policy provide the best bang for our buck? - PANEL DISCUSSION** (Sponsored by E-2050).

Monday, July 30 - 9:30AM-10:30AM

Location:

Moderator: Sherry Hunt, PhD, Research Leader for USDA-ARS Hydraulic Engineering Research Unit, Stillwater, OK

ASABE is dedicated to the advancement of engineering applicable to agricultural, food, and biological systems. ASABE members work to develop efficient and environmentally sensitive methods to produce food, fiber, timber, and renewable energy sources for an ever-increasing world population. The U.S. and other world leaders are challenged everyday with producing more food with less water. Droughts occurring in different parts of the world not only impact our water availability, but also affect our water quality as soils become vulnerable to erosion causing water contamination. In addition, floods are just as devastating, affecting everything from agricultural production and processing to transporting goods to the consumer. Water is at the center of economic prosperity regardless of where you are located in the world. So how are we equipped to handle these challenges laid before us? Are there improved methods for harnessing excess water for clean and safe reuse or recharge of our aquifers? Does technology, management, or policy provide the best bang for our buck when it comes to producing more food with less water? This panel discussion is intended explore these questions and much more.

Panelists include:

**Margaret Catley-Carlson**, Vice Chair of the Canadian Water Network Board and patron and past chair of the Global Water Partnership. She is actively involved in supporting improved water resource management and the twin issues of agricultural productivity and rural development.

**Leigh-Ann Krometis, PhD.**, Associate Professor in the Biological Systems Engineering Department at Virginia Tech University. Dr. Krometis focuses on threat to public health as it relates to contamination of our drinking water supplies.

**Steve Evett, PhD.**, Soil Scientist at the USDA-ARS Soil and Water Management Research Unit. Dr. Evett focuses on water management from quality to quantity and is exploring the new innovative ways for water reuse and water recharge.

**Nick Dokoozlian, PhD.**, E. J. Gallo Winery Vice-President, Viticulture, Chemistry, and Enology. Dr. Dokoozlian focuses on the effects of cultural practices and environmental factors on grape and wine composition. In addition, E. & J. Gallo Winery have been long committed to water efficiency through conservation, development and implementation of new technologies and updating practices to maximize water use.

### **ASABE Career Fair**

Monday, July 30 - 9:30AM-12:00PM

Location:

The Career Fair is just one of the many highlights of the ASABE Annual International Meeting. It is an outstanding networking opportunity that allows interested individuals to connect with the Fortune 500 companies, agricultural and bio-based businesses, bio-research companies and major land grant universities looking for qualified candidates. The ASABE Career Fair provides an opportunity for employee and potential employees to come together informally and share information. Academia will also be represented with opportunities at the masters and doctoral level. Employers register their job positions at the registration desk and receive an interview table number. These openings are posted with the table number located near the ASABE registration desk for review. Prospective employees are invited to seek out employers of interest and exchange information.

Session #110

### **Current Achievements and New R&D Trends in Renewable Energy Resources and Technologies – INVITED SPEAKERS** (Sponsored by ES-210)

Monday, July 30 – 9:30AM-12:00PM

Location:

Moderator: Lin Wei, South Dakota State University, Brookings, SD

Overview achievements and improvements (e.g. efficiency, cost) of current renewable energy resources and technologies including solar, wind, geothermal, hydropower, and biopower; provide perspectives of new R&D trends of these technologies, policy, market and their impact on agricultural production sustainability, rural economy, and environmental protection in the coming decades.

*Invited Speakers:*

*R Roger Ruan, University of Minnesota*

*Brian D. Vick, USDA ARS*

*Douglas Reinemann, University of Wisconsin*

*Sushil Adhikari, Auburn University*

*Paul Funk, USDA ARS*

*Paul Preckel*

Session #122

### **Transfer of Concept on Precision Agriculture for Sustainable Global Crop Production – PANEL DISCUSSION** (Sponsored by MS-54, E-2050)

Monday, July 30 – 9:30AM-12:00PM

Location:

Moderator: Ganesh C. Bora, Mississippi State University, Mississippi State, MS

Transfer of concept, not transfer of technology, is key to successful global adaptation of precision agricultural technology to optimize resources for sustainable crop production. When the concept works for the particular crop or in a region; the technology can be developed locally.

*Panelists include:*

Dr. John Schueller of Florida,  
Dr. Yubin Lan of South China,  
Dr. Dharmendra Saraswat of Purdue,  
Dr. Michael Ngadi of McGill,  
Dr. Folarin of Uyo Nigeria -

Session #123

**Natural Resources & Environmental Systems Distinguished Lecture – INVITED SPEAKERS** (Sponsored by PAFS)

Monday, July 30 – 10:30AM-12:00PM

Location:

Moderator: John Linhoss, Mississippi State University, Mississippi State, MS

This session will host a series of invited presentations from Major Award Recipients, Fellow Inductees, and Superior Paper Award Winners from 2016. The format for this series differs from general technical session, providing invited speakers with the flexibility to deliver a presentation which highlights their views and vision of the past, present and/or future on a subject area relative to the PAFS Community and highlight the research and development of award winning research published with the *Transactions of ASABE* and *Applied Engineering in Agriculture*.

Invited Speakers:

Kenneth Stone, USDA ARS

Kati Migliaccio

Daniel Andersen

**Boyd-Scott Graduate Research Award**

Monday, July 30 – 12:00PM-2:30PM

Location:

The Graduate Student Research Award (GSRA) Competition sets out to recognize excellence in the conduct and presentation of agricultural and biological engineering research carried out by graduate student members. The competition is held in two parts: a written competition and an oral presentation for the top three finalists in the M.S. and Ph.D. categories, which is held at the ASABE Annual International Meeting. Winners will be recognized at the AEM/ASABE Student Awards Breakfast on Wednesday.

**Fountain Wars Competition**

Monday, July 30 – 1:00PM-8:00PM

Location:

Fountain Wars is a competition aimed at students in their sophomore and junior years of study. It provides students with hands on experience in engineering design and most importantly the students have a great time. Teams are given two and a half hours to build a fountain that completes two technical tasks and provides an aesthetic display.

Team check-in and Build 1:00PM-5:00PM

Team test / Adjustment in Fountain and Competition 5:00-8:00PM

Session #137

**Solutions to Agricultural Water Sustainability and Security in India and other Developing Countries (AABFEIO) – INVITED SPEAKERS**

Monday, July 30 – 2:30PM-5:00PM

Location:

Moderator: Vivek Sharma, University of Wyoming, Powell, WY

Description: Efficient management of agricultural water resources is vital to agricultural productivity worldwide, especially in India, which is one of the most irrigated country in the world. This session will specifically focus on

agricultural water sustainability and security issue in terms of water quantity and quality in India and other developing countries. Invited speakers will highlight the solution to agricultural water sustainability and security problems.

Target Audience: AABFEIO and ASABE members with interests in learning major agricultural water management challenges in India and other developing countries.

Learning Objectives: The invited session will achieve the learning objectives through a variety of presentations from accomplished scientists.

Invited Speakers:

Dr. Indrajeet Chaubey, Purdue University

Dr. Christopher Neale, University of Nebraska, Lincoln

Dr. Rameshwar Kanwar, Iowa State University

Dr. Harminder Singh Sidhu, Borlaug Institute for South Asia (BISA)

Session #138

### **Appropriate-Scale Mechanization for Global Food Security – INVITED SPEAKERS**

Monday, July 30 – 2:30PM-5:00PM

Location:

Moderator: Ajit Srivastava, Michigan State University, East Lansing, Michigan

It is expected that global food production needs to double by the year 2030 due to population growth and diet transformation. Nearly 80% of 500 million farmers in the world are classified as small-holder farmers holding less than 2 ha. To increase expected food production increase, small-holders must become more productive. Agricultural mechanization is critical to increasing farm productivity. Therefore, it is imperative that appropriate-scale mechanization be developed and adopted by small-holder to meet production target. This session provides a platform for researchers to share emerging technologies suitable for small-holder farmers.

#### ***Attributes of Appropriate-scale Mechanization***

*Alan Hansen, University of Illinois*

#### ***Taking a Participatory Farming Systems Approach to Mechanizing Maize Production in Burkina***

**Faso**

*Tim Harrigan, Michigan State University*

#### ***A Low-cost Locally-made Maize Planter in Burkina Faso***

*Robert Burdick, Tillers International*

#### ***Appropriate-scale Thresher for Small-holders in Africa***

*Kerry Clark, Soybean Innovation Lab*

#### ***A Solar-powered Bean Thresher for Zambia***

*Adam Layman, Michigan State University*

#### ***Appropriate-scale Post-harvest Storage System***

*Carlos Campabadal Teran, Kansas State University*

#### ***A Solar-Powered Low-Cost Water Lifting Device***

*Ajit Srivastava, Michigan State University*

#### ***A Solar-Powered Two-wheel Multi-purpose Traction Platform***

*Ajit Srivastava, Michigan State University*

#### ***Oggun Tractor: An Affordable Open-sourced Design for Small-holder Farmers***

*Horace Clemmons, Cleber, LLC*

#### ***Closing Comments***

*Alan Hansen*

Session #152

### **Agricultural Drainage: Past, Present and Future – Honoring the Career of Dr. Norm Fausey – INVITED SPEAKERS** (Sponsored by NRES-23)

Monday, July 30 – 2:30PM-5:00PM

Location:

Moderator: Lindsay Pease, USDA ARS, Columbus, OH

To come

### **Order of the Engineer Induction Ceremony**

Monday, July 30 – 4:00PM-5:00PM

Location:

Engineering graduates and registered engineers are invited to accept the Obligation of the Engineer and a stainless steel ring which is worn on the little finger of the engineer's working hand. All graduates of ABET accredited engineering programs; seniors in ABET accredited programs within two academic years of graduation; licensed PEs; and members of the Canadian Calling by reciprocity are invited to join the Order. All inductees must be present to accept their certificate and ring at the induction ceremony. The cost of entering the Order is \$15.00 and inductees may register with Tina Schultz at [schultz@asabe.org](mailto:schultz@asabe.org) before the meeting or in person at the membership booth at the meeting. Learn more about the Order here - <http://www.order-of-the-engineer.org/>.

### **ASABE Robotics Student Design Competition**

Monday, July 30 – 4:00PM-6:00PM

Location:

The ASABE Robotics Competition is a student design competition that was conceived in 2006. The aim of the competition is to encourage undergraduate as well as graduate students to develop innovative robotic solutions to real life problems in the Agricultural arena. The competition is open to students in one or more departments from a single University. There is no maximum number of team members per team, so multiple teams from a single University are allowed. Every team should have a faculty adviser who is also the contact person with ASABE. There are no classes or leagues, every team will work on the same Challenge. Activities for this competition are scheduled both Monday and Tuesday.

#### **Robotics Competition Testing**

Monday, July 30 - 4:00PM-6:00PM

#### **Robotics Judges Orientation**

Monday, July 30 - 5:00PM-6:00PM

E#9

### **Women in ASABE Social**

Monday, July 30 – 4:30PM-5:30PM

Location:

The Women in ASABE Social is an informal mixer open to all female ASABE members. Hosted by Past Presidents Mary Leigh Wolfe and Sonia Maassel Jacobsen, this event will provide a unique opportunity to meet, socialize and network with other women from across ASABE. Refreshments will be served. Registration is required but there is no charge for this event.

Cost: Preregistration is required

E#10

### **Association of Agricultural Food and Biological Engineers of Indian Origin (AABFEIO) Business Meeting and Dinner**

Monday, July 30 – 5:30PM-9:30PM

Location:

The 2018 Annual Business Meeting of AABFEIO will be held from 5:30PM to 6:30PM on Monday, July 30 at the ASABE conference venue. Following the meeting, the association will have its annual dinner from 7:00PM to 9:30PM. Dinner location will be announced. Tickets for students are discounted.

Cost: \$30.00 AABFEIO ASABE Member & Family  
\$20.00 Student Member

\$35.00 Non-AABFEIO ASABE Member

### **Fellows Induction Ceremony and Reception**

Monday, July 30 – 6:00PM-8:00PM

Location:

All registrants are invited to this special recognition ceremony and reception honoring the 2017 ASABE Fellows. ASABE defines a Fellow as a member of unusual professional distinction, with outstanding and extraordinary qualifications and experience in, or related to, the field of agricultural, food, or biological systems engineering.

## **TUESDAY, JULY 31**

Session #213

### **Local Production Agriculture 101- INVITED SPEAKERS**

Tuesday, July 31 - 7:30AM-9:00AM

Location:

Moderator: Rebecca Kallal, Evansville, WI

This session will present Recovery Park Farms, a local business and social endeavor. This farm is an example of how urban agriculture has taken root in the city of Detroit. The Recovery Park organization believes that "by growing vibrant, healthy foods in blighted Detroit neighborhoods we can create quality jobs, accessible for people with barriers to traditional employment." Attend this session to learn more about the challenges and rewards that have resulted from this urban farming experiment.

### **K.K. Barnes Student Paper Competition**

Tuesday, July 31 – 8:00AM-9:00AM

Location

The KK Barnes Student Paper Award Competition comprises of an undergraduate student paper competition and an oral competition, which is held at the ASABE Annual International meeting. Winners will be recognized at the AEM/ASABE Student Awards Breakfast on Wednesday.

### **ASABE Robotics Student Design Competition**

Tuesday, July 31 – 8:00AM-4:00PM

Location

The ASABE Robotics Competition is a student design competition that was conceived in 2006. The aim of the competition is to encourage undergraduate as well as graduate students to develop innovative robotic solutions to real life problems in the Agricultural arena. The competition is open to students in one or more departments from a single University. There is no maximum number of team members per team, so multiple teams from a single University are allowed. Every team should have a faculty adviser who is also the contact person with ASABE. There are no classes or leagues, every team will work on the same Challenge. Activities for this competition are scheduled both Monday and Tuesday.

#### **Robotics Competition: Round 1**

Tuesday, July 31 - - 8:00AM-10:00AM

#### **Robotics Competition: Round 2**

Tuesday, July 31 - 10:30AM-12:30PM

#### **Robotics Competition: Round 3**

Tuesday, July 31 - 2:00PM-4:00PM

Session #203

### **Best Practices in Undergraduate Programming – RAP SESSION**

Tuesday, July 31 – 9:30AM-12:00PM



Location:

Moderator: D Raj Raman, Iowa State University, Ames, IA

This session is allow instructors and program leaders in ASABE-umbrella programs to hear about best practices at other programs, and to brainstorm solutions to issues facing all programs.

### **Gunlogson Environmental Design Student Competition**

Tuesday, July 31 – 9:30AM-10:30AM

Location:

The Gunlogson Environmental Design Student Competition comprises of a written design report and an oral competition, which is held at the ASABE Annual International Meeting. Winners will be recognized at the AEM/ASABE Student Awards Breakfast on Wednesday.

### **AGCO National Student Design Competition**

Tuesday, July 31 – 11:00AM-12:00PM

Location

The top three entries for the student design competition have been invited to this oral competition. Listen to these outstanding engineering design project presentations. Winners will be recognized at the AEM/ASABE Student Awards Breakfast on Wednesday.

E#16

### **Graduate Student Professional Development Roundtable**

Tuesday, July 31 – 12:00PM-2:00PM

Location

An invited panel of esteemed members of our society will share their academic and professional experiences with current graduate students. This is not a technical session but instead a time to ask questions and gain advice from others who have been there before you. This is a YPC sponsored event, open to all graduate students.

Cost: \$15.00

### **Quarter Scale Tractor Student Design Competition**

Tuesday, July 31 – 12:30PM-2:30PM

Location:

Top finishing teams in the Team Presentation category from this year's competition will give their winning presentations during this session. This is an excellent opportunity for students to see what a top presentation looks like and use that knowledge to improve their own presentation in future years. There will be ample time for Q&A, so come ready to learn.

### **ASABE Business Meeting**

Tuesday, July 31 – 1:00PM-2:00PM

Location:

### **ASABE Foundation Board of Trustees**

Tuesday, July 31 - 2:00PM-5:00PM

Location:

### **Past Presidents Roundtable**

Tuesday, July 31 – 2:30PM-5:00PM

Location:

## **Grad School 101: A Panel Discussion for Undergraduates**

Tuesday, July 18 - 2:00PM-4:00PM

Location:

Thinking about graduate school? Wondering what it's all about or if it's the right place for you? A panel of current graduate students from different backgrounds, programs, and experiences will share their journey as well as answer questions on everything from the application process to every day grad life. This is a YPC sponsored event.

Session #233

## **Innovative Research and Challenges in Food Engineering – INVITED SPEAKERS / PANEL DISCUSSION**

(Sponsored by PRS Revitalization Task Force)

Tuesday, July 31 - 2:30PM-5:00PM

Location:

Moderator(s): Shaojin Wang, Northwest A&F University, Yangling, Shaanxi China  
Litha Sivanandan, West Virginia University, Morgantown, WV

This session offers presentations and discussions on innovation and challenges in food engineering by leaders and experts in this field.

Session #259

## **Vulnerability Assessment of Land Resources for Sustainable Development – INVITED SPEAKERS**

(Sponsored by NRES-26)

Tuesday, July 31 – 2:30PM-5:00PM

Location:

Moderator: Aavudai Anandhi, Florida A&M University, Tallahassee, FL

This invited technical session addresses developing vulnerability assessments for land resources and also explores ways to link these assessments for sustainable development of the land resources through bioremediation. The speakers will address soil and water components of land resources; their vulnerability and sustainability to changes in land-use. The invited presentations are given by multi-disciplinary professionals (e.g. engineers, agronomists, soil scientists, environmentalists, geologists) who share case studies, lessons learned, overviews of cutting-edge technologies and design strategies, and best practices that are aimed at improving the land resources sustainability through vulnerability assessments. This multi-disciplinary approach through a series of talks can open up avenues to explore stressors important for vulnerability assessments and how the stressors can be represented using indicators for land resources and bioremediation.

*Invited Speakers:*

*Marybeth Kirkham, Kansas State University*

*Dr. Saugata Datta, Kansas State University*

*Esther Jegethambal*

Session #260

## **Manure Nutrients, the Environment, and the Great Lakes – INVITED SPEAKERS**

Tuesday, July 31 – 2:30PM-5:00PM

Location:

Moderator: Teng Teeh Lim, University of Missouri, Columbia, MO

This session will provide insights to manure and environmental issues with several invited speakers.

**2:30PM Introduction**

**2:35PM Michigan Agriculture Environmental Assurance Program**

Joe Kelpinski, Michigan Dept of Agriculture and Rural Development, Lansing, MI

**2:55PM Winter Manure Applications: Management Practices and Environmental Impacts**

- 3:15PM** Steven Safferman/Jason Smith, Michigan State University, Lansing, MI  
**Regional Runoff Risk Decision Support Tools**
- 3:35PM** Shelby Burlew/Erica Rogers, Michigan State University Extension, Hillsdale, MI  
**Manure Sidedress of Corn Research**
- 3:55PM** Glen Arnold, Ohio State University Extension, Findlay, OH  
**Edge of Field Monitoring Research in Ohio**
- 4:15PM** Lindsay Pease, Ohio State University, Columbus, OH  
**Ohio Manure and Fertilizer Regulations pertaining to Lake Erie Basin**
- 4:35PM** Glen Arnold, Ohio State University Extension, Findlay, OH  
**Panel Discussion:** Opportunities for Research/Extension to Improve Manure Nutrient Use, and Correlating Manure with Soil Properties and Environmental Benefits.

Session #263

**National Basin-scale Water Quality Review: Targets, Trends, and Takeaways – INVITED SPEAKERS**

(Sponsored by NRES 22, NRES-21, NRES-25, NRES-26, NRES-28)

Tuesday, July 31 – 2:30PM-5:00PM

Location:

Moderator: Sanjay Shukla, University of Florida, Immokalee, FL

This session will provide a basin-scale review of water quality goals, trends, challenges and successes in prominent drainage basins of US. The watersheds will likely include Great Lakes, Chesapeake Bay, Mississippi River, Peugeot Sound, and Everglades. It will include invited speakers from federal agencies and institutions, universities, and NGOs who have a deep understanding of the water quality, ecological linkages, and progress towards restoration efforts in these drainage basins and associated waterbodies.

Session #265

**Flood vs. Drought: Water Availability and Watershed Management – HYBRID** (Sponsored by NRES-25, NRES-22)

Tuesday, July 31 – 2:30PM-5:00PM

Location:

Moderator: Sherry Hunt, USDA ARS, Stillwater, OK

Global climate is changing across the U.S, which is evident by the extreme and wide range of events occurring. Floods and droughts are a normal part of climate, and you don't have to look too far back in recent history to identify extreme events that have occurred in the U.S. related to floods or droughts. For example, Hurricanes Harvey, Irma, and Maria provided historic levels of rainfall in particular regions of the U.S.; thus, had a significant impact on U.S. agriculture and infrastructure. Likewise, the droughts in the Western part of the U.S. have led to wildfires, mudslides due to soil vulnerability, and decrease air quality. How do we as engineers prepare to handle issues that arise from these extreme events given the U.S. population is ever so growing. The objective of this session is to discuss the extreme climatologic events and their effect on agriculture, engineering practices, human health, and/or planning and adapting practices for water availability and watershed management across the U.S.

Session #267

**PAFS Distinguished Lecture Series – INVITED SPEAKERS**

Tuesday, July 31 - 2:30PM-5:00PM

Location:

This session will host a series of invited presentations from Major Award Recipients, Fellow Inductees, and Superior Paper Award Winners from 2016. The format for this series differs from general technical session, providing invited speakers with the flexibility to deliver a presentation which highlights their views and vision of the past, present and/or future on a subject area relative to the PAFS Community and highlight the research

and development of award winning research published with the Transactions of ASABE and Applied Engineering in Agriculture.

Session #269

**AOCABFE & NERCITA China Exchange Forum – INVITED SPEAKERS**

Tuesday, July 31 - 2:30PM-5:00PM

Location:

Moderator: Hong Li, University of Delaware, Newark, DE

Promoting and facilitating academic and research exchanges among scholars from China and other countries. Invited speakers will share their views and perspectives on international exchange in food, renewable and bio-energy, and climate change and environment protection.

Session #238

**Transformational Solutions to Sustainable Agricultural Development in Africa – PANEL DISCUSSION**

(Sponsored by African Network (ANGASABE), Indian Community (AABFEIO), Chinese Community (AOCABFE), E-2050,

Tuesday, July 31 – 2:30PM-5:00PM

Location

Moderator: Nourredine Abdoulmoumine, University of Tennessee, Knoxville, TN

Countries in Africa have one of the largest numbers of smallholder farmers who still utilize low input and low level technologies in their farming operations. Farmer sizes are characteristically small (2 ha on average) with lower productivity which is lagging when considering the soaring demographics. If Africa is to try to catch up in agricultural development and feed its people, incremental steps to improve productivity might not be sufficient. How African countries can use new transformational technologies to address problems at the nexus of water, energy, plant and animal systems to promote sustainable agricultural development? This panel discussion aims to kick-start a conversation on futuristic, transformational aspects of agriculture development in Africa. The digital agriculture is here and critically influencing agriculture in a major way. This invited session is organized for the second consecutive year by the African Network in collaboration with the Chinese and Indian communities. It aims to provide an opportunity for African, Chinese and Indian ASABE members to share experiences and discover opportunities to foster collaboration between the three communities with the goal of improving the agricultural productivity of smallholders in these regions through the implementation of transformational technologies.

**African Network Group of the ASABE Annual Business Meeting**

Tuesday, July 31 – 4:00PM-6:00PM

Location:

Annual business meeting to receive and evaluate feedback on past year's milestones and set new goals in alignment with the Society's objectives. Old and new members as well as interested parties are cordially welcome to contribute and network.

**YPC Graduate Student Involvement Committee Meeting**

Tuesday, July 31 – 4:00PM-5:00PM

Location

Have ideas, thoughts, or concerns about AIM's events for graduate students? Looking to get more involved with YPC and ASABE? We would love to have you! We will be discussing the committee's purpose & goals, reviewing this year's events as well as looking to what we would like to have at the 2019 AIM. This is a YPC sponsored event, open to all grad students.

**International Preprofessional Community (IPC) Business Meeting – Part 2**

Tuesday, July 31 – 4:00PM-5:00PM

Location

This business meeting will briefly review the results of this year's annual meeting and will elect new officers for the 2018-2019 year. These new officers will be introduced at the Wednesday Awards Banquet at 12:30PM.

E#17

**Association of Overseas Chinese Agricultural, Biological, and Food Engineers (AOCABFE) Annual Business Meeting**

Tuesday, July 31 – 5:00PM-9:30PM

Location

The AOCABFE Annual Business Meeting will be held from 5pm to 6pm at the ASABE conference venue. The meeting will review AOCABFE activities in 2017-2018 and discuss plans of action for 2018-2019. The award Banquet will follow the business meeting at an off-site restaurant from 6:30pm-9:30pm. The meeting and the banquet provides a great opportunity for socializing with peers. All ASABE meeting attendees with Chinese origin or with international collaboration interests are invited.

Cost: \$65.00 Member

\$20.00 Student Member

**Young Professionals Community Business Meeting**

Tuesday, July 31 – 5:15PM-7:00PM

Location

The Young Professional Community annual business meeting is open to all YPC members. If you have a bachelor's degree and are under the age of 35, you're a member! Please come to discuss YPC activities, strategic goals, and meet your fellow YP'ers.

Session #239

**Technical Trends and Career Opportunities in the U.S. and Korea – INVITED SPEAKERS**

Tuesday, July 31 - 5:00PM-7:00PM

Location:

Moderator: Won Suk (Daniel) Lee, University of Florida, Gainesville, FL

More collaboration between U.S. and Korea and international collaboration between Korea and other countries. Understand current technical trends and seek career opportunities in U.S. and Korea

E#20

**Association of Korean Agricultural, Biological, and Food Engineers (AKABFE) Business Meeting**

Tuesday, July 31 – 7:00PM-7:30PM

Location

Annual business meeting sponsored by the Association of Korean Agricultural, Biological, and Food Engineers (AKABFE)

Cost: \$30.00 Member

## **WEDNESDAY, AUGUST 1**

Session #301

**Challenges and Solutions in Biomass Pellet Storage Systems - WORKSHOP**

Wednesday, August 1 – 7:30AM-11:00AM

Location

Moderator(s): Shahab Sokhansanj, University of British Columbia, Vancouver, BC Canada  
Mark Elless, US DOE, Washington, DC

The production, domestic use and export of wood pellets are becoming major industrial activity around forest biomass and residues. The volumes of pellets produced in the US exceeded 8 million tons in 2017. The world trade in wood pellets may surpass 25 million dry tons in 2020. Storage systems constitute a critical link in the supply chain of wood pellets. Engineering data are immediately needed for safe design and operation of silo and bin structures. This workshop will explore some of the challenges and solutions to storing large quantity of biomass pellets. The objective is to ensure the safety of persons working around storage structures, preserving the quality of pellets during storage and the cost competitiveness of storage systems.

Session #329

**Large Scale Grain Drying, Storage and Aeration Systems – INVITED SPEAKERS**

Wednesday, August 1 – 7:30AM-10:00AM

Location:

Moderator: John Lawrence, Kansas State University, Manhattan, KS

In USA, billions of bushels of grains are handled during harvest season particularly for drying and storage. When we handle these grains in large scale, there are a lot of issues in grain handling such as quality, moisture content, amount of fines and foreign materials, hotspots, moisture migration, mycotoxins, insect problems. In terms of grain drying, there are issues such as uniformity, over-drying, energy consumption, quality and so forth. How to dry these harvest high moisture to safe storage moisture without affecting the quality. Similar how to manage the grain after drying using aeration systems without affecting the quality. In this session, we will cover various topics related to large scale system in drying, storage and aeration system for grains such as corn, rice, soybean and so on.

*Invited Speakers:*

*Greg Baltz*

*Ricardo Reggati*

*Chris Butt*

*Scott Chant*

*Charles Sukup*

Session #302

**ABET Information Session for potential Program Evaluators – PANEL DISCUSSION**

Wednesday, August 1 - 9:00AM-10:00AM

Location:

Moderator:

This is an information session for anyone interested in becoming an ABET program evaluator for ASABE.

Session #303

**Benefits of ABET Assessment/Painless ABET Assessment – INVITED SPEAKERS**

Wednesday, August 1 - 10:00AM-11:00AM

Location:

Presentations on key aspects of program assessment for programs in agricultural, biological and food engineering and related departments.

Session #330

**Addressing Ethical Issues in Engineering Design – PANEL DISCUSSION**

Wednesday, August 1 - 10:30AM-12:00PM

Location:

Moderator: Robert Gustafson, Ohio State University, Worthington, OH

A keynote speaker will introduce how IEEE P7000™ Standards Working Group which is setting the standards for the future of ethical intelligent and autonomous technologies. Including work on 1) Model Process for

Addressing Ethical Concerns During System Design, 2) a Standard for developing autonomous technologies, and 3) how to manage privacy issues for systems or software that collect personal data. This will be followed by a panel discussion of ethics in agricultural and biological engineering systems design by practicing engineers.

Session #337

**Innovative Teaching Approaches for Instrumentation and Control Courses – INVITED SPEAKERS**

Wednesday, August 1 – 10:30AM-12:15PM

Location:

To Come

Session #356

**Transforming Drainage: Retaining Water for Increased Resiliency of Drained Agricultural Land – INVITED SPEAKERS**

Wednesday, August 1 – 10:30AM-12:15PM

Location:

Moderator: Jane Frankenberger, Purdue University, West Lafayette, IN

Increasing the storage of drained water within the landscape could increase the sustainability of water for agriculture, producing positive impacts for crop production as well as the environment. This session will highlight work throughout the Midwest region to advance transformative drainage practices.

**10:15AM Transforming Drainage through a Research, Extension, and a Stakeholder Network**

Jane Frankenberger, Purdue University

**10:30AM Variability in Seasonal Tile Flow and Nitrate-N loads from Controlled Drainage Systems Across 16 sites**

Matt Helmers, Iowa State University

**10:45AM A Review of Saturated Buffer Performance Across the Upper Midwest**

Nathan Utt, University of Minnesota

**11:00AM Discussion**

**11:15AM Drainage Water Recycling and Related BMPs in Fulton County, Illinois: A Win-Win for Agriculture and the Environment**

Richard Cooke, University of Illinois

**11:30AM The Drainage Water Recycling Evaluation Tool: Evaluating the Potential Benefits of Drainage Water Recycling for Varying Water Storage Sizes and Conditions**

Benjamin Reihart, Purdue University

**11:45AM Potential Benefits of Drainage Water Recycling on Crop Yield**

Christopher Hay, Iowa Soybean Association

Session #357

**Best Practices in Graduate Programming and Recruiting – RAP SESSION)**

Wednesday, August 1 – 10:30AM-12:15PM

Location:

Moderator: John Classen, North Carolina State University, Raleigh, NC

This session will start with short statements from a panel Directors of Graduate Programs; we will then have an open discussion about recruiting graduate students and training those students for success in a variety of careers. We'll talk about recruiting tactics from the viewpoint of the program as well as that from the advisor, especially related to student success and program diversity. We'll also discuss mentoring, curricular requirements, and non-curricular training suggestions that prepare our MS and PhD students for careers in academia, industry, government and other sectors.

### **SmartAg Visionary Session and Strategic Planning Workshop**

Wednesday, August 1 – 3:00PM-7:30PM

Location:

Thursday, August 2 – 8:00AM-5:00PM

Location

ASABE and IEEE are partnering to promote smart technologies and innovations for enhancing global agro-food systems across the food supply chain. On Wednesday, August 1, 2018, 3:00pm-5:00pm, a SmartAg Visionary Session featuring leading industry innovators will take place, followed by a networking reception with hors d'oeuvres from 5:30pm-7:30pm. On Thursday, August 2, 2018, 8:00am-5:00pm a Strategic Planning Workshop with international stakeholders from different sectors including academia, industry, commodity groups, government and non-governmental organizations will take place to develop a strategic plan for the SmartAg Initiative, including a 2019 SmartAg Conference.

Open to everyone. Registration includes reception, lunch and coffee breaks.

Cost: \$99.00

## **THURSDAY, AUGUST 2**

E#23

### **SmartAg Visionary Session and Strategic Planning Workshop**

Thursday, August 2 – 8:00AM-1:00PM

Location

Open to everyone. Registration includes reception, lunch and coffee breaks.

Cost: \$99.00

### **ASABE Membership Council**

Thursday, August 2 – 8:00AM-10:00AM

Location

### **ASABE Meetings Council**

Thursday, August 2 – 8:00AM-10:00AM

Location

### **ASABE Publications Council**

Thursday, August 2 – 8:00AM-10:00AM

Location

### **ASABE Standards Council**

Thursday, August 2 – 8:00AM-10:00AM

Location

### **ASABE Board of Trustees**

Thursday, August 2 – 1:00PM-4:15PM

Location