

ASABE 2016

Annual International Meeting

Welcome to the 2016 ASABE Annual International Meeting (AIM) in Orlando, Florida!

Disney's Coronado Springs Resort is an excellent venue for combining business and pleasure and I hope you are able to do some of both while you are here.

Also, I want to thank the Florida Section for serving as hosts for this year's AIM. They had an active hand in planning sessions, tours and other meeting events all designed to make your AIM experience a memorable one.

I look forward to visiting with you and hope your time at the Orlando AIM is productive and enjoyable.

Mary Leigh Wolfe

ASABE President 2015-2016

REGISTRATION

Our registration desk is happy to answer any questions you may have during the meeting. The ASABE Registration desk is located at the central registration counter in the convention center area.

Registration hours:

Saturday, July 16	3:00PM-6:00PM
Sunday, July 17	7:00AM-6:00PM
Monday, July 18	6:00AM-6:00PM
Tuesday, July 19	6:00AM-6:00PM
Wednesday, July 20	6:00AM-4:00PM

Your full meeting registration includes Welcome Reception, Opening General Session, Technical Sessions, Coffee Breaks, ASABE Business Meeting, Awards Luncheon and any other published receptions or nonticketed activities.

ASABE GIVES BACK

Support Victims of the Pulse Shooting

The Orlando community experienced a horrendous act of violence on June 12, 2016, when a gunman attacked innocent individuals at Pulse Nightclub killing 49 people and injuring countless more.

In lieu of table decorations, the ASABE Annual International Meeting will make a donation to the National Center for Victims of Crime Compassion Fund to support the victims of the Pulse Shooting.

100% of the donations received through this fund will help support the immediate and long-term complex emotional and physical needs of these victims and their families who were forever changed on June 12th.

Additional donations to support the victims of violent crimes can be made at: www.nationalcompassionfund.org

LOCATION

Disney's Coronado Springs
Resort Convention Center
1000 West Buena Vista Drive
Lake Buena Vista, Florida 32830-8403
407-939-1000

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SPOUSE/GUEST LOUNGE

Location: Monterey 1

HOURS:

Monday: 8:00AM-5:00PM

Tuesday: 8:00AM-5:00PM

Wednesday: 8:00AM-12:30PM

With the full meeting registration, a Spouse/Guest will receive a name badge and may enjoy the comfort and convenience of the Spouse/Guest Lounge as well as an included admittance to the Spouse/Guest Brunch at The Boathouse in the newly renovated Disney Springs and the Wednesday Awards Luncheon.

KIDS CAMP/CHILD CARE LOUNGE

Location: Monterey 2

HOURS:

Monday: 7:00AM-5:00PM

Tuesday: 7:00AM-5:00PM

Wednesday: 7:00AM-12:00PM

The Young Professionals Community is sponsoring a childcare lounge in the Monterey 2 and Monterey 3 rooms. This will give parents, both members and/or their spouses, a central and convenient place to watch their children during each day's events. A variety of crafts, toys, games and entertainment will be provided.

Rules/guidelines for the use of the room are published. This room is meant more for convenience than a professional service.

By using this service, parents cannot and will not hold the American Society of Agricultural and Biological Engineers, the Young Professional Community or the Coronado Springs Resort Convention Center liable for any personal injury, sickness, harm, loss of personal property or damage to personal property.

A completed liability release form is requested prior to use of the room, or when you register.

NURSING ROOM

Location: Monterey 3

A quiet and private space has been secured for nursing mothers. Comfortable seating and power will be supplied.

EXHIBITS

Location: Veracruz B

Please take time to visit our exhibitors located in the Exhibit Hall located in Veracruz B.

HOURS:

Sunday: 3:00PM-6:00PM

Monday: 7:00AM-6:00PM

Tuesday: 7:00AM-6:00PM

Wednesday: 7:00AM-4:00PM

NAME BADGES

Please wear your name badge at all times when you are attending functions within the conference hotel. This badge informs us that you are a registered conference attendee and it will allow you access into meetings, the exhibit hall and meal functions.

ELECTRONIC DEVICES

As a courtesy to your colleagues, please turn off or silence all electronic devices during sessions, workshops and plenary addresses.

PHOTOGRAPHS/VIDEO TAPING

Photographs and video taping or recording of presentations without advance approval from ASABE or the presenters is strictly prohibited.

CYBER CAFE

Location: Veracruz B

A bank of computers is available in the Exhibit Hall for you to view your emails. Please limit your time on the computers to be courteous to others.

VISITING ORLANDO

Do not wear your name badge outside of the conference hotel. When possible, travel in groups when visiting the downtown area.

Disney provides a complimentary shuttle to Disney Springs as well as to Disney Theme Parks.

PARKING AT THE CORONADO SPRINGS

Complimentary parking is available at the Coronado Springs Resort.

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EVENT SUMMARY

The following is a listing of events by interest area. Descriptions and locations are later in the program.

STUDENTS/PREPROFESSIONALS

International Preprofessional Community (IPC) Mixer

Saturday, July 16 – 8:00PM-9:00PM

YPC Fun Run/Walk

Sunday, July 17 – 7:30AM-9:00AM

Fountain Wars Presentation Judging

Sunday, July 17 – 1:00PM-4:30PM

International Preprofessional Community (IPC)

Business Meeting - Professional Development Session

Sunday, July 17 – 1:00PM-2:00PM

AIM Meeting Orientation (for students / first timers)

Sunday, July 17 – 2:00PM-3:00PM

Undergraduate Poster Session

Sunday, July 17 – 3:00PM-4:30PM

Alpha Epsilon Annual Meeting

Sunday, July 17 – 4:00PM-5:00PM

Women in ASABE Speed Networking

Sunday, July 17 – 6:30PM-7:30PM

Foundation Portrait Studio

Monday, July 18 and Tuesday, July 19

Career Fair

Monday, July 18 – 9:30AM-12:00PM

ASABE Robotics Student Design Competition

Monday, July 18 – 10:00AM-12:30PM

Boyd-Scott Graduate Research Award

Monday, July 18 – 12:00PM-2:30PM

ASABE Robotics Student Design Competition: Round 1 and Round 2

Monday, July 18 – 1:00PM-5:00PM

Fountain Wars Competition - Build

Monday, July 18 – 1:00PM-5:00PM

Women in ASABE Social

Monday, July 18 – 4:30PM-5:30PM

Fountain Wars Competition

Monday, July 18 – 5:00PM-8:00PM

Graduate Student Social

Monday, July 18 – 8:00PM-10:00PM

Ethics Essay Competition

Tuesday, July 19 – 8:00AM-9:00AM

ASABE Robotics Student Design Competition: Round 3

Tuesday, July 19 – 8:00AM-12:00PM

K.K. Barnes Student Paper Competition

Tuesday, July 19 – 9:00AM-10:00AM

Gunlogson Environmental Design Competition

Tuesday, July 19 – 10:00AM-11:00AM

AGCO National Student Design Competition

Tuesday, July 19 – 11:00AM-12:00PM

1/4 Scale Tractor Student Design Competition

Tuesday, July 19 – 12:30PM-2:30PM

Meet and Greet with Chairs and (Senior) Faculty

Wednesday, July 20 – 7:00AM-8:00AM

AEM / ASABE Student Awards Breakfast

Wednesday, July 20 – 7:30AM-9:00AM

Ethics in Engineering – Video Competition

Wednesday, July 20 – 7:30AM-10:00AM

International Preprofessional Community (IPC)

Business Meeting – Part 2

Wednesday, July 20 – 10:00AM-11:00AM

Fundamentals of Engineering (FE) Information Session

Wednesday, July 20 – 11:00AM-12:00PM

GRADUATE STUDENT ACTIVITIES

YPC Pin Spin

Saturday, July 16 – 7:00PM-9:00PM

YPC Fun Run/Walk

Sunday, July 16- 7:30AM-9:00AM

Marketing Yourself in Academia

Sunday, July 17 – 12:00PM-2:00PM

Data Management

Sunday, July 17 – 12:00PM-2:00PM

AIM Meeting Orientation (for students / first timers)

Sunday, July 17 – 2:00PM-3:00PM

Alpha Epsilon Annual Meeting

Sunday, July 17 – 4:00PM-5:00PM

Women in ASABE Speed Networking

Sunday, July 17 – 6:30PM-7:30PM

Guide to Professional Licensure

Monday, July 27 – 7:00AM-8:00AM

Career Fair

Monday, July 18 – 9:30AM-12:00PM

Order of the Engineer Induction Ceremony

Monday, July 18 – 4:00PM-5:00PM

Women in ASABE Social

Monday, July 18 – 4:30PM-5:30PM

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Graduate Student Social

Monday, July 18 – 8:00PM-10:00PM

Graduate Student Professional Development Roundtable

Tuesday, July 19 – 12:00PM-2:00PM

Graduate School 101: A Panel Discussion for Undergraduates

Tuesday, July 19 – 2:00PM-4:00PM

Graduate Student Business Meeting

Tuesday, July 19 – 4:00PM-5:30PM

Meet and Greet Breakfast with Department Chairs and Senior Faculty

Wednesday, July 20 – 7:00AM-8:00AM

Ethics in Engineering – Video Competition

Wednesday, July 20 – 7:30AM-10:00AM

Fundamentals of Engineering (FE) Information Session

Wednesday, July 20 – 11:00AM-12:00PM

YOUNG PROFESSIONALS' COMMUNITY

YPC Pin Spin

Saturday, July 16 – 7:00PM-9:00PM

YPC Fun Run/Walk

Sunday, July 16- 7:30AM-9:00AM

Marketing Yourself in Academia

Sunday, July 17 – 12:00PM-2:00PM

Data Management – YPC Sponsored CPD

Sunday, July 17 – 12:00PM-2:00PM

AIM Meeting Orientation (for students / first timers)

Sunday, July 17 – 2:00PM-3:00PM

Women in ASABE Speed Networking

Sunday, July 17 – 6:30PM-7:30PM

Guide to Professional Licensure

Monday, July 27 – 7:00AM-8:00AM

Career Fair

Monday, July 18 – 9:30AM-12:00PM

Order of the Engineer Induction Ceremony

Monday, July 27 – 4:00PM-5:00PM

Women in ASABE Social

Monday, July 18 – 4:30PM-5:30PM

Fellows Induction Ceremony / Reception

Monday, July 18 – 6:00PM-8:00PM

Florida Agricultural Systems 101

Tuesday, July 19 – 7:00AM-9:00AM

Young Professionals Business Meeting

Tuesday, July 19 – 5:15PM-6:30PM

Ethics in Engineering – Video Competition

Wednesday, July 20 – 7:30AM-10:00AM

Fundamentals of Engineering (FE) Information Session

Wednesday, July 20 – 11:00AM-12:00PM

INTERNATIONAL COMMUNITY

International Preprofessional Community (IPC) Mixer

Saturday, July 16 – 8:00PM-9:00PM

Women in ASABE Speed Networking

Sunday, July 17 – 6:30PM-7:30PM

Alumni Reception of College of Biosystems Engineering and Food Science, Zhejiang University

Sunday, July 17 – 6:30PM-10:00PM

Guide to Professional Licensure

Monday, July 18 – 7:00AM-8:00AM

Association of Agricultural Food and Biological Engineers of Indian Origin (AABFEIO) Meeting

Monday, July 18 – 5:30PM-9:30PM

International Breakfast

Tuesday, July 19 – 7:00AM-8:30AM

AOCABFE & NERCITA China Exchange Forum

Tuesday, July 19 – 2:30PM-5:00PM

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

Tuesday, July 19 – 5:15PM-10:00PM

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

Tuesday, July 19 – 5:30PM-7:00PM

ASABE Foundation Networking Event – Fogo de Chao

Tuesday, July 28 – 6:00PM-10:00PM

TECHNICAL AND CULTURAL TOURS

I-Drive 360

Sunday, July 17 – 12:00PM-3:00PM

Everglades Restoration Project

Monday, July 18 – 5:30AM-7:30PM

Lakeridge Winery Private Tour & Wine Tasting

Monday, July 18 – 1:00PM-6:00PM

Behind the Seeds

Monday, July 18 – 3:30PM-5:30PM

Orlando Wetlands Park and Conserv II Field Tour

Tuesday, July 19 – 10:00AM-4:00PM

Orlando Outlets

Tuesday, July 19 – 11:00AM-3:00PM

Foundation Networking Event – Fogo de Chao

Tuesday, July 19 – 6:00PM-10:00PM

Behind the Seeds

Wednesday, July 20 – 3:30PM-5:30PM

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Kennedy Space Center

Thursday, July 21 – 9:00AM-4:00PM

Biogas Recovery System Generating Electricity from Cow Manure

Thursday, July 21 – 8:00AM-6:00PM

CONTINUING EDUCATION/WORKSHOPS

Hyperspectral Imaging and Data Analysis

Sunday, July 17 – 8:00AM-5:00PM

Designing Agricultural Applications for Hand Held Mobile Devices

Sunday, July 17 – 9:00AM-12:00PM

Training on ROS-Robot Operating System

Sunday, July 17 – 9:00AM-12:00PM

Academic Leadership-A Systems Approach

Sunday, July 17 – 9:00AM-12:00PM

Dielectric Sensing Applications in Food and Agriculture

Sunday, July 17 – 9:00AM-12:00PM

Online Teaching and Active Learning: Flipping the Classroom

Sunday, July 17 – 9:00AM-12:00PM

Data Management

Sunday, July 17 – 12:00PM-2:00PM

Marketing Yourself in Academia

Sunday, July 17 – 12:00PM-2:00PM

SOCIAL/HOSTED RECEPTIONS

International Preprofessional Community (IPC) Mixer

Saturday, July 16 – 8:00PM-9:00PM

ASABE Welcome Reception

Sunday, July 17 – 4:30PM-6:00PM

Alumni Reception of College of Biosystems Engineering and Food Science, Zhejiang University

Sunday, July 17 – 6:30PM-10:00PM

Women in ASABE Social

Monday, July 18 – 4:30PM-5:30PM

Fellows Induction Ceremony / Reception

Monday, July 18 – 6:00PM-8:00PM

Texas A&M Biological and Agricultural Engineering Reception

Monday, July 18 – 8:00PM-10:00PM

Iowa State University ABE Reception

Monday, July 18 – 8:00PM-9:00PM

Graduate Student Social

Monday, July 18 – 8:00PM-10:00PM

Virginia Tech Alumni & Friends Social

Monday, July 18 – 8:00PM-10:00PM

University of Illinois Alumni & Friends Reception

Monday, July 18 – 8:00PM-10:00PM

Purdue Alumni & Friends Complimentary Breakfast

Tuesday, July 19 – 7:00AM-8:00AM

Foundation Networking Event - Fogo de Chao

Tuesday, July 19 – 6:00PM-10:00PM

Meet and Greet Breakfast with Department Chairs and Senior Faculty

Wednesday, July 20 – 7:00AM-8:00AM

SPOUSE/GUEST INFORMATION

Spouse/Guest Brunch

Monday, July 18 – 9:00AM-11:30AM

ASABE Awards Luncheon

Wednesday, July 20 - 12:30PM-2:30PM

ASABE Fellows Induction Ceremony & Reception

**Monday, July 18
6:00PM**

Coronado K/L

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ASABE Business Meeting

Tuesday, July 19 – 12:00PM-12:30PM
Fiesta 5



Mary Leigh Wolfe
ASABE President
Professor and Department Head
Virginia Tech

As head of the Department of Biological Systems Engineering at Virginia Tech, Wolfe is responsible for overseeing all administrative aspects (budget, personnel, and facilities) of the department and facilitating the success of individual departmental members as well as the department overall. As a faculty member, she is currently responsible for teaching one course each year and for conducting research in watershed science and engineering.

Specifically, her research and teaching of undergraduate and graduate courses has focused on hydrologic modeling, nonpoint-source (NPS) pollution control strategies, and decision support tools for watershed management. She has served as an advisor or an advisory committee member for 30 PhD students and 46 MS students.



Maynard Herron, P.E.
ASABE President-Elect
Engineering Manager
AGCO

In his professional role, Herron has served 12 years as engineering manager responsible for new product engineering for AGCO hay tools. In this role, he has overseen the development and launch of several forage and hay harvesting products. His current role is manager of product proving, AGCO Hesston division. He recently served as principal investigator for a biomass harvest and logistics demonstration grant from the U.S. Department of Energy (DE-EE0001035). Herron is individual or joint inventor on fourteen U.S. patents.

A member of ASABE for 37 years, Herron is currently a member of MS-23/7/2 (Forage and Biomass Engineering) and MS-23/5 (Tractor Implement Interface). His other Society activities include the AETC planning committee, the ASABE marketing task force, and an employer outreach task force to develop career promotion materials to improve employer comprehension of the agricultural and biological engineering degree and curriculum. This task force also developed a résumé writing guide to aid agricultural and biological engineers in emphasizing the diversity and strengths of the degree, including tips to enhance recognition by electronic résumé scanning programs.

ASABE Code of Conduct: Harassment & Safety Policy

ASABE is dedicated to providing a safe, hospitable, and productive environment for everyone attending our events, regardless of ethnicity, religion, disability, physical appearance, gender, age, or sexual orientation. All participants, attendees, ASABE staff, and vendors shall be treated with respect and consideration, valuing a diversity of views and opinions, in a considerate, respectful, and collaborative manner. It is important to remember that a community where people feel uncomfortable or threatened is neither healthy nor productive. Accordingly, ASABE prohibits intimidating, threatening, or harassing conduct during our meetings and conferences.

This policy applies to speakers, staff, volunteers, guests, students, contractors, exhibitors, and attendees participating in the sessions, tours, social events, and other activities of ASABE. Participants violating these rules may be sanctioned or expelled from the meeting or conference, without warning or refund, at the discretion of ASABE leadership.

Harassment of ASABE participants will not be tolerated in any form. Harassment includes offensive gestures or verbal comments related to ethnicity, religion, disability, physical appearance, gender, age, or sexual orientation in public spaces, deliberate intimidation, stalking, following, harassing photography or recording, sustained disruption of talks or other events, inappropriate physical contact, circulation of written or graphic material that denigrates or shows hostility or aversion, and unwelcome attention. Participants asked to stop any harassing behavior are expected to comply immediately and without retaliation.

If a participant or exhibitor engages in harassing behavior, ASABE leadership may take any action they deem appropriate, ranging from a simple warning to the offender to expulsion from this and future meetings and conferences. If you are being harassed, notice that someone else is being harassed, or have any other concerns, please do not hesitate to contact ASABE staff who can work with appropriate ASABE leadership to resolve the situation. Harassment and other code of conduct violations reduce the value of our event for everyone. Confidentiality will be honored to the highest extent permitted without compromising the rights of others.

ASABE staff will be happy to help participants contact convention center/hotel/venue security or local law enforcement, and otherwise assist those experiencing harassment, to enable them to feel safe for the duration of the meeting or conference. Anyone experiencing or witnessing behavior that constitutes an immediate or serious threat to public safety at our meetings and conferences in the convention center is advised to locate a house phone and ask for security. We value your attendance, and want to make your experience as productive and professionally stimulating as possible.

Adopted 4/22/2016

ASABE 2016

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Events, Technical Sessions, Tours

The entire meeting schedule is listed by date and time.

SATURDAY, JULY 16

Event #1

YPC PIN SPIN

Saturday, July 16 – 7:00PM-9:00PM

Location: Disney Springs – Meet at Disney shuttle stop at 6:00PM

What better way to kick off AIM than with the Young Professional Community's Social? Come join us for camaraderie and to show off your bowling skills Saturday evening! Prizes awarded for winning bowler and team as well as most team spirit. The social begins at 7:00PM at Splitsville Lanes at Disney Springs or you can meet us at 6:00PM at the Disney shuttle stop at Coronado Springs.

COST: \$50.00

Event #2

INTERNATIONAL PREPROFESSIONAL COMMUNITY (IPC) MIXER

Saturday, July 16 – 8:00PM-9:00PM

Location: Fiesta 7/8

All pre-professionals are invited to attend our social. 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

SUNDAY, JULY 17

Event #3

YPC FUN RUN/WALK

Sunday, July 17 – 7:30AM-9:00AM

Location: Meet near the ASABE Registration Desk

The Young Professional Community is sponsoring its eleventh annual YPC Fun Run/Walk. Come join us for a 5k run or a 1 mile walk around the Lago Dorado! All proceeds will go towards supporting future YPC events focused on young member retention during the transition from student to professional. Please come out and show your support for the young members of ASABE while staying active.

COST: \$20.00

Event #4

GALE HOLLOWAY MEMORIAL GOLF OUTING TO SUPPORT THE ASABE FOUNDATION

Sunday, July 17 – 7:30AM-12:00PM

Location: Meet near ASABE registration

Join us for a game of golf with your friends at the Falcon's Fire Golf Club in Kissimmee which is a short distance from our convention center. All proceeds benefit the ASABE Foundation.

COST: \$110.00

ASABE FOUNDATION SILENT AUCTION

Sunday, July 17 through Tuesday, July 19

Location: Veracruz B

The Silent Auction provides random meetings of wine and beer connoisseurs, old and new college alumni, art and craft lovers, model tractor collectors, travel packages, potatoes, nuts, and local packages. Many great conversations have taken place at the auction tables. Beginning at the Welcome Reception, bid on items or take advantage of the "buy-it-now" option. Get your ticket for Pick-a-Prize: one awarded each day and two on the final day.

Event #5

PROFESSIONAL ENGINEERING EXAM QUESTION WRITING SESSION

Sunday, July 17 – 8:00AM-5:00PM

Location: Fiesta 7

Licensed Professional Engineers are welcome to participate in a day-long effort to write and evaluate agricultural and biological engineering Professional Examination test questions. This session is sponsored by the EOPD-414 committee. Persons attending must be licensed professional engineers and provide their PE number(s) to participate. Preregistration is required.

COST: Preregistration and PE license is required

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CPD #1

HYPERSPECTRAL IMAGING AND DATA ANALYSIS

Sunday, July 17 – 8:00AM-5:00PM

Location: Fiesta 9

Instructor(s): Kurt Lawrence, Bosoon Park,
Seung-Chul Yoon, USDA-ARS, Athens, GA

Sponsored by ITSC-348

LEVEL OF DIFFICULTY: Entry/Intermediate Level

TARGET AUDIENCE: Engineers, scientists, and graduate students who are interested in hyperspectral imaging and data analysis for applied research. The course is designed for researchers from beginning to intermediate knowledge of hyperspectral data analysis.

LEARNING OBJECTIVES: The course will be divided into three parts. The first part will cover a brief overview of hyperspectral and multispectral imaging including improved data capture, calibration, lighting, and visualization. The second part will cover intermediate topics of hyperspectral data exploration and multivariate image analysis. Emphasis will be placed on assessment of the hyperspectral data, exporting data to common chemometrics software for model development, model prediction, and validation with hyperspectral image data. Finally, the third part will explore a couple of case studies for real-world problem solving with hyperspectral imaging technology.

BENEFITS: Many multispectral and most hyperspectral imaging systems are still sold “as is”. That is, the hardware of the system is usually assembled and packaged with only some form of data acquisition software and limited data analysis. This course is intended to introduce multi- and hyperspectral image analysis to the audience and help them understand the basics of quality data collection, exporting data to popular chemometric packages, and finally evaluation/validation of models back on the hyperspectral image.

COST: \$135.00

CPD #2

DESIGNING AGRICULTURAL APPLICATIONS FOR HAND HELD MOBILE DEVICES

Sunday, July 17 – 9:00AM-12:00PM

Location: Fiesta 1

Instructor: Joseph Dvorak

Sponsored by ITSC-254

LEVEL OF DIFFICULTY: Entry Level

TARGET AUDIENCE: Engineers and researchers interested in starting to develop App for handheld mobile devices.

LEARNING OBJECTIVES: (a) Understand the basic App development process (b) Become familiar with the tools required for App development (c) Develop a single app.

COST: \$50.00

CPD #3

TRAINING ON ROS-ROBOT OPERATING SYSTEM

Sunday, July 17 – 9:00AM-12:00PM

Location: Fiesta 2

Instructor: Stephene Nuske, The Robotics Institute,
Carnegie Mellon University

Sponsored by ITSC-318, MS-48

LEVEL OF DIFFICULTY: Entry Level

TARGET AUDIENCE: Professors, Graduate Students, Undergraduate Students, Researchers and Engineers Working in Agricultural Automation, Robotics and Mechanization Areas. ROS (Robot Operating System) has rapidly become a default for robotics engineers and scientists in the past decade, this course will introduce ROS and help guide people with its use for agricultural engineering applications. For a wide variety of reasons ROS is a great choice as a tool for collecting data, processing data, interfacing with actuators, through to communicating with other machines/robots. Even with a basic understanding of the ROS framework gives a user a wide variety of useful capabilities. More advanced understanding gives the ability to custom tailor ROS into your work to leverage all that ROS has to offer.

COST: \$100.00

CPD #4

ACADEMIC LEADERSHIP – A SYSTEMS APPROACH

Sunday, July 17 – 9:00AM-12:00PM

Location: Fiesta 3

Instructor(s): KC Ting, Ajit Srivastava, Richard Straub,
Lalit Verma, Steven Taylor

Sponsored by EOPD

This workshop will address typical academic environments in the United States, necessary elements for leadership development, generally appreciated traits of a leader, exciting and effective leadership, solving complex problems using systems methodologies, and integrating systems methodologies and leadership. The format of this 3 hour workshop will include a 90 minute presentation, a 15 minute questions and answers, a 15 minute break, and a 60 minute panel discussion (20 minutes of remarks by panelists and 40 minutes of open discussion). The topics of panel discussion may include measurement of leadership success, leadership skill improvement, most pressing challenges and rewarding experiences as a leader, interpersonal skills, peer-coaching processes, work/life balance, and new demands on academic leaders, leadership succession plan, and other topics raised by the participants.

COST: \$50.00

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CPD #5

DIELECTRIC SENSING APPLICATIONS IN FOOD AND AGRICULTURE

Sunday, July 17 – 9:00AM-12:00PM

Location: Fiesta 4

Instructor(s): Samir Trabelsi, Micah Lewis

Sponsored by ITSC-348

LEVEL OF DIFFICULTY: Entry Level

LEARNING OBJECTIVES: The workshop will cover the basics of radio-frequency dielectric properties and measurement techniques and their applications in food and agriculture. The attendees will learn how to select the most suitable measurement technique for a given application and how to identify correlations between measured dielectric properties and target physical properties. Examples of nondestructive sensing of bulk density and moisture content in grain, seed, and nuts from measurements of their dielectric properties at microwave frequencies will be given in static and dynamic situations. Also, use of microwave sensing technology for real-time monitoring of a given process will be presented for in-wagon or in-trailer peanut drying.

BENEFITS: The attendees will acquire a better understanding of the interaction between electromagnetic waves and water-containing materials and will gain expertise in measurement of the dielectric properties of food and agricultural products over a broad radio-frequency range. Also, the attendees will be familiarized with the automation of measurements and the integration of several sensors to monitor simultaneously a number of variables. The knowledge gained will be critical in the experimental design of microwave heating and sensing applications.

COST: \$75.00

CPD #8

ONLINE TEACHING AND ACTIVE LEARNING: FLIPPING THE CLASSROOM

Sunday, July 17 – 9:00PM-12:00PM

Location: Coronado B

Instructor(s): Prof. Patrizia Busato, Prof. Remigio Berruto,
Prof. Fedro Zazueta

Sponsored by Education Community

LEVEL OF DIFFICULTY: Entry Level

TARGET AUDIENCE: Individuals with teaching and extension education responsibilities including, faculty, lecturers and teaching assistants interested in acquiring knowledge and skills on active learning and flipped classroom instruction.

LEARNING OBJECTIVES: Describe flipped classroom principles and pedagogy; Identify required resources for successful delivery of a course in a flipped classroom format; Develop foundational skills to develop online and face-to-face materials for flipped classroom delivery.

BENEFITS: Implementing active learning pedagogies in engineering education has been shown to improve learning outcomes and higher levels of student satisfaction.

COST: \$80.00

CPD #6

DATA MANAGEMENT

Sunday, July 17 – 12:00PM-2:00PM

Location: Fiesta 1

Sponsored by YPC

This two hour course will introduce professionals to tools useful to increasing efficiency and managing daily activities. This course will assist in developing participants' skills in applying better data presentation practices to their audiences.

COST: \$30.00

CPD #7

MARKETING YOURSELF IN ACADEMIA

Sunday, July 17 – 12:00PM-2:00PM

Location: Fiesta 2

Instructor: Gloria Teague

Sponsored by YPC

This two-hour course will be a panel discussion to guide recent graduates and newcomers to academia. The focus will be on how to build relationships, partnerships, and develop key skills to be successful as an academic.

COST: \$20.00

Tour #1

I-DRIVE 360

Sunday, July 17 – 12:00PM-3:30PM

Location: Meet 15 minutes prior to scheduled departure at LaMesa Patio

Visit Orlando's newest addition, a complex in the heart of International Drive that is home to the 400-foot-tall The Orlando Eye. Fashioned after the London Eye, this iconic observation wheel provides amazing views of Central Florida. Before the 20-minute ride, you will see a 4-D film about Florida. The complex also features many attractions, restaurants, clubs and shops. Visit the World-famous celebrity wax attraction Madame Tussauds, or Sea Life Orlando – an aquarium where you will encounter sharks face-to-face via a 360-degree underwater tunnel. In addition, there are many shops and restaurants for you to explore, grab a bite to eat, or enjoy a refreshing beverage.

COST: \$25.00 includes transfers and guide; entrance fees are additional and can be purchased on site.

ASABE 2016

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INTERNATIONAL PREPROFESSIONAL COMMUNITY (IPC) BUSINESS MEETING – PART 1

Sunday, July 17 – 1:00PM-2:00PM

Location: Fiesta 6

The current IPC officers will focus on networking with other students and reviewing which session preprofessional attendees should attend to make the most of the conference. Attendance at this meeting is highly encouraged for all students and especially those in undergraduate competitions and those looking to run for an IPC office. Come represent your school and preprofessional chapter!

FOUNTAIN WARS PRESENTATION JUDGING

Sunday, July 17 – 1:00PM-4:30PM

Location: Fiesta 4

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 CHAIR/SESSION ORGANIZER/MODERATOR ORIENTATION

Sunday, July 17 – 2:00PM-4:00PM

Location: Fiesta 8

Basic instructions on how to use forums and other key notes for committee chairs. The process for the technical programming - from the submitting of sessions, organizing the sessions thru the actual process of moderating the session - will be reviewed. A time of questions and answers will be available.

AIM MEETING ORIENTATION (FOR STUDENTS/FIRST TIMERS)

Sunday, July 17 – 2:00PM-3:00PM

Location: Fiesta 6

Never been to an Annual International Meeting? Has it been a while since your last meeting? Are you looking to get more out of your meeting this year? If you answered yes to any of these, come to this YPC and IPC sponsored event! The AIM Meeting Orientation session will introduce what AIM is all about, AIM "etiquette", new meeting opportunities and tips to make the most of your AIM experience.

UNDERGRADUATE POSTER SESSION

Sunday, July 17 – 3:00PM-4:30PM

Location: Veracruz C

This undergraduate poster competition encourages Preprofessional ASABE members to interact with industry, faculty, and fellow students by giving a technical poster presentation on an engineering project useful to agriculture and related areas. Feel free to come browse the posters, engage the students in dialogue about their experiences, or listen to their brief research poster summary. Winners of this competition will receive cash awards of \$500, \$300, and \$200 for first, second, and third places, respectively.

ALPHA EPSILON ANNUAL MEETING

Sunday, July 17 – 4:00PM-5:00PM

Location: Fiesta 1

This is the annual meeting for the honor society recognizing outstanding Agricultural and Biological Engineering Students. Join us as we discuss the society's latest activities and announce the recipients of this year's chapter awards. Meeting attendees will be entered into a drawing for the door prizes.

ASABE WELCOME RECEPTION

Sunday, July 17 – 4:30PM-6:00PM

Location: Veracruz B/C

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. A representative from Disney will have a representative available to assist you in making your dining reservations.

Event #6

WOMEN IN ASABE SPEED NETWORKING

Sunday, July 17 – 6:30PM-7:30PM

Location: Fiesta 6

Would you like to visit other women who participate in the annual meeting and perhaps share some of your same interests? This is the opportunity for you. You will be provided with suggested topics which will assist you in obtaining good information within a short period of time about other women attending this event. When the buzzer sounds you will move to another table to make another acquaintance. Preregistration is required but there is no registration fee to participate.

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

Alumni Reception of College of Biosystems Engineering and Food Science, Zhejiang University

Sunday, July 17 – 6:30PM-10:00PM

Location: To be Announced

Alumni and visiting professors of College of Biosystems Engineering and Food Science, Zhejiang University are invited to enjoy a reception at a local restaurant and catch up with old friends. Please send email to shaojin_wang@wsu.edu by July 25th if you plan to attend.



ASABE Foundation

Fun begins at Sunday's Welcome Reception!

Silent Auction & Pick-a-Prize

Bidding closes Tuesday at 6pm. Items include farm equipment models, a Detroit long board, drill kit, unique works in wood, jewelry, logo items, wine, and more.

Buy your tickets & choose what you want to win!



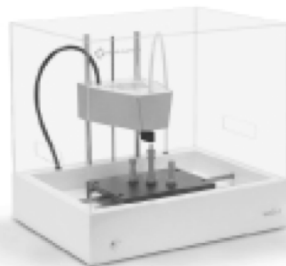
Disney \$250 Gift Card

drawing Monday @ 5:55pm



Kids Fire Tablet

drawing Monday @ 5:55pm



MOD-t 3D Printer

drawing Tuesday @ 5:55pm



iPad Air 2

drawing Tuesday @ 5:55pm

Come visit us in the Foundation area of the Exhibit Hall!

All proceeds support the KEYS Fund!

TICKETS SOLD during WELCOME RECEPTION & in EXHIBIT HALL until FINAL DRAWING

Portrait Studio



**at the Career Fair
Monday, July 18th**

Improve your personal brand with a portrait photo!

No charge—donations accepted.

Foundation Dinner

Tuesday, July 19th

Fogo de Chao Brazilian Steakhouse

Ray Wheeler, who leads the Kennedy Space Center's Advanced Life Support research efforts, will enlighten us with his **dinner presentation** on "Potatoes in Space."

Come and enjoy what Fogo de Chao does best: towering skewers of meat carved tableside! Don't miss "one small bite for man, one giant meal for mankind."

Tickets available at the AIM registration desk.

2016 Fountain Wars Competition

Monday, July 18



2015 Fountain Wars Competitor



Location: LaMesa Patio



1:00PM-5:00PM – Team Check-in,
Build, Team Test / Adjustment

5:00PM-8:00PM – Competition



Come join in the fun and cheer your favorite team on to victory!!

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MONDAY, JULY 18 FOUNDATION PORTRAIT STUDIO

Monday, July 18

Location: Veracruz B

Improve your personal brand with a portrait photo. Perfect for social media networking, employment opportunities, award announcements. Professional headshots offered in the Exhibit Hall.

GUIDE TO PROFESSIONAL LICENSURE

Monday, July 18 – 7:00AM-8:00AM

Location: Coronado A

Come learn about the benefits of professional licensure and the ABCs of getting there. This session, jointly sponsored by the YPC and PEI, will provide an introduction to PE licensure and highlight professional and personal benefits of getting your PE. A panel of licensed engineers from both academia and industry will talk about their experience including why they decided to get licensed, what opportunities have come from it, and tips on how to prepare as well as answer any questions from the audience. All members, especially first time attendees, preprofessionals, and young professionals, are encouraged to attend. Refreshments will be provided.

FOUNTAIN WARS COMPETITION

LaMesa Patio

5:00PM-8:00PM

ASABE GENERAL SESSION / RECOGNITIONS / KEYNOTE SPEAKER

Monday, July 18 – 8:00AM-9:30AM

Location: Coronado H/J



ASABE President Mary Leigh Wolfe welcomes each of you to the 2016 ASABE Annual International Meeting. Our Keynote Speaker is Martin Richenhagen, President and Chief Executive Officer of AGCO Corporation.

Martin H. Richenhagen was selected by the Board of Directors in March 2004 as President and Chief Executive Officer of AGCO Corporation. He was appointed to Chairman of the Board on August 15, 2006, and continues to serve on the Executive Committee and the Succession Planning Committee.

Previously, Mr. Richenhagen was the Executive Vice President at Forbo International SA, a manufacturing firm, headquartered in Switzerland. He also served as Group President for CLAAS KgaA mbH, a global manufacturer of agricultural equipment, headquartered in Germany. Prior to 1995, Mr. Richenhagen was the Senior Executive Vice President of Field Operations for Schindler Holding GmbH in Germany.

Mr. Richenhagen is currently the Chairman of the German American Chambers of Commerce of the U.S. (GACCs), and he is a member of the U.S. Chamber of Commerce Board of Directors. He has served as Chairman of the Board of the Association of Equipment Manufacturers (AEM) and is a Life Honorary Director of AEM.

In the course of two decades, his manufacturing career has covered a wide array of executive positions and managing directorships with responsibility for sales, marketing, human resources management, acquisitions, joint ventures, logistics, materials purchase, inventory management and competitor intelligence.

An international business executive, Mr. Richenhagen is fluent in several languages and has lived overseas for many years. He graduated from the University of Bonn. In December 2008, Mr. Richenhagen was appointed Honorary Professor to the faculty of agricultural machinery at the TU Dresden, Dresden University of Technology (Germany).

Event #7

SPOUSE/GUEST BRUNCH

Monday, July 18 – 9:00AM-11:30AM

Location: Meet at the LaMesa Patio 15 minutes prior to scheduled departure

Experience a nostalgic nautical visit to The Boathouse in the newly renovated Disney Springs. We will take the short drive to this magical complex of shops, restaurants and entertainment venues and enjoy brunch at this restaurant that features floating artwork – 19 rare dream boats from the 30's, 40's and 50's that float along the dock outside the Boathouse. The boats are a collection from museums, private collectors and boat shows from around the world. Talk with knowledgeable captains who are available to answer questions about these classic boats. The views from the restaurant are matched by a delectable brunch dining experience.

COST: Included in cost of Spouse Registration;

Guest Fee: \$75.00 – includes transportation and brunch

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CAREER FAIR

Monday, July 18 – 9:30AM-12:00PM

Location: Veracruz B

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 employees 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.

TS #114

NATURAL RESOURCES & ENVIRONMENTAL SYSTEMS DISTINGUISHED LECTURE SERIES – INVITED SPEAKERS

Monday, July 18 – 9:30AM-12:00PM

Location: Fiesta 5

Sponsored by: NRES

Moderator: Sherry Hunt

Invited awardees will be making presentations.

- 9:30AM** Introduction – Sherry Hunt, Moderator
9:35AM Agricultural Impacts on Water Resources:
Recommendations for Leading Applied
Research
Daren Harmel, USDA ARS
- 9:55AM** A Look at Irrigation Technology
Advancements through the Rear View
Mirror, the Kansas Experience
Danny H. Rogers, Kansas State Univ,
Manhattan, KS
- 10:15AM** BREAK
10:25AM Reflections – Better Irrigation by Using
What We Already Know
Robert von Bernuth, Waynesboro, VA
- 10:45AM** From an Undergraduate Agricultural
Engineer to Head of an ABE Department:
Some Things I've Learned Along the Way
Bernard Engel, Purdue, Univ, West Lafayette,
IN

TS #116

PLANT, ANIMAL AND FACILITY SYSTEMS DISTIN- GUISHED LECTURE SERIES – INVITED SPEAKERS

Monday, July 18 – 9:30AM-12:00PM

Location: Coronado S

Sponsored by: PAFS-01

Moderator: Jeremiah Davis

This series highlights the contributions of individuals whose work has advanced the structures and environment field. Keynote speakers are the 2015 recipients of the Henry Giese Structures & Environment Award and G.B. Gunlogson Countryside Engineering Award, followed with presentations by the 2015 PAFS superior paper recipients.

- 9:30AM** Introduction – Jeremiah Davis, Moderator
9:35AM Challenges and Emerging Needs for the
Next Generation of Animal Production
Facilities
Jay D. Harmon, Iowa State University, Ames,
IA
- 10:20AM** TBA
Gregory D. Williams, Facility Engineering
Services, Springdale AR
- 11:05AM** Break
11:15AM Effect of Measurement Density on
Characterizing Air Velocity Distribution in
Commercial Broiler
Brian D Luck, University of Wisconsin-
Madison, Madison, WI
- 11:35AM** Heat and Moisture Production Rates of a
Modern U.S. Swine Breeding, Gestation,
and Farrowing Facility
John Stinn, Iowa Select Farms, State Center,
Iowa

FOUNDATION PORTRAIT STUDIO

Monday, July 18– 9:30AM-12:00PM

Location: Exhibit Hall -Veracruz B

Improve your personal brand with a professional headshot photo. The ASABE Foundation is offering professional quality headshots on Monday in the Foundation area of the Exhibit Hall. A high quality headshot is perfect for social media networking, web directories, and awards or research publications.

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TS #151

2016 BILLION-TON REPORT: ADVANCING DOMESTIC RESOURCES FOR A THRIVING BIOECONOMY – INVITED SPEAKERS

Monday, July 18 – 9:30AM-12:00PM

Location: Coronado P

Sponsored by MS-23/7/2

Moderator: Sam Tagore, Erin Webb, Shahab Sokhansanj

The 2016 Billion-Ton report (BT16) is third in a series of reports evaluating potential US biomass supply. Building on previous analyses, the BT16 (1) updates the farmgate/roadside analysis using latest-available data and specified enhancements, (2) adds additional feedstocks, including algae and specified biomass crops, and (3) expands the analysis to include scenario analysis of transportation costs to biorefineries under specified logistical assumptions. The 2016 Billion-Ton Report is scheduled to be released in July 2016. This session will be one of the first public presentations of the BT16 assumptions, methods, and results. The Regional Feedstock Partnership synthesis report, to be released in conjunction with the BT16, will also be presented in this session.

9:30AM Introduction

9:35AM BT16 Overview

Mark Elless, US Dept of Energy, Washington, DC

9:55AM Forest Resource Assessment Methods

Bryce Stokes, CNJV, Washington, DC

10:15AM Ag Resource Assessment Methods

TBD

10:35AM Delivered Costs

Erin Webb, Oak Ridge National Laboratory, Oak Ridge, Tennessee

10:55AM Break

11:05AM Bioenergy Knowledge Discovery

Framework: BT 16 Interactive Version

TBD

11:20AM Estimating the Required Logistical Resources to Support the Development of a Sustainable Corn Stover Bioeconomy in the US

Mahmood Ebadian, Univ of British Columbia, Vancouver BC, Canada

11:35AM Regional Feedstock Partnerships

Vance Owens, South Dakota State Univ, Brookings, South Dakota

11:50AM Spatial Analysis of Distributed Depots for Advanced Biomass Processing

Erin Webb, Oak Ridge National Laboratory, Oak Ridge, TN (E. Webb)

ASABE ROBOTICS STUDENT DESIGN COMPETITION – ROBOTICS COMPETITION TESTING

Monday, July 18 – 10:00AM-12:30PM

Location: Veracruz B

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.

Monday, July 18

Robotics Competition Testing

10:00AM-12:30PM

Robotics Competition: Round 1 and Round 2

1:00PM-5:00PM

Tuesday, July 19

Robotics Competition: Round 3

8:00AM-12:00PM

BOYD-SCOTT GRADUATE RESEARCH AWARD

Monday, July 18 – 12:00PM-2:30PM

Location: Coronado B

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.

ASABE ROBOTICS STUDENT DESIGN COMPETITION: ROUND 1 AND ROUND 2

Monday, July 18 – 1:00PM-5:00PM

Location: Veracruz B

Round 1 and Round 2 of Competition

FOUNTAIN WARS COMPETITION - BUILD

Monday, July 18 – 1:00PM-5:00PM

Location: LaMesa Patio

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

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Tour #9

LAKERIDGE WINERY PRIVATE TOUR & WINE TASTING

Monday, July 18 – 1:00PM-6:00PM

Location: Tours depart from LaMesa Patio

Sponsored by YPC

Lakeridge Winery & Vineyards opened its doors in February 1989 in Clermont, Florida and sits on a 127-acre estate in gently rolling countryside some 25 miles west of downtown Orlando. This area was once the center of the State's grape industry. After years of phenomenal growth, Lakeridge ranks as Florida's largest premium winery, and remains a pioneer in the development of table and sparkling wines from muscadine and hybrid grapes, surviving in Florida because of their disease resistance and adaptability to the warm, humid climate. Currently at Lakeridge, there are about 80 acres of vineyards planted. Breeding programs over the past 50 years by plant geneticists and food scientists have brought about dozens of new types of Muscadine grapes and bunch grapes, some of which are excellently suited to winemaking. Begin your tour with a short video showing the growing of Florida grapes, to the wine making process and finishing, to the bottling and labeling. You will then see the vineyards and production area. Finish with a wine tasting to include Cabernet Sauvignon, Chardonnay, Chablis, Sunblush, Southern White, Southern Red, and Proprieter's Reserve, served with gourmet cheese board pairings and crackers or French baguette. Please arrive 15 minutes before scheduled departure.

COST: \$50.00 includes transportation, tour and tasting

TS #121

CURRICULUM INTEGRATION: THE CAPSTONE COURSE – PANEL DISCUSSION

Monday, July 18 – 2:30PM-5:00PM

Location: Cancun

Sponsored by EOPD

Moderator: Russell McGee

This session will facilitate the exchange of ideas and innovative methods that have been successful in the development of the senior Capstone Course at various universities. It is targeted toward the Ag-Mech/Ag-Systems course of study, but applicable to engineering senior design courses as well. Attendees will hear brief presentations on four different programs then participate in a discussion and interaction time.

Panelists:

Leon Schumacher, University of Missouri
Deepak R. Keshwani, University of Nebraska-Lincoln
Bob Stwalley, Purdue University
Russell McGee, Texas A&M University

TS #129

FREITAG-WISMER MEMORIAL SESSION ON TRACTION AND MOBILITY – INVITED SPEAKERS

Monday, July 18 – 2:30PM-5:00PM

Location: Coronado G

Sponsored by: MS-45

Moderator: Thomas R. Way

The Freitag-Wismer Memorial Session on Traction and Mobility is a session in honor of Dean Freitag and Bob Wismer. In this introductory presentation, Dr. Carol Plouffe will summarize the career of Bob Wismer and will present highlights of Wismer's contributions in the areas of off-road traction and mobility, and related topics. Professor R. Lal Kushawaha will be making a presentation on Dr. Freitag's lifelong contribution to this field.

2:30PM

Introduction – Thomas R. Way, Moderator Dr. Freitag's Contributions on Traction and Mobility

Lal Kushwaha, University of Saskatchewan,
Saskatoon, SK Canada

2:35PM

3:05PM

Contributions of Bob Wismer in the Advances of Traction and Mobility

Carol Plouffe, Deere & Co., Moline, IL

3:35PM

Evaluation of Low Inflation Tire Technologies on Soil Compact

Mehari Tekeste, Iowa State University, Ames,
IA

3:55PM

Break

4:05PM

Why Tractive Footprint Length Matters

Thomas R. Way, USDA ARS Auburn, AL

4:25PM

Modeling Soil-Cone Penetrometer Interaction Using Continuum and Discontinuum Approach

Mehari Tekeste, Iowa State University, Ames,
IA

ASABE ROBOTICS STUDENT DESIGN COMPETITION:

Location: Veracruz B

ROUND 1 AND ROUND 2

Monday, July 18 – 1:00PM-5:00PM

ROUND 3

Tuesday, July 19 – 8:00AM-12:00PM

ASABE 2016

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TS #140

PHYSICAL, BIOLOGICAL, AND SOCIO-ECONOMIC WORLDS COLLABORATE FOR ECOSYSTEM SERVICES PROGRAMS: LESSONS LEARNED – INVITED SPEAKERS

Monday, July 18 – 2:30PM-5:00PM

Location: Fiesta 8

Sponsored by: NRES-28

Moderator: Sanjay Shukla, Hillary Swain

Learning Objectives: 1) what are different ecosystem services and how to enhance them using payment for ecosystem services (PES) programs; 2) how to develop, verify, value, and implement an ecosystem services program; 3) development of decision tools for evaluating and implementing ecosystem services; and 4) lessons learned from implementing the PES programs through collaboration between physical, biological, and social scientists and engineers. The invited session will achieve the learning objectives through a variety of presentations from accomplished scientists.

2:30PM Introduction

**2:35PM Ecosystem Services: What Engineers
Should Learn from Ecologist and
Ecologists from Engineers**

William Mitsch, Florida Gulf Coast University,
Fort Myers, FL

**3:00PM (EPES) 1: Everglades Payment for
Environmental Services (EPES) – Water,
Biodiversity, People**

Hillary Swain, Archbold Expedition, Lake
Placid, FL

**3:15PM EPES2 – Quantification and Tradeoffs for
Water Storage and Treatment Services**

Sanjay Shukla, University of Florida,
Immokalee, FL

**3:30PM EPES3 – Quantification and Tradeoffs for
Biological Diversity Services**

Patrick Bohlen, University of Central Florida,
Orlando, FL

**3:45PM Implementing a Payment for Water
Storage and Treatment Services Program**

Benita Whalen, South Florida Water
Management District, West Palm Beach, FL

4:00PM Break

**4:10PM Application of The Nature Conservancy's
Resource Investment Optimization System
(RIOS) to Evaluate Watershed
Management Investments**

Stephen Suau, Progressive Water
Resources, Sarasota, FL

**4:25PM Can Water Quality Trading Improve Water
Quality: The Myth and the Reality**

Len Shabman, Resources for Future,
Washington, DC

4:45PM

**Designing Payments to Landowners Who
Provide Wetland Ecosystem Services**

Len Shabman, Resources for Future,
Washington, DC

5:00PM

Discussion and Concluding Remarks

Hilary Swain, Archbold Biological Station,
Venus, FL

TS#141

EMERGING CHALLENGES IN FOOD AND WATER SEC- URITY

– INVITED SPEAKERS

Monday, July 18 – 2:30PM-5:00PM

Location: Fiesta 9

Sponsored by E-2050, AABFEIO

Moderator: Ajay Kumar

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

Learning Objectives: Challenges of food and water security in India and
other developing countries.

2:30PM Introduction

**2:35PM Global Challenges of Irrigation Water
Management and Food Security**

Ashish Pandey, Indian Institute of Technology,
Roorkee, Uttarakhand, India

**3:15PM Global Food Security under Climate
Change**

Ashutosh Singh, University of Guelph,
Guelph, ON Canada

**3:35PM Global Postharvest Loss Prevention and
the ADM Institute at the University of
Illinois**

Prasanta K. Kalita, University of Illinois,
Urbana, IL (P.K. Kalita)

3:55PM Break

**4:00PM Role of Sustainable Intensification of
Agricultural Practices for Improving Crop
Productivity and Climate Resiliency of
Smallholder Farmers: Lessons Learned
from West Africa**

P.V. Vara Prasad, Kansas State Univ,
Manhattan, KS (P. Prasad)

**4:20PM Opportunities and Challenges in
Utilization of Food and Agricultural Wastes**

Ajay Kumar, Oklahoma State University,
Stillwater, OK

4:40PM Panel Discussion



The 2016 Robotics Competition Challenge

Cash prizes for top three finishers - 1st \$1,250; 2nd: \$1,000; 3rd \$750

This year's objective will require the construction of a fully automated robotic system designed to simulate the transfer of citrus fruits from the harvester to the processing plant. Two mobile robots will be required for this competition where one will haul the fruits and transfer the fruits to the other robot, which will then move the fruits to its final destination (processing plant). The main emphasis on this year's competition is on a cooperative, harvesting robot.

Location: Veracruz C

Monday, July 18 – 10:00AM-12:30PM; 1:00PM-5:00PM; Tuesday, July 19 – 8:00AM-12:00PM

ASABE ROBOTICS 2016 REGISTERED PARTICIPANTS As of June 24, 2016

McGill University (1 Team)
Texas A&M (1 Team)
UC Davis (1 Team)
University of Nebraska – Lincoln (1 Team)
University of Florida (1 Team)
Kansas State University (1 Team)
Iowa State University (2 Teams)
Clemson University (2 Teams)
Zhejiang University (3 Teams)
University of San Carlos (1 Team)
California Polytechnic University (1 Team)

History of ASABE Robotics Competition

The ASABE Robotics Competition is a student design event 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 travels with the Annual International Meeting, and hence, the solutions must allow transportation via airplane. The challenge will be communicated through the website and digital flyers describing the rules, requirements, limitations, deadlines and demonstration procedures.

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 advisor who is also the contact person with ASABE. There are no classes or leagues, every team will work on the same Challenge. There are no limits to the budget. Teams are encouraged to obtain funding for their solutions and participation through on-campus resources such as departmental sources and Engineering Councils, as well as from companies. All participating students must be ASABE student members.

The solutions must be developed at the departments, and demonstrated at the ASABE Annual International Meeting. The requirements are that the teams demonstrate their solutions, give a presentation, and write a report. The teams' performances will be judged by three judges from Industry as well as Academia.

ASABE 2016

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TS #146

CATASTROPHIC DISEASE OUTBREAKS: ENGINEERING RESPONSES FOR LIVESTOCK PRODUCTION – INVITED SPEAKERS

Monday, July 18 – 2:30PM-5:00PM

Location: Fiesta 3

Sponsored by: PAFS-40

Moderator: Timothy Shepherd

Invited Speakers and Highlighted Research will provide insight and discussion surrounding the engineering challenges and needs of past and future catastrophic disease outbreaks in livestock production. Key topics will include: 2015 HPAI Outbreak, Strategic Mortality Management Planning, Whole-House Vaccination Methods for Poultry Facilities, Modeling of Airborne Transmission, and Biosecurity Assessment of transportation vehicles.

2:30PM

Introduction

2:35PM

Engineering Challenges and Responses to the Highly Pathogenic Avian Influenza Outbreak in Minnesota in 2015

Kevin A. Janni, University of Minnesota, St. Paul MN

3:05PM

Whole House Poultry Vaccination System: Development and Field Implementation

Joseph L. Purswell, USDA ARS, Mississippi State, MS

3:35PM

Positive Pressure Ventilation and Filtration of Swine Facilities-Application and Performance

John P. Stinn, Iowa Select Farms, State Center, IA

3:50PM

Nutrient Management Considerations for Mass Depopulation Events

Kris Kohl, Iowa State University, Ames, IA

4:05PM

Modeling Airborne Transmission of Avian Influenza Using Hybrid Single Particle Lagrangian Integrated Trajectory (HYSPLIT) Model

Yang Zhao, Iowa State University, Ames, IA

4:20PM

Rapid Assessment of Cleanliness of Commercial Hog Transport Trailers Using ATP Bioluminescence Method

Alvin Alvarado, Prairie Swine Centre Inc., Saskatoon, SK, Canada

TS #142

GUIDELINES FOR HYDROLOGIC AND WATER QUALITY MODELING CALIBRATION AND VALIDATION PROJECT – RAP SESSION

Monday, July 18 – 5:15PM-7:00PM

Location: Fiesta 9

Leader(s) Bruce Wilson, University of Minnesota

Daniel Moriasi, USDA ARS

Daren Harmel, USDA ARS

Purpose: To 1) enable leaders of the proposed topic-specific engineering practices to present results to all members of the 201 hydrology group and 2) discuss the drafted topic-specific model calibration and validation engineering practices to reach consensus prior to submitting to ASABE Standards Committee for the formal approval process.

ORDER OF THE ENGINEER INDUCTION CEREMONY

Monday, July 18 – 4:00PM-5:00PM

Location: Durango 1/2

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 \$10.00 and inductees may register with Tina Schultz at 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/>.

Tour #3

BEHIND THE SEEDS

Monday, July 18 – 3:30PM-5:30PM

Location: Tours depart from LaMesa Patio

Explore the future of agriculture and get up-close and personal with what happens behind the scenes in this tour at The Land Pavilion. This one-hour walking tour of the fish farm and 4 greenhouses that make up the Land Pavilion at Epcot is perfect for anyone interested in natural sciences and innovations in the science of farming. You will behold gigantic fruits and vegetables and unusual crops from around the world, and depending on timing, may taste some produce or release ladybugs into the greenhouse to help protect the plants. Discover the latest plant-growing techniques, including hydroponics, and take home a handout with some great ideas. Wear comfortable shoes for walking. Plan to arrive 15 minutes before scheduled to departure.

COST: \$35.00 Includes roundtrip transportation to Epcot and guided back-of-house tour

ASABE 2016

Annual International Meeting

Event #8

WOMEN IN ASABE SOCIAL

Monday, July 18 – 4:30PM-5:30PM

Location: Acapulco

The Women in ASABE Social is an informal mixer for all female ASABE members. Hosted by President Mary Leigh Wolfe and Past President 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

FOUNTAIN WARS COMPETITION

Monday, July 18 – 5:00PM-8:00PM

Location: Competition will be held in the LaMesa Patio.

Event #9

ASSOCIATION OF AGRICULTURAL FOOD AND BIOLOGICAL ENGINEERS OF INDIAN ORIGIN (AABFEIO) BUSINESS MEETING AND DINNER

Monday, July 18 – 5:30PM-9:30PM

Location: Fiesta 5

The 2016 Annual Business Meeting of AABFEIO will be held from 5:30PM to 6:30PM on Monday, July 18 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: \$15.00 Students

\$25.00 AABFEIO ASABE member and family members

\$35.00 Non-AABFEIO ASABE member

FELLOWS INDUCTION CEREMONY / RECEPTION

Monday, July 18 – 6:00PM-8:00PM

Location: Coronado K/L

All registrants are invited to this special recognition ceremony and reception honoring the 2016 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

Those inductees are:

David D. Bosch

Robert T. Burns

Gary A. Clark

Darrin J. Drollinger

Joseph P. Harner

Maynard M. Herron

Kevin M. Keener

Sue E. Nokes

Randy L. Raper

Michael D. Smolen

Xiuzhi Susan Sun

Thomas R. Way

Ruihong Zhangr

TEXAS A&M BIOLOGICAL AND AGRICULTURAL ENGINEERING RECEPTION

Monday, July 18 – 8:00PM-10:00PM

Location: Baja

The Texas A&M University Biological and Agricultural Engineering Department invites you to join us in a reception for all Aggies and their supporters. We will meet at 7:00PM for complimentary appetizers and a cash bar. Gather with us to enjoy an update on the department!

IOWA STATE UNIVERSITY ABE RECEPTION

Monday, July 18 – 8:00PM-9:30PM

Location: Cancun

Meet your old friends and make new ones and find out what is happening in the Department of Agricultural & Biosystems Engineering at Iowa State University.

Event #10

GRADUATE STUDENT SOCIAL

Monday, July 18 – 8:00PM-10:00PM

Location: Acapulco

This event will provide an informal setting for Graduate Students to socialize and make connections with their peers from other institutions around the world. It's a great chance to get to know the people you'll be seeing in the hallways all week!

COST: Preregistration is required

VIRGINIA TECH ALUMNI & FRIENDS SOCIAL

Monday, July 18 – 8:00PM-10:00PM

Location: Durango 2

The Biological Systems Engineering Department at Virginia Tech cordially invites alumni and friends to this gathering on Monday evening. Come enjoy some refreshments and catch up on the happenings in the department and at Virginia Tech!

Event #11

UNIVERSITY OF ILLINOIS ALUMNI & FRIENDS RECEPTION

Monday, July 18 – 8:00PM-10:30PM

Location: Durango 1

Alumni & friends of the University of Illinois are invited to stop by to hear what is new with the Orange & Blue!

COST: Preregistration is required

ASABE 2016

Annual International Meeting

TUESDAY, JULY 19

PURDUE ALUMNI & FRIENDS- COMPLIMENTARY BREAKFAST

Tuesday, July 19 – 7:00AM-8:00AM

Location: Baja

Purdue University's Dean of Agriculture, the Agricultural & Biological Engineering Department, and the Engineering Alumni Association invite all alumni and friends to their complimentary breakfast. Reservations are required!!

Event #12

PENN STATE ALUMNI AND FRIENDS BREAKFAST

Tuesday, July 19 – 7:00AM-8:30AM

Location: Acapulco

This event is open to all alumni, student, current employees, and friends of The Pennsylvania State University, sponsored by the Penn State Department of Agricultural and Biological Engineering. Come join us for the opportunity to meet old friends, faculty, students, and to get updated on the current happenings in the ABE Department. All guests are eligible to win door prizes.

COST: \$12.00

Event #13

INTERNATIONAL BREAKFAST

Tuesday, July 19 – 7:00AM-8:30AM

Location: Cancun

The International Breakfast is a great opportunity to interact with peers from many different countries. If you are coming from abroad or have an interest in international issues this is the place to meet new people and begin long and fruitful working relationships. The speaker for this International Breakfast will be the 2016 recipient of ASABE's prestigious Kishida Award.

COST: \$15.00

FLORIDA AGRICULTURAL SYSTEMS 101

Tuesday, July 19 – 7:00AM-9:00AM

Location: Coronado A

This YPC sponsored session is designed to highlight agricultural systems in the sunshine state, ranging from livestock operations to orchard farms. Attendees will get a comprehensive understanding of Florida's unique production systems and innovative farming techniques from both a farmer's and an engineer's perspective.



FLORIDA SECTION ASABE WELCOMES YOU TO FLORIDA!

Stop by to visit OUR BOOTH!

- FASABE Silent Auction - raising funds for scholarships, Student Support & Science Fair Awards – ends Tuesday, July 19th at Noon.
- University of Florida ABE and Florida Agricultural & Mechanical University BASE Student Displays

FASABE Appreciates our Student Travel Sponsors:



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TECHNOLOGY, INC.

FASABE STUDENT SUPPORT SPONSORS:

R. Quince Sellers, PE

Melanie Correll, Ph.D.

ASABE 2016

Annual International Meeting

ETHICS ESSAY COMPETITION

Tuesday, July 19 – 8:00AM-9:00AM

Location: Yucatan 3

Speak Up! ASABE encourages you to consider issues important to the integrity of the profession. Choose a topic, research the facts, develop a position, and craft your arguments. Your original essay of up to 1500 words could earn you recognition and a cash award. The winning entry may be published in ASABE's Resource magazine.

ASABE ROBOTICS STUDENT DESIGN COMPETITION – ROUND 3

Tuesday, July 19 – 8:00AM-12:00PM

Location: Veracruz B

The ASABE Robotics Competition continues with Round 3 of the competition.

K.K. BARNES STUDENT PAPER COMPETITION

Tuesday, July 19 – 9:00AM-10:00AM

Location: Yucatan 3

Invitations will be extended to the top three entries in the student paper competition. You can hear the authors of outstanding papers make their presentations. Come support the students from your school who may be participating. Winners will be recognized at the AEM/ASABE Student Awards Breakfast on Wednesday.

ASABE CAREER FAIR

Monday, July 18

9:30AM-12:00PM

Veracruz B

TS #213

MARVIN STONE MEMORIAL SESSION ON AGRICULTURAL ELECTRONICS – INVITED SPEAKERS

Tuesday, July 19 – 9:30AM-12:00PM

Location: Fiesta 6

Sponsored by: ITSC, MS

Moderator: Randy Taylor, Moderator

This session will honor the memory of Dr. Marvin Stone, an ASABE Fellow and former Board member with a long and distinguished career in the field of agricultural electronics. Internationally recognized, Dr. Stone was the recipient of the ASABE McCormick-Case Gold Medal, the Farrall Young Educator Award, and the Rosentreter Standards Award. After a brief recap of Dr. Stone's contributions in research, teaching, and service, the session will include timely information on (a) communication networks on agricultural and off-road equipment; (b) real-time sensors in crop production; and (c) visions of future advances in sensors and controls in agriculture.

9:30AM

Introduction

9:35AM

**Marvin Stone: A Career of
Accomplishment and Service**

Ronald Elliott, Oklahoma State University,
Stillwater, OK

9:55PM

**Marvin Stone: Colleague and Mentor (A
panel)**

John Solie, retired, Oklahoma State
University

Carol Jones, Oklahoma State University
Joe Dvorak, University of Kentucky

10:15AM

**Status and Future of Communications
Networking on Agricultural Machinery**

Peter van der Vlugt, Kverneland Group Nieuw
Vennep BV, Nieuw-Vennep, Netherlands

10:45AM

Break

10:55AM

**Status and Future of Real-Time Sensing in
Crop Production**

Joshua McGrath, University of Kentucky

11:25AM

**Visions of Future Advances in Sensors
and Controls in Agriculture (A panel)**

Terry Howell, Jr., McKee Foods and ASABE
Past President (Panel Moderator)

John Reid, John Deere

Jeyam Subbiah, University of Nebraska-
Lincoln

Steven Thomson, USDA National Institute of
Food and Agriculture

ASABE 2016

Annual International Meeting

TS #225

DISTINGUISHED ADVANCES IN PROCESSING SYSTEMS – INVITED SPEAKERS

Tuesday, July 19 – 9:30AM-12:00PM

Location: Yucatan 2

Sponsored by: PRS Revitalization Task Force, PRS-06, Machinery Systems,

Moderator: Christopher Butts, USDA ARS

This session is sponsored by the Executive/Steering Committee of the Processing Systems technical community. Presenters for this invited session will be recent recipients of ASABE Awards and Honors whose primary technical interest and expertise is in the Processing Systems Technical Community. Award winners presenting include the recipients of the International Food Engineering Award, the Kishida International Award, the Sukup Global Food Security Award and the PEI Professional Engineer of the Year Award. Come join us as we learn of the work of these esteemed members of the Processing Systems Technical Community.

Tour #5

ORLANDO WETLANDS PARK AND CONSERV II FIELD TOUR

Tuesday, July 19 – 10:00AM-4:00PM

Location: Tour departs from LaMesa Patio. Please be present 15 minutes prior to departure

The tour will encompass two large scale water reclamation systems. The largest water reuse project of its kind in the world, Water Conserv II reclaims over 70 million gallons daily by combining agricultural and recreational spaces irrigation with rapid infiltration basins to recharge Florida's Aquifer.

The City of Orlando also has the Orlando Wetlands Park, one of the largest treatment wetlands providing a final polish to effluent from Orlando's Iron Bridge Facility, and is capable of handling up to 35 million gallons daily.

Both facilities are quite large and will require a considerable amount of walking in the Florida sun.

Participants are encouraged to bring sun screen. Closed toed shoes and long pants are required.

COST: \$100.00 includes transportation, tour guide, lunch

GUNLOGSON ENVIRONMENTAL DESIGN COMPETITION

Tuesday, July 19 – 10:00AM-11:00AM

Location: Yucatan 3

The top three entries for the Environmental Design Competition have been invited to this oral competition. Winners will be recognized at the AEM/ASABE Student Awards Breakfast on Wednesday.

AGCO NATIONAL STUDENT DESIGN COMPETITION

Tuesday, July 19 – 11:00AM-12:00PM

Location: Yucatan 3

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.

Tour #4

ORLANDO OUTLETS

Tuesday, July 19 – 11:00AM-3:00PM

Location: Tour departs from LaMesa Patio – Please be present 15 minutes prior to departure

The Orlando Outlets are a shopper's dream! This is a true shopping destination where you can find impressive savings of 25% to 65% off retail prices at over 150 designer and name-brand outlet stores. Featured stores include Coach, Cole Haan, Burberry, Tory Burch, Polo Ralph Lauren, Lenox, Saks Fifth Avenue Off 5th, J Crew, Kate Spade, Tumi, and so many more!

COST: \$20.00 Includes transportation to the outlets and return to the hotel

ASABE BUSINESS MEETING

Tuesday, July 19 – 12:00PM-12:30PM

Location: Fiesta 5

ASABE President Mary Leigh Wolfe will chair the business meeting, which includes reports from the Treasurer, Foundation President and her year in review.

Event #14

GRADUATE STUDENT PROFESSIONAL DEVELOPMENT ROUNDTABLE

Tuesday, July 19 – 12:00PM-2:00PM

Location: Durango 1

A panel of renowned scientists will share their academic and professional experiences with current graduate students. This will not be a technical session, rather the panelists will provide tips and answer questions about starting and maintaining a desired career trajectory. Lunch will be served.

COST: \$5.00

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Annual International Meeting

QUARTER SCALE TRACTOR STUDENT DESIGN COMPETITION

Tuesday, July 19 – 12:30PM-2:30PM

Location: Yucatan 3

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.

THIRSTY LAND VIDEO

Tuesday, July 19 – 12:30PM-2:00PM

Location: Fiesta 5

Thirsty Land is a documentary film that tells the story about extreme drought, agriculture, & the water crisis in the western United States and how these challenges impact farmers, urban communities, and the environment.

The depleted water resources in the American Southwest is one of the most urgent challenges of the 21st century facing agriculture and growing urban communities. The drought on this region has local, national, and global impacts not only for the present, but also for future generations.

ASABE FOUNDATION BOARD OF TRUSTEES

Tuesday, July 19 – 2:00PM-5:00PM

Location: Yucatan 2

This is the annual business meeting for the ASABE Foundation.

GRADUATE SCHOOL 101: A PANEL DISCUSSION FOR UNDERGRADUATES – ROUNDTABLE

Tuesday, July 19 – 2:00PM-4:00PM

Location: Fiesta 10

A graduate student panel will share their academic experiences with current undergraduates. Undergrads will be encouraged to ask questions about selecting and applying to grad schools, housing and stipend concerns, what day-to-day life is like, etc.

TS #230

AOCABFE & NERCITA CHINA EXCHANGE FORUM – INVITED SPEAKERS

Tuesday, July 19 – 2:30PM-5:00PM

Location: Fiesta 6

Sponsored by E-2050, AOCABFE

Moderator: Zhiming Qi, McGill Univ

The 2016 AOCABFE & NERCITA China Exchange Forum theme this year is "Agricultural and Biological Engineering for Tomorrow." Under this theme, we will be hosting seven invited speakers from China and the US to present their research and education programs, share their experiences in collaborations between China and the US, and envision the future of technology and international collaboration for a sustainable tomorrow through agricultural and biological engineering.

2:30PM

Introduction

2:35PM

TBA

Gary Clark, Kansas State University

2:50PM

Perspective on the Development of Agricultural Engineering in the 13th Five-year Plan of China

Ming Zhu, Chinese Academy of Agricultural Engineering

3:05PM

US-China Cooperation in Precision Agriculture

Ken Sudduth, USDA ARS

3:20PM

Break

3:30PM

Monitoring Crop Growth in the Context of Precision Farming Using New Near-Ground and UAV-Based Imaging Systems

Yan Zhu, Nanjing Agricultural University

3:45PM

UC Davis New Model for International Cooperation

Zhongli Pan, USDA ARS

4:00PM

IJABE: Past and Future

Yingkuan Wang, Chinese Academy of Agricultural Engineering

Florida Section ASABE

Welcomes you to Florida!

Stop by and visit our booth!

FASABE Silent Auction - raising funds for scholarships, Student Support and Science Fair Awards – ends Tuesday, July 19th at Noon

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TS #239

AN UPDATE ON THE ENVIRONMENTAL CAB STANDARD, ASABE S-613

– INVITED SPEAKERS

Tuesday, July 19 – 2:30PM-5:00PM

Location: Fiesta 5

Sponsored by MS

Moderator: Richard Job

A summary of the efforts to develop the environmental cab standard and what the standard means and can do for operations in contaminated environment.

2:30PM Introduction

2:35PM A Summary of Environmental Cab Standard Development: A Verbal Account of Some of the Important Issues from ASABE Paper #2461359

Richard W. Job, Retired Consultant

2:55PM Testing Efforts to Verify the Cab Standard and Issues with Filter Development for This Market

Michael Schmitz, Chief Technology Officer, Clean Air Filter

3:15PM Research Efforts in Mining Applications and Verification of the Elements of This Standard

John Organiscak, Research Engineer, NIOSH

3:35PM Break

3:45PM How Does the Development of This Standard Impact Other Industries

Al Leupold, Director of Test and Development, Bergstrom, Inc.

4:05PM An Update on EN 15695 and Other Issues Related to Operator Environment in the EU

Keith J. Hawken, Technical and Standards Director, Agricultural Engineers Association

TS #252

TECHNICAL TRENDS AND CAREER OPPORTUNITY IN THE U.S. AND KOREA

– INVITED SPEAKERS

Tuesday, July 19 – 2:30PM-5:00PM

Location:

Sponsored by: AKABFE, P-2050

Moderator: Seung-Chul Yoon

This session is intended to facilitate communication between Korean and U.S. professionals and students in the field of agricultural, biological and food engineering. Discussions will center on 'Technical Trends and Career Opportunities in the U.S. and Korea,' and the invited speakers will address a wide range of topics covering trends both past and present as well as directions the profession will likely take in the future. Speakers will also offer practical advice on pursuing professional careers.

2:30PM Introduction – Seung-Chul Yoon, Moderator

2:35PM Past, Present and Future of AKABFE
Christopher Choi, University of Wisconsin-Madison, Madison, WI

2:50PM International Research Collaboration between Korea and US – Detection of Apple Marssonina Blotch Disease
Won Suk (Daniel) Lee, University of Florida, Gainesville, FL

3:05PM Recent Progress of Agricultural Machinery in Korea

Chang Hyun Choi, Sung Kyun Kwan University, Suwon Gyeonggi-Do, Korea

3:20PM Future Directions of the AKABFE Symposium

Bosoon Park, USDA ARS, Athens, GA

3:35PM Panel Discussion

4:05PM AKABFE Annual Report and Discussion

GRADUATE STUDENT INVOLVEMENT BUSINESS MEETING

Tuesday, July 19 – 4:00PM-5:00PM

Location: Fiesta 10

This meeting will be held to discuss and review this year's Graduate Student Involvement activities, plan future progress, and form a planning committee to move forward with ideas for 2017.



ASABE 2016

Annual International Meeting

AFRICAN NETWORK GROUP ANNUAL BUSINESS MEETING

Tuesday, July 19 – 4:00PM-6:00PM

Location: Yucatan 3

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 BUSINESS MEETING

Tuesday, July 19 – 5:15PM-6:30PM

Location: Yucatan 2

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 YPC'ers.

Event #15

ASSOCIATION OF OVERSEAS CHINESE AGRICULTURAL, BIOLOGICAL, AND FOOD ENGINEERS (AOCABFE) ANNUAL BUSINESS MEETING AND AWARD BANQUET

Tuesday, July 19 – 5:15PM-10:00PM

Location: Fiesta 6

The AOCABFE annual meeting provides a platform for promoting and facilitating research and educational exchanges among researchers with Chinese origin or associations in the areas of agricultural, biological and food engineering. The ASABE meeting attendees with international collaboration interests are invited to attend the meeting as well. The AOCABFE activities in 2015-2016 will be reviewed and plans of action for 2016-2017 will be discussed. Following the business meeting the members of AOCABFE will be gathering at an off-site location for the awards dinner and an opportunity for socializing and networking. Recognition and awards will be presented at the banquet.

COST: \$65.00 member; \$20.00 student

Event #16

ASSOCIATION OF KOREAN AGRICULTURAL, BIOLOGICAL, AND FOOD ENGINEERS (AKABFE) MEETING

Tuesday, July 19 – 5:30PM-7:00PM

Location: Yucatan 1

Association of Korean Agricultural, Biological, and Food Engineers (AKABFE) will have an annual meeting. A business meeting will take place and the Association dinner will follow at a nearby restaurant

COST: \$30.00 member; \$15.00 Student

Event #17

FOUNDATION NETWORKING EVENT - FOGO DE CHAO

Tuesday, July 19 – 6:00PM-10:00PM

Location: Tour departs LaMesa Patio

This year, the ASABE Foundation has planned a very special dinner fundraiser! Did you happen to read the book or see the movie "The Martian"? Growing potatoes on Mars? Dr. Ray Wheeler from NASA will join us and tell us that potatoes in space was part of his postdoctoral work at the University of Wisconsin in the 1980's. Dr. Wheeler currently leads the Kennedy Space Center's Advanced Life Support research efforts. Just this summer, astronaut Scott Kelly harvested and enjoyed "rocket" lettuce grown on the International Space Station as part of the "Veggie by NASA" program. Most importantly, some clues about possible impacts of this research on future agriculture will sure to be intriguing to both ASABE members and our guests.

Join us and enjoy a massive salad bar and practically unlimited choice of protein at the Fogo de Chao Brazilian Steakhouse! Don't miss "one small bite for man, one giant meal for mankind" and the exciting presentation by Dr. Wheeler. Network with your fellow ASABEer's and many of our next generation!! (Students: sign up early and be sponsored again this year by CNH Industrial!!) Remember the good work of the Foundation and support its efforts advancing ASABE.

COST: \$100 per person

WEDNESDAY, JULY 20

Event #18

PRAYER BREAKFAST

Wednesday, July 20 – 6:30AM-8:00AM

Location: Cancun

The Fellowship of Christian Agricultural Engineers invites all meeting registrants, spouses and guests to the interdenominational prayer breakfast. The continental breakfast will begin promptly at 6:30AM and end at 8:00AM. Pre-registration is required.

COST: \$15.00

Event #19

MEET AND GREET BREAKFAST WITH DEPARTMENT CHAIRS AND SENIOR FACULTY

Wednesday, July 20 – 7:00AM-8:00AM

Location: Baja

This networking event is meant to connect late-career graduate students with department chairs and senior faculty members to discuss opportunities for further research and/or faculty position openings.

COST: \$5.00

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Event #20

AEM/ASABE STUDENT AWARDS BREAKFAST

Wednesday, July 20 – 7:30AM-9:00AM

Location: Durango 1/2

The Association of Equipment Manufacturers (AEM) and the American Society of Agricultural and Biological Engineers (ASABE) invites all of the ASABE student members to attend the AEM/ASABE Student Awards Breakfast. This event is a wonderful time to learn more about the professional side of the world as you dine. Reservations must be made by on or before Tuesday, July 19. Breakfast reservations will be confirmed in your ASABE registration packet. All annual meeting attendees are encouraged to attend.

COST: \$7.00

Event #23

GRAB AND GO BREAKFAST

Sponsored by Kansas State University

Wednesday, July 20 – 7:30AM-9:00AM

Location: LaMesa Patio

Start the day by making even more connections! Stop by between the hours of 7:30AM and 9:00AM on Wednesday, July 20 to grab a bite to eat, and stay as long as you like while joining with other Kansas State University students and alumni attending the AIM.

COST: \$15.00

TS #301

AGRICULTURAL SUSTAINABILITY PROGRAMS: EXISTING AND EMERGING INITIATIVES – INVITED SPEAKERS

Wednesday, July 20 – 7:30AM-10:00AM

Location: Fiesta 5

Sponsored by: ASE-1,

Moderator: Marty Matlock, University of Arkansas

Agricultural sustainability initiatives are emerging around the world, ranging from very local and specialized certification protocols to broad sweeping global initiatives for entire sectors of production. This session will include invited speakers representing two US initiatives (Field to Market and the Sustainable Soybean Assurance Protocol) and two global initiatives (Global Roundtable for Sustainable Beef and FAO Livestock Environmental Assessment and Performance Partnership). A roundtable discussion will follow, moderated by the session Chair (Dr. Marty Matlock), to compare and contrast goals, approaches, and outcomes of these initiatives.

7:30AM

Introduction

7:35AM

Coexistence of Biotech and Organic/NonGMO Crops: USDA AC21 and Sustainability Standards

Thomas P. Redick, GEEC LLC, Clayton, Missouri

8:00AM

Development of a Multi-Stakeholder Sustainability Program for US Poultry

Paul Bredwell, US Poultry, Tucker, Georgia

8:25AM

Indicator and Metric Development for The US Roundtable for Sustainable Beef

Benjamin Weinheimer, Texas Cattle Feeders Association, Amarillo, Texas

8:50AM

Sustainability, Indicators, Metrics and Continuous Improvement in US Pork

Allan Stokes, National Pork Board, Clive, Iowa

9:15AM

Sustainability from an Industry Prospective: Why We Care

Kimberly Stackhouse, Sustainability | JBS USA, Greeley, Colorado

9:40AM

Discussion

TS #319

SUSTAINABLE INTENSIFICATION

Wednesday, July 20 – 7:30AM-10:15AM

Location: Fiesta 8

Sponsored by NRES-01, NRES-26, ASE-16

Moderator: Alan C. Hansen, Manny Reyes

Sustainable Intensification (SI) is a topic receiving global attention, especially by agricultural and biological engineers. The purpose of SI is to increase agricultural productivity and quality, improve human nutrition and provide economic and social benefits, while simultaneously decreasing environmental impacts, labor and human drudgery, and water and energy needs. Such a strategy is of particular importance for developing countries challenged with the need for increased food production subject to limited resources. SI has been applied to a variety of value chains and agricultural production activities. The purpose of this invited session is to highlight the need for SI as well as detailing current and future efforts to address its practical implementation through appropriate strategies in a global context. Speakers with expertise and experience in SI will be invited to participate.

7:30AM

Introduction

7:35AM

Evergreen Agriculture a Sustainably Intensified System

Dennis Garrity, World Agroforestry Centre, Nairobi, Kenya

7:50AM

Conservation Agriculture with Trees a Sustainably Intensified System for Sloping Terrain

Manuel Reyes, North Carolina A&T State University, Greensboro, NC

8:10AM

Sustainably Intensified Vegetable Production System

Don Immanuel Edralin, North Carolina A&T State University, Greensboro, NC

8:25AM

Panel Discussion

ASABE 2016

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8:45AM **The United States Agency for International Development Global Research in Sustainable Intensification**
 Vara Prasad, Kansas State Univ, Manhattan, KS

9:00AM **Appropriate Scale Mechanization Innovation for Sustainable Intensification**
 Alan Hansen, University of Illinois, Urbana, IL

9:15AM **Panel Discussion**

TS #342

ETHICS IN ENGINEERING – VIDEO COMPETITION

Wednesday, July 20 – 7:30AM-10:00AM

Location: Yucatan 2

Sponsored by EOPD-412

Moderator: Scott Mueller

The ASABE EOPD-412 committee invites ASABE preprofessionals and young professionals to participate in the 2016 Professional Engineering Ethics Video Challenge.

In a video of five minutes or less, describe an ethical issue(s) faced by agricultural and biological engineers in practice or research. Winners will receive a travel grant to the 2016 ASABE Annual International Meeting (AIM), where winning videos will be presented at the 2016 Ethics session sponsored by EOPD-412, as case studies for discussion of ethical scenarios.

INTERNATIONAL PREPROFESSIONAL COMMUNITY (IPC) BUSINESS MEETING - PART 2

Wednesday, July 20 – 10:00AM-11:00AM

Location: Coronado A

This is the main event of the International Preprofessional Community at AIM 2016. The current IPC officers will focus on electing new IPC officers. This is also the meeting where the longest mile award will be counted. Come cast your vote and show your support!

TS #325

PROGRAMS OF EXCELLENCE IN AGRICULTURAL SAFETY AND HEALTH – INVITED SPEAKERS

Wednesday, July 20 – 10:30AM-12:15PM

Location: Coronado D

Sponsored by: ESH,

Moderator: Dee Jepsen

Previous winners of ASABE Blue Ribbon Awards, Superior Papers, and Standards Developer Awards with Ergonomics, Safety & Health topics will highlight their work with conference participants.

TS #336

EVERGLADES RESTORATION – INVITED SPEAKERS

Wednesday, July 20 – 10:15AM-12:30PM

Location: Coronado R

Sponsored by: Florida Section, NRES-26, NRES-21, NRES-28

Moderator: Richard Scholtz, Univ of Florida

10:15AM **Introduction**

10:20AM **Florida Agricultural Water Supply and Conservation – Past, Present and Future**
 Camilo Gaitan, P.E., Florida Dept of Agriculture and Consumer Services, Tallahassee, FL

10:35AM **Engineering the Restoration of America's Everglades**
 Tom VanLent, Everglades Foundation, Palmento, FL

10:50AM **Payment for Water Storage and Treatment Services in the Northern Everglades**
 Sanjay Shukla, University of Florida, Immokalee, FL

11:05AM **SFWMD L-8 Flow Equalization Project: Capturing Stormwater Runoff for the Restoration of the Florida Everglades – Part 2**
 David Scott, Jacobs Engineering Group, Palm Beach Gardens, FL

11:20AM **SFWMD L-8 Flow Equalization Project: Capturing Stormwater Runoff for the Restoration of the Florida Everglades – Part 1**
 David Scott, Jacobs Engineering Group, Palm Beach Gardens, FL

11:35AM **Using Quantitative and Qualitative Metrics to Compartmentalize the A.R.M. Loxahatchee National Wildlife Refuge Based on Habitat Suitability**
 Ian Hahus, University of Florida, Gainesville, FL

11:50PM **Phosphorus Treatment from Detection Areas in the Everglades through a Payment for Environmental Services Program**

Asmita Shukla, Southwest Florida Water Management District, Brooksville, FL

12:05PM **Saving the Everglades: The World's Largest Restoration Program**
 Joffre Castro, National Park Service, Ochopee, FL

ASABE 2016

Annual International Meeting

FUNDAMENTALS OF ENGINEERING (FE) INFORMATION SESSION

Wednesday, July 20 – 11:00AM-12:00PM

Location: Fiesta 8

Are you graduating in the next 12 months? Do you feel unprepared to take the FE? If you answered yes to these questions, come to the FE information and review session to learn what is on the exam and how to master it from people who mastered it themselves.

Event #21

ASABE AWARDS LUNCHEON

Wednesday, July 20 – 12:30PM-2:30PM

Location: Coronado H/J

COST: Included with Registration

Additional tickets \$40.00 per person

Pharos of Alexandria Global Learning (*grad student -2016*)

Kathryn Douglass

Yoerger Preprofessional Engineer of the Year

Cassidy Laird

Robert E. Stewart Engineering-Humanities

Paul A. Lengemann

Gale A. Holloway Professional Development

Alicia Modenbach

New Holland Young Researcher

Changying "Charlie" Li

A.W. Farrall Young Educator

Lisa R. Wilken

Sunkist Young Designer

Santosh K. Pitla

John Deere Gold Medal

Michael Dukes

Rain Bird Engineering Concept of the Year -

Wenqiao Yuan, Duo Wang, Donghai Wang, Ajay Kumar

"Char Supported Catalysts for Syngas Cleanup and Conditioning"

James R. and Karen A. Gilley Academic Leadership

Bernard Engel

Evelyn E. Rosentreter Standards

Richard W. Job

PEI Professional Engineer of the Year

Dana Porter

Kishida International

John Lumkes

Sukup Global Security Food Award

Carl Bern

McCormick Case Gold Medal

Charles Sukup

Netafim Microirrigation

Howard A. Wuertz

International Food Engineering

Gustavo V. Barbosa-Canovas

Henry Giese Structures & Environment

Hongwei Xin

ADS/Hancor Soil and Water Engineering

Daren Harmel

G.B. Gunlogson Countryside Engineering

Danny H. Rogers

Mayfield Cotton Engineering

Michael D. Buser

SMV Technologies Ergonomics, Safety and Health

H. Mark Hanna

Advancement of Surface Irrigation

Earl Vories

Heermann Sprinkler Irrigation

Robert von Bernuth

Massey-Ferguson Educational Gold Medal

Raj Raman

Tour #6

BEHIND THE SEEDS

Wednesday, July 20 – 3:30PM-5:30PM

Location: Tour departs from LaMesa Patio

Explore the future of agriculture and get up-close and personal with what happens behind the scenes in this tour at The Land Pavilion. This one-hour walking tour of the fish farm and 4 greenhouses that make up the Land Pavilion at Epcot is perfect for anyone interested in natural sciences and innovations in the science of farming. You will behold gigantic fruits and vegetables and unusual crops from around the world, and depending on timing, may taste some produce or release ladybugs into the greenhouse to help protect the plants. Discover the latest plant-growing techniques, including hydroponics, and take home a handout with some great ideas. Wear comfortable shoes for walking.

COST: \$35.00 Includes roundtrip transportation to Epcot and guided back-of-house tour

Event #22

FLORIDA SECTION OF ASABE 2016 AWARDS AND RECOGNITION RECEPTION

Wednesday, July 20 – 6:30PM-8:30PM

Location: Yucatan

Recognition of ASABE Membership Pin Recipients, Florida Section ASABE Awards and FASABE Officers. Cash bar opens at 6:00PM



Sponsored by
Tru-Flo Pumps Corporation

Florida Section ASABE Awards:

Outstanding Professional Engineer

Distinguished Achievement

Teacher of the Year

Outstanding Service

Outstanding Young Researcher

Outstanding Student

ASABE 2016

Annual International Meeting

THURSDAY, JULY 21

Tour #7

KENNEDY SPACE CENTER

Thursday, July 21 – 9:00AM-4:00PM

Location: Tour departs from LaMesa Patio

Worlds apart from Orlando's theme parks, but just a short drive away, Kennedy Space Center is NASA's launch headquarters. Be among the millions of visitors each year who make the trek to this hub of technology and discovery where many of mankind's greatest accomplishments take place. Tour NASA's launch and landing facilities, experience live shows and jaw-dropping encounters with massive rockets, as well as have the opportunity to meet a member of the NASA Astronaut Corps. At the Visitor Complex, there is much to see and do, from live action theatrical shows to an educational Astronaut Encounter briefing. There are rockets from all eras of space exploration in the Rocket Garden, and you can walk through a full-size Space Shuttle mock-up. See space films on the 5-story IMAX Theater screens, and see an actual Gemini program capsule on display. There is also an opportunity for shopping and getting lunch at the food concessions.

COST: \$130.00 Includes transportation and admission to the Kennedy Space Center, all films at the IMAX Theater and Visitor Complex, exhibits and shows, guide, and return transportation to the hotel.

Tour #8

BIOGAS RECOVERY SYSTEM GENERATING ELECTRICITY FROM COW MANURE

Thursday, July 21 – 8:00AM-6:00PM

Location: Tour departs from LaMesa Patio

This tour will be traveling to the Alliance Grazing Group, Trenton, Florida to view this recovery system.

COST: \$125.00



ASABE Foundation

Fun begins at Sunday's Welcome Reception!

Silent Auction & Pick-a-Prize

Bidding closes Tuesday at 6pm. Items include farm equipment models, a Detroit long board, drill kit, unique works in wood, jewelry, logo items, wine, and more.

Buy your tickets & choose what you want to win!



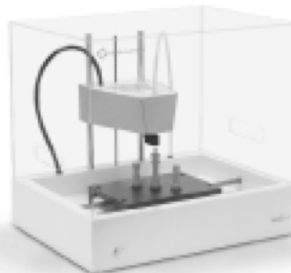
Disney \$250 Gift Card

drawing Monday @ 5:55pm



Kids Fire Tablet

drawing Monday @ 5:55pm



MOD-t 3D Printer

drawing Tuesday @ 5:55pm



iPad Air 2

drawing Tuesday @ 5:55pm

Come visit us in the Foundation area of the Exhibit Hall!

All proceeds support the KEYS Fund!

TICKETS SOLD during WELCOME RECEPTION & in EXHIBIT HALL until FINAL DRAWING

COMMITTEES TO CONVENE

Updated: June 30, 2016

These committees are scheduled to meet in conjunction with the 2016 ASABE Annual International Meeting. An (asterisk (*)) by a specific committee indicates that the committee is meeting in closed session. Interested persons are welcome to all other committee meetings. Meetings will be held at the Coronado Springs Resort Convention Center in Orlando, Florida. Committees are listed by day, time and then room.

EXECUTIVE

ASABE Board of Trustees

Sunday, 10:30AM-1:30PM – Coronado F/G

Thursday, 10:30AM-3:00PM – Yucatan 1/2

ASABE Foundation Board of Trustees

Tuesday, 2:00PM-5:00PM – Fiesta 5

ASABE Foundation Orientation

Monday, 11:30AM-1:00PM – Fiesta 4

E-02 Constitution and Bylaws

NOT MEETING

E-05 Marketing and External Communications

Wednesday, 2:30PM-5:00PM – Fiesta 3

E-05/1 E-Week Coordinating Committee

Tuesday, 12:15PM-2:15PM – Coronado A

E-05/2 FFA Coordinating Committee

Tuesday, 12:15PM-2:15PM – Coronado A

E-05/3 Giving Back Fund

NOT MEETING

E-07 Issues Management & Social Action

Monday, July 18 – 6:30AM-8:00AM – Coronado B

E-08 Fellows

Monday, July 18 – 12:15PM-2:15PM – Coronado N

E-20 Finance

Sunday, 9:00AM-10:00AM – Coronado C

Nominating Committee

Monday, 12:15PM-2:15PM – Coronado R

Wednesday, 9:00AM-12:00PM – Baja

MEETINGS COUNCIL

Sunday, 1:30PM-3:30PM – Coronado D

Thursday, July 21 – 7:00AM-9:00AM – Fiesta 7

MEMBERSHIP DEVELOPMENT COUNCIL

Sunday, 1:30PM-3:30PM – Coronado A

Thursday, 8:00AM-10:00AM – Fiesta 10

M-102 Awards Coordinating

Tuesday, 8:00AM-9:15AM – Coronado E

M-111 John Deere/McCormick-Case Gold Medal

TBA

M-112 Massey-Ferguson Gold Medal

TBA

M-113 Engineering Concept of the Year

TBA

M-114 Young Researcher (New Holland)

TBA

M-115 Young Educator (A.W. Farrall)

NOT MEETING

M-116 Young Designer (Sunkist)

NOT MEETING

M-117 Larry W. Turner Young Extension Professional

TBA

M-122 Stewart Engineering Humanities

TBA

M-130 Sukup Global Food Security Award

NOT MEETING

M-131 Fellows Screening

TBA

M-151 Henry Giese ASABE Structures & Environment

TBA

M-152 ADS/Hancor Soil & Water Engineering

TBA

M-154 International Food Engineering Award

NOT MEETING

M-155 Gunlogson Countryside Engineering

NOT MEETING

M-156 Kishida International

Monday, 5:15PM-7:00PM – Coronado E

M-157 SMV Technologies Ergonomics, Safety and Health

TBA

M-158 Mayfield Cotton Engineering

TBA

M-159 Award for the Advancement of Surface Irrigation

TBA

M-160 Evelyn E. Rosentreter Standards Award

NOT MEETING

M-161 PEI Professional Engineer of the Year

NOT MEETING

M-162 Heermann Sprinkler Irrigation Award

TBA

M-163 Gale A. Holloway Professional Development Award

NOT MEETING

M-164 Yoerger Preprofessional Engineer of the Year Award

TBA

M-165 Pharos of Alexandria Global Learning Award

TBA

M-166 James R. and Karen A. Gilley Academic Leadership Award

TBA

M-167 Netafim Award for the Advancements in Microirrigation

TBA

M-170 Historic Commemoration

Monday, 12:15PM-2:15PM – Fiesta 9

INTERNATIONAL

E-2050 /INTL-601,602,603,604 International Commission

Monday, 12:15PM-2:15PM – Coronado G

SECTION STEERING COMMITTEE

MDC-S02 Section Steering

Monday, 12:15PM-2:15PM – Fiesta 10

STUDENT ORGANIZATIONS AND AWARDS

P-120 Student Organizations

Tuesday, 8:00AM-9:15AM – Coronado C

P-121 G.B. Gunlogson Student Environmental Design Competition

Monday, 7:00pm-9:00pm – Coronado A

P-122 Boyd-Scott Graduate Research Award

TBA

P-123 Student Paper Competition (K.K. Barnes)

Tuesday, 7:30AM-8:00AM – Coronado D

P-124 AGCO National Student Design Competition

Tuesday, 7:00AM-8:00AM – Coronado C

P-125 AEM Student Trophies Competition

TBA

P-126 1/4 Scale Tractor Design Competition

TBA

P-127 Robotics Student Design Competition

Tuesday, 5:15PM-7:00PM – Coronado G

PUBLICATIONS COUNCIL

Sunday, 1:30PM-4:30PM – Coronado C

Thursday, 8:00AM-10:00AM – Fiesta 9

P-511 Refereed Publications

Monday, July 18 – 6:00PM-8:30PM – Coronado D

P-513 Resource Editorial Board

Tuesday, July 19 – 1:00PM-2:30PM – Coronado C

P-515 Textbooks and Monographs

Tuesday, July 19 – 8:00AM-10:00AM – Coronado F

STANDARDS & TECHNICAL COUNCIL

Sunday, 1:30PM-3:30PM – Coronado B

Thursday, 8:00AM-10:00AM – Fiesta 9

STC-01 Standards Policy & Procedures

Wednesday, 4:30PM-6:30PM – Fiesta 1

STC-02 International Standardization

Monday, 5:00PM-6:00PM – Fiesta 1

APPLIED SCIENCE & ENGINEERING

ASE-01 Executive / ASE-08

Tuesday, 5:15PM-7:00PM – Fiesta 7

ASE-05 Biological Engineering Transactions

NOT MEETING

ASE-09 Environmental Quality Coordinating

TBA

ASE-12 Forest Engineering

Tuesday, 5:15PM-7:00PM – Fiesta 8

ASE-16 Engineering for Sustainability

Tuesday, 4:30PM-6:30PM – Fiesta 2

EDUCATION, OUTREACH & PROFESSIONAL DEVELOPMENT

EOPD-01 Executive/Steering

Tuesday, July 19 – 12:15PM-2:15PM – Coronado D

EOPD-04 Referred Publications Review and Paper Awards

TBA

EOPD-203 Undergraduate & Graduate Instruction

Tuesday, 5:15PM-7:00PM – Coronado E

EOPD-204 Engineering & Technology Accreditation

Tuesday, July 19 – 8:00AM-9:15AM – Coronado P

EOPD-205 Engineering Technology & Management Education

Monday, July 18 – 12:15PM-2:15PM – Coronado M

EOPD-206 Agr Tech & Mgmt Curriculum Review & Program Recog

Monday, July 18 – 12:15PM-2:15PM – Coronado M

EOPD-208 Extension

Tuesday, July 19 – 8:00AM-9:15AM – Coronado Q

EOPD-210 Department Heads

Tuesday, 5:15PM-7:00PM – Coronado A

EOPD-210/1 Steering

NOT MEETING

EOPD-211 Undergraduate Engineering Prgm & Instructional Chairs

TBA

EOPD-412 Professional Ethics

Wednesday, July 20 – 10:30AM-12:00PM-Fiesta 7

EOPD-414 Engineering Licensure

Monday, 12:15PM-2:15PM – Coronado D

EOPD-416 Continuing Professional Development

TBA

ENERGY SYSTEMS

ES-02 Steering

NOT MEETING

ES-03 Energy Systems Standards Oversight

Monday, July 18 – 5:15PM-7:00PM – Coronado G

ES-04 Publications Review

TBA

ES-100 Energy Systems General Body

Monday, 6:15PM-7:30PM – Coronado C

ES-210 Renewable Power Generation

Tuesday, 5:15PM-7:00PM – Coronado C

ES-220 Biomass Energy & Industrial Byproducts

Tuesday, 7:00AM-8:00AM – Fiesta 3

ES-238 Solid Biofuels and US TAG for ISO TC 238

NOT MEETING

ES-238/2 Thermally Treated Solid Biofuels

NOT MEETING

ES-300 Electrical Utilization & Energy Application

Monday, 12:15PM-2:15PM – Coronado C

ES-310 Ag Lighting Group

Thursday, July 21 – 7:30AM-9:00AM – Fiesta 4

ES-311 Plant Growth LED Lighting

Thursday, 9:00AM-5:00PM – Fiesta 4

ES-311/3 Performance

TBA

ES-320 Electric Fence Controlle

TBA

ES-330 Fan Testing

TBA

ES-340 Standby Electric Power

TBA

ES-400 Electrical Code for Agriculture

NOT MEETING

ERGONOMICS, SAFETY & HEALTH

ESH-01 Executive / Oversight

Wednesday, 2:45PM-4:30PM – Fiesta 2

ESH-02 Policy and Forward Planning

TBA

ESH-03 Standards

Tuesday, 6:30PM-8:00PM – Fiesta 1

ESH-03/1 External Standard Development

Tuesday, 6:30PM-8:00PM – Fiesta 1

ESH-03/2 Internal Standard Development

Tuesday, 6:30PM-8:00PM – Fiesta 1

ESH-04 Technology Exchange

Tuesday, 8:00AM-9:15AM – Coronado D

ESH-04/1 Journal of Agricultural Safety and Health

Tuesday, 8:00AM-9:15AM – Coronado D

ESH-04/2 Farmers With Disabilities Technology Exchange

Tuesday, 8:00AM-9:15AM – Coronado D

ESH-05 Nominations

TBA

INFORMATION TECHNOLOGY, SENSORS & CONTROL SYSTEMS

ITSC-01 Executive

Sunday, 3:30PM-5:30PM – Fiesta 3

ITSC-02 Steering

Wednesday, 2:45PM-5:00PM – Coronado D

ITSC-04 Publications Review and Paper Awards

Tuesday, 7:00AM-8:00AM – Coronado G

ITSC-06 Programs

TBA

ITSC-07 Forward Planning & Structure

TBA

ITSC-217 Computational Methods, Simulations & Applications

Tuesday, 5:15PM-7:00PM – Coronado D

ITSC-230 Biosensors

Tuesday, 8:00AM-9:15AM – Coronado G

ITSC-254 Emerging Information Systems

Tuesday, 12:15PM-2:15PM – Coronado G

ITSC-312 Machine Vision

Tuesday, 8:00AM-9:15AM – Coronado M

ITSC-318 Mechatronics & Biorobotics

Tuesday, 7:00PM-9:00PM – Coronado B

ITSC-348 Electromagnetics & Spectroscopy

TBA

ITSC-353 Instrumentation & Controls

TBA

MACHINERY SYSTEMS

MS-01 Executive /MS-02 Steering

Sunday, 6:00PM-8:00PM – Coronado B

Wednesday, 7:00AM-8:00AM – Fiesta 2

MS-03 Machine Systems Standards Oversight

Wednesday, 8:00PM-10:00PM – Fiesta 1

MS-03/2 Farm Materials Handling and Transport

Tuesday, 5:15PM-7:00PM – Fiesta 5

MS-04 Publications Review

Tuesday, 7:00AM-8:00AM – Fiesta 7

MS-05 Nominating

TBA

MS-23 & US TAG ISO/TC23

Wednesday, 6:30PM-8:00PM – Fiesta 1

MS-23/14 Ag Mach. – Sym., Disp & Man & US TAG ISO TC23/SC14

Monday, 7:00AM-8:00AM – Fiesta 1

MS-23/19 Ag Electronics & US TAG ISO TC23/SC19

Tuesday, 2:30PM-4:30PM – Fiesta 1

MS-23/19/1 Electronics for Mobile Equipment (ISOBUS)

Tuesday, 2:30PM-4:30PM – Fiesta 1

MS-23/19/3 Electronics for Identification (Animal)

Tuesday, 2:30PM-4:30PM – Fiesta 1

MS-23/19/5 Standards for Wireless Communications in Agr.

Tuesday, 2:30PM-4:30PM – Fiesta 1

MS-23/2 Ag Mach. – Common Tests & US TAG ISO TC23/SC2

Monday, 1:00PM-3:00PM – Fiesta 2

MS-23/2/1 Environment Within Ag Vehicle Enclosures

NOT MEETING

MS-23/2/2 ATSC ROPS Subcommittee

Monday, 10:00AM-11:00AM – Fiesta 1

MS-23/3 Ag Mach. – Operator Comfort & US TAG ISO TC23/SC3

Tuesday, 10:30AM-12:00PM – Fiesta 1

MS-23/3/1 Implement Jacks

NOT MEETING

MS-23/4 Tractors and US TAG ISO TC23/SC4

Wednesday, 9:30AM-12:00PM – Fiesta 1

MS-23/4/1 Agricultural Equipment Braking

Tuesday, 2:30PM-4:30PM – Fiesta 2

MS-23/4/2 Agricultural Loaders

NOT MEETING

MS-23/4/3 Lighting & Marking

Monday, 3:00PM-5:00PM – Fiesta 2

MS-23/4/4 Tractor & Implement Hydraulics

Tuesday, 7:00AM-8:00AM – Fiesta 1

MS-23/4/5 Tractor Implement Interface/PTO

Tuesday, 8:00AM-10:00AM – Fiesta 1

MS-23/6 Application Sys & US TAG ISO TC23/SC6

Monday, 5:30PM-7:30PM – Fiesta 2

MS-23/6 Application Sys – WG18

Tuesday, 12:30PM-2:30PM – Fiesta 1

MS-23/6/1 Liquid Materials Application

Monday, 7:30PM-9:00PM – Fiesta 2

MS-23/6/2 Aviation

Tuesday, 5:15PM-7:00PM – Coronado F

MS-23/6/3 Dry Materials

NOT MEETING

MS-23/6/4 Spray Application Modeling

Monday, 12:15PM-2:15PM – Fiesta 1

MS-23/7 Harvest and US TAG ISO TC23/SC7

Wednesday, 8:00AM-9:30AM – Fiesta 1

MS-23/7/1 Grain Harvesting
NOT MEETING

MS-23/7/2 Forage & Biomass Engineering
Tuesday, 4:30PM-6:30PM – Fiesta 1

MS-23/7/3 Cotton Engineering
Wednesday, 9:00AM-10:00AM – Yucatan 3

MS-45 Soil-Plant-Machine Dynamics
Monday, 5:15PM-7:00PM – Coronado F

MS-47 Distinguished Lecture Series
TBA

MS-48 Specialty Crop Engineering
TBA

MS-49 Crop Production Systems, Machinery, and Logistics
Monday, 5:15PM-7:00PM – Coronado M

MS-52 Turf & Landscape Equipment Systems
Tuesday, 1:30PM-2:30PM – Fiesta 2

MS-54 Precision Agriculture
Tuesday, 8:00AM-10:00AM – Fiesta 2

MS-58 Agricultural Equipment Automation
Tuesday, 6:30PM-8:00PM – Fiesta 2

MS-60 Unmanned Aerial Systems
Tuesday, 7:00PM-9:00PM – Fiesta 4

NATURAL RESOURCES & ENVIRONMENTAL SYSTEMS

NRES-01 Executive
Sunday, 3:30PM-5:30PM – Coronado A

NRES-02 Steering
Wednesday, 2:45PM-5:00PM – Coronado B

NRES-03 Natural Resources & Environmental Systems Standards Oversight
Wednesday, 6:00AM-7:30AM – Coronado Q

NRES-03/2 US TAG ISO TC23/SC18
Tuesday, 7:00AM-8:00AM – Coronado Q

NRES-04 Program
Sunday, 3:30PM-5:30PM – Coronado A

NRES-05 Publications Review
Monday, 6:30AM-7:30AM – Fiesta 7

NRES-06 Paper Awards
Not Meeting

NRES-07 Nomenclature
NOT MEETING

NRES-09 Forward Planning
Sunday, 3:30PM-5:30PM – Coronado A

NRES-21 Hydrology Group
Tuesday, 8:00AM-9:15AM – Coronado N

NRES-22 Erosion Control Group
Tuesday, 12:15PM-2:15PM – Coronado N

NRES-223 Erosion Control Research
Tuesday, 12:15PM-2:15PM – Coronado N

NRES-224 Pollution by Sediment
Tuesday, 12:15PM-2:15PM – Coronado N

NRES-225 Conservation Systems
Tuesday, 12:15PM-2:15PM – Coronado N

NRES-23 Drainage Group
Tuesday, 5:15PM-7:00PM – Coronado S

NRES-24 Irrigation Group
Tuesday, 5:15PM-7:00PM – Fiesta 9

NRES-241 Sprinkler Irrigation
Tuesday, 5:15PM-7:00PM – Fiesta 9

NRES-242 Surface Irrigation & Water Supply
Tuesday, 5:15PM-7:00PM – Fiesta 9

NRES-244 Irrigation Management
Tuesday, 5:15PM-7:00PM – Fiesta 9

NRES-245 Microirrigation
Tuesday, 5:15PM-7:00PM – Fiesta 9

NRES-246 Turf & Landscape Irrigation
Tuesday, 5:15PM-7:00PM – Fiesta 9

NRES-25 Streams, Reservoirs, and Wetlands Group
Tuesday, 5:15PM-7:00PM – Coronado P

NRES-251 Hydraulic Structures
Tuesday, 5:15PM-7:00PM – Coronado P

NRES-252 Geomorphology, Streambank Stability & In-Stream Processes
Tuesday, 5:15PM-7:00PM – Coronado P

NRES-253 Riparian Zones, Floodplains, and Wetlands
Tuesday, 5:15PM-7:00PM – Coronado P

NRES-26 Sustainable Land Resources
Monday, 5:15PM-7:00PM – Fiesta 7

NRES-262 Home Sewage Disposal
TBA

NRES-265 Soil and Groundwater Remediation
TBA

NRES-27 Agricultural Byproducts & Animal Mortality Mgmt
Tuesday, 12:15PM-2:15PM – Coronado Q

NRES-28, Ecological Engineering
Tuesday, 7:00AM-8:00AM – Coronado N

PLANT, ANIMAL AND FACILITY SYSTEMS

PAFS-01 Executive
TBA

PAFS-02 Steering
Wednesday, 3:00PM-5:00PM – Coronado A

PAFS-03 Standards Oversight
Tuesday, 7:00PM-9:00PM – Fiesta 3

PAFS-04 Paper Awards
NOT MEETING

PAFS-05 Publications Review
TBA

PAFS-06 Program
TBA

PAFS-07/1 Agri-Industrial Facility Design and Operation
TBA

PAFS-20 Structures Group
Tuesday, 5:15PM-7:00PM – Fiesta 3

PAFS-20/4 Bulk Solids Handling and Storage
Monday, 5:15PM-7:00PM – Fiesta 4

PAFS-234 Fisheries & Aquaculture
TBA

PAFS-30 Plant Systems Group
TBA

PAFS-40 Facilities & Systems Group
Monday, 5:15PM-7:00PM – Fiesta 10

PAFS-403/1 Milk Handling Equipment
Tuesday, 12:30PM-2:15PM – Fiesta 3

PAFS-50 Environmental Air Quality
Tuesday, 8:00AM-9:15AM – Fiesta 3

PROCESSING SYSTEMS

PRS-01 Executive & Steering
Sunday, 3:30PM-5:30PM – Fiesta 2

Wednesday, 2:30PM-5:00PM –
Coronado C

PRS Community Meeting

Monday, 12:15PM-2:15PM – Fi-
esta 6

PRS-02/2 Nominating

Monday, 12:15PM-2:15PM – Fi-
esta 6

PRS-03 Processing Systems Stan- dards Oversight

Monday, 5:15PM-7:00PM – Yu-
catan 1

PRS-04 Publications

Monday, 7:00AM-8:00AM – Fiesta
9

PRS-06 General Program

Monday, 12:15PM-2:15PM – Fi-
esta 6

PRS-280 Bioconversion and Bio- processes

Monday, 12:15PM-2:15PM – Fi-
esta 6

PRS-293 US TAG for ISO TC 293 Feed Machinery –

TBA

PRS-701 Physical Properties of Ag & Biological Products

Monday, 12:15PM-2:15PM – Fi-
esta 6

PRS-702 Crop & Feed Processing & Storage

Tuesday, 12:15PM-2:15PM – Fi-
esta 6

PRS-703 Food Processing

Monday, 12:15PM-2:15PM – Fi-
esta 8

PRS-707 Food & Organic Waste Management & Utilization

Tuesday, 7:00AM-8:00AM – Yu-
catan 1

PROFESSIONAL ENGINEERING INSTITUTE

PEI Professional Engineers Institute

Monday, 12:15PM-2:15PM –
Coronado D

OTHER COMMITTEES

ABET Program Evaluation (PEV) In- troduction

Wednesday, 9:00AM-10:00AM –
Yucatan 2

ABET Refresher for PEVs and De- partment

Wednesday, 10:00AM-11:00AM –
Yucatan 2

ABET Program Administrators

Wednesday, 11:00AM-12:00AM –
Yucatan 2

Foundation Development Commit- tee

Monday, 5:15PM-7:00PM – Coro-
nado N

ISO WG 13

Monday, 9:30AM-2:00PM – Fiesta
3

Global Food Security Conference Coordinating Committee

Saturday, 7:00PM-9:00PM – Fi-
esta 1

NRCS

Sunday, 5:30PM-6:30PM – Coron-
ado A

Past Presidents Roundtable

Monday, 2:30PM-3:30PM – Baja

PRS Revitalization Task Force

Tuesday, 8:00AM-9:15AM – Yu-
catan 2

Quarter Scale Tractor

Tuesday, 12:30PM-2:30PM –
Yucatan 3

Water Security Conference Plan- ning Meeting

Tuesday, 6:30PM-8:00PM – Coro-
nado T

Young Professionals Community

Tuesday, 5:15PM-7:00PM – Yu-
catan 2



ASABE Foundation

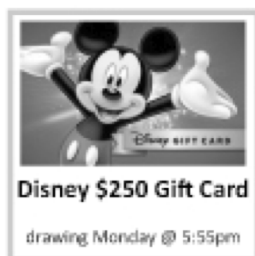
Silent Auction &

Pick-a-Prize

Bidding closes Tuesday at 6pm. Items include farm equip-
ment models, a Detroit long board, drill kit, unique works
in wood, jewelry, logo items, wine, and more.

Fun begins at Sunday's Welcome Reception!

Buy your tickets & choose what you want to win!



Disney \$250 Gift Card

drawing Monday @ 5:55pm



Kids Fire Tablet

drawing Monday @ 5:55pm



MOD-t 3D Printer

drawing Tuesday @ 5:55pm



iPad Air 2

drawing Tuesday @ 5:55pm

Come visit us in the Foundation area of the Exhibit Hall!

All proceeds support the KEYS Fund!

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