CONTINUING PROFESSIONAL DEVELOPMENT:

SUNDAY, JULY 29
CPD #4 Graduate Student Involvement
10:00AM-12:00PM – CANCELLED

TECHNICAL SESSIONS:

MONDAY, JULY 30

SESSION #109

<table>
<thead>
<tr>
<th>Time</th>
<th>Paper #</th>
<th>Title/Author</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:45AM</td>
<td>1800400</td>
<td>FAA 14 CFR Part 107 for Commercial UAS and UAS as Agriculture Field Equipment: A Review for Agriculture Safety Standards</td>
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<tr>
<td></td>
<td></td>
<td>Charles Collins, North Carolina State University, Raleigh, NC United States (Presenter: Charles Collins) (Gary Robertson, Scott Hale)</td>
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<tr>
<td>11:00AM</td>
<td>1801343</td>
<td>Improving Safety and Health in the Cattle Feed yard Industry</td>
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<td>Aaron Yoder, University of Nebraska, Omaha, NE United States (Presenter: Aaron Yoder) (Daniel Kent)</td>
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<tr>
<td>11:15AM</td>
<td>1801430</td>
<td>Evaluating the Effect of Friction and Speed on Foldable Roll-Over Protective Structure Actuation Forces</td>
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<td>Farzaneh Khorsandi, University of California, Davis, CA United States (Presenter: Farzaneh Khorsandi) (Farzaneh Khorsandi, Paul Ayers)</td>
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SESSION #110

<table>
<thead>
<tr>
<th>Time</th>
<th>Paper #</th>
<th>Title/Author</th>
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<tbody>
<tr>
<td>10:15AM</td>
<td></td>
<td>Renewable Energy Sustainability and Safety Indicators for Selected Greenhouse Production Facilities in North America</td>
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<td>Jaime Thissen, University of Illinois Urbana-Champaign, Urbana, Illinois</td>
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<tr>
<td>11:05AM</td>
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<td>Integration of Solar Energy for Thermochemical Conversion Processes</td>
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<td>Sushil Adhikari, Auburn University, Auburn, AL</td>
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<td>11:25AM</td>
<td></td>
<td>Photovoltaic Systems on Dairy Farms: An Economic Analysis</td>
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<td>Michael Breen, Cork Institute of Technology, Cork, Ireland</td>
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SESSION #113

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<thead>
<tr>
<th>Time</th>
<th>Paper #</th>
<th>Title/Author</th>
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<tbody>
<tr>
<td>11:45AM</td>
<td>1801718</td>
<td>Handheld Phenotyping Device</td>
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<td></td>
<td></td>
<td>Zhihang Song, Purdue University, West Lafayette, IN United States (Presenter: Zhihang Song) (Liangju Wang, Jian Jin, Zhihang Song, Jialei Wang, Dongdong Ma, Libo Zhang, Tanzeeel Rehman)</td>
</tr>
</tbody>
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SESSION #114

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<thead>
<tr>
<th>Time</th>
<th>Paper #</th>
<th>Title/Author</th>
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</thead>
<tbody>
<tr>
<td>11:45AM</td>
<td>1800316</td>
<td>Cat face recognition using deep learning</td>
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<tr>
<td></td>
<td></td>
<td>Tzu-Yuan Lin (Presenter: Tzu-Yuan Lin) Tzu-Yuan Lin, Yan-Fu Kao</td>
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</tbody>
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SESSION #115

<table>
<thead>
<tr>
<th>Time</th>
<th>Paper #</th>
<th>Title/Author</th>
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<tbody>
<tr>
<td>11:15AM</td>
<td>1800985</td>
<td>Design of a Non-Destructive Forage Biomass Estimation Robot</td>
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<td>WITHDRAWN</td>
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</tbody>
</table>
SESSION #118  
LOCATION: 331B

SESSION #119  
AUTONOMOUS VEHICLES AND SYSTEMS – PART 1  
- Sponsored by MS-58, ITSC-318, ITSC-353  
Moderator: Ning Wang, Oklahoma State University, Stillwater, OK

SESSION #130  
FOOD PROCESS AND ENGINEERING – PART 1  
- Sponsored by PRS-703, PRS-701  
Moderator: Akinbode Adedeji, University of Kentucky, Lexington, KY; Felix Akharume, University of Kentucky, Lexington, KY

SESSION #131  
FOOD SAFETY ENGINEERING – PART 1  
- Sponsored by PRS-703  
Moderator: Griffiths Atungulu, University of Arkansas, Fayetteville, AR; Stephen Walker, US Food and Drug Administration, Bedford Park, IL

SESSION #143  
Time  | Paper #  | Title/Author  
--- | --- | ---  
2:35PM  | 1801719 | CANCELLED

SESSION #145  
Time  | Paper #  | Title/Author  
--- | --- | ---  
3:05PM  | 1801877 | Trends and Developments for Connected Machines  
Peter Van der Vlugt, AEF/Kvernland Group, Nieuw-Vennep, NH Netherlands (Presenter: Peter Van der Vlugt) (Peter Schlingmann)

3:35PM  | 1801182 | Using probabilistic risk assessment to quantify equipment reliability for short rotation woody crops  
Magan Shedden, Oak Ridge Associated Univ, Oak Ridge, Tennessee United States (Presenter: Megan Shedden).

3:50PM | BREAK |

4:00PM  | 1800857 | In-Field Harvest Logistics Modeling for Single Combine/Grain Cart Operations  
John Evans, University of Nebraska, Lincoln, Nebraska United States (Presenter: John Evans) (John Evans, Santosh Pitla, Joe Luck)

4:15PM  | 1800821 | Development of working mode for an agricultural tractor during baler operation  
Wansoon Kim, Chungnam National University, Daejeon, Korea, South (Presenter: Wan-Soo Kim) (Yong-Joo Kim, Dae-Hyun Lee, Seung-Yun Baek, Sun-Ok Chung, Chang-Hyun, Choi)

4:30PM  | 1800037 | Impact of raking and baling patterns on alfalfa hay dry matter and quality losses  
Khalid Al-Gaadi, King Saud Universit, Riyadh, Saudi Arabia (Presenter: Khalid Al-Gaadi)

4:45PM  | 1800501 | Turning structures and driving strategies of different fields  
Heinz Bernhardt, Technical University of Munich, Freising, Bavaria Germany (Presenter: Heinz Bernhardt (Julian Bartenschlager, Mathias Stettmer, Michael Mederle)

SESSION #150  
Time  | Paper #  | Title/Author  
--- | --- | ---  
4:15PM  | 1801828 | How does the source of baseflow impact nitrate concentrations in four small tributary catchments to the Wabash River, Indiana?  
Marty Frisbee, Purdue University, West Lafayette, Indiana United States (Presenter: Marty D. Frisbee)

4:45PM  | 1801829 | Isotope tracers of pore water geochemistry variability across a backwater wetland-a case study from the Fourpole Creek Watershed, Huntingdon, WV  
Andrea Erhardt, University of Kentucky, Lexington, Kentucky United States (Presenter: Andrea M. Erhardt) (Holly Young, William I Ford, Ill)

SESSION #151  
EROSION MECHANICS AND PREDICTION  
- Sponsored by NRES-223, NRES-22  
Moderators: Dennis Flanagan, USDA-Agricultural Research Service, West Lafayette, IN; Celso Castro-Bollinaga, North Carolina State University, Raleigh, NC

SESSION #154  
Time  | Paper #  | Title/Author  
--- | --- | ---  
3:45PM  | 1801114 | Presenter: Duminda Vidana Gamage
SESSION #158

Time         Paper # Title/Author
3:20PM        1801792 Modeling Watershed-Scale impact on Low Impact Development on Water Table Depth and Baseflow-WITHDRAWN

SESSION #159

Poster #         Paper # Title/Author
37      1800145 Presenter: Vijaya Raghavan
41      1800146 Presenter: Vijaya Raghavan
112      1801277 Evaluating controlled drainage flow and nutrient load reduction in Michigan

Ehsan Ghane, Michigan State University, East Lansing, MI United States. (Presenter: Ehsan Ghane) (Ehsan Ghane, Jason Piwarski, Sami Shokrana) PLEASE NOTE: Author notified headquarters that this was to be a poster presentation on May 24. In error, this presentation was incorrectly posted into Session 257 which is an oral presentation.

SESSION #165

FOOD PROCESS AND ENGINEERING – PART 2 - Sponsored by PRS-703, PRS-701
Moderator: Stephen Walker, U.S. Food and Drug Administration, Bedford Park, IL; Francis Agabali, University of Kentucky, Lexington, KY

SESSION #166

Time         Paper # Title/Author
5:00PM      1800701 Quality of Powdered infant formula milk by radio frequency versus hot water treatments
(Presenter: Yawen Lin)

TUESDAY, JULY 31

SESSION #205

9:30AM   Session CANCELLED. All speakers duplicated in Session 110 on Monday, July 30 – 9:30AM

SESSION #206

Time         Paper # Title/Author
11:15AM     1801106 CANCELLED

SESSION #210

Time         Paper # Title/Author
11:45AM     1801328 Sunflower head, disc, and ray florets dimensions measurement using image processing

SESSION #215

Time         Paper # Title/Author
11:30AM     1800311 Integration and Interaction of Canopy and Mechanical Parameters for Vibratory Harvesting of Apple Trees
Xin Zhang, Washington State University, Prosser, Washington United States (Presenter: Xin Zhang) (Xin Zhang, Long He, Yaqoob Majeed, Longsheng Fu, Manoj Karkee, Matthew D. Whiting, Qin Zhang)

11:45AM     1801610 Overview of Digital Technologies Offerings for North American Soybean Producers
John Fulton, Ohio State University, Columbus, Ohio United States (Presenter: Jenna Lee) (Jenna Lee, John Fulton, Kaylee Port, Richard Colley III, Joe Luck, Matthew Darr, Scott Shearer)

12:00PM     1801209 Harvesting front analysis for sugarcane yield mapping using GPS
Md Abdul Momin, Bangladesh Agricultural University, Mymensingh, Bangladesh (Presenter: Md Abdul Momin) (Md Abdul Momin, Tony Grift, Alan Hansen)

SESSION #222

Time         Paper # Title/Author
11:00AM     18012145 CANCELLED
### SESSION #231
**Time** 11:15AM  
**Paper #** 1800895  
**Title/Author** Heat and Moisture Production of Heavy Broilers: A Chamber Study  
Lingjuan Li, North Carolina State University, Raleigh, NC (Presenter: Lingjuan Wang Li) (Yan Qian, Bin Cheng, Yijia Zhao, Xiuguo Zou, Derek West, Sherry Liu, Lingjuan Wang-Li, Hernan Cordova, Viviana San Martin Diaz, Edgar Oviedo)

### SESSION #241
**Time** 3:05PM  
**Paper #** 1800196  
**Title/Author** Presenter: Junhee Kim

### SESSION #244
**Time** 2:50PM  
**Paper #** 1801426  
**Title/Author** CANCELLED

### SESSION #252
**Time** 2:50PM  
**Paper #** 1801823  
**Title/Author** A Novel GSA-MCDA Model Optimization Framework for Environmental Data  
Kathleen Vazquez, University of Florida, Gainesville, Florida United States (Presenter Kathleen Vazquez)

### SESSION #254
**Time** 3:05PM  
**Paper #** 1801277  
**Title/Author** Evaluating the nitrate and phosphorus remal efficiency of a saturated buffer in Michigan  
MOVED to NRES Poster session. Poster 112  
Due to miscommunication received at ASABE headquarters, this presentation was moved to an oral presentation. This is no fault of the author Ehsan Ghane who informed us that 1801277 was to be a poster presentation. It is now included in the NRES Poster Session

### SESSION #255
**Time** 2:35PM  
**Paper #** 1801426  
**Title/Author** Presenter: Cyrus Belenky, North Carolina State Univ., Raleigh, NC

### SESSION #257
**Time** 3:05PM  
**Paper #** 1801277  
**Title/Author** Evaluating the nitrate and phosphorus remal efficiency of a saturated buffer in Michigan  
MOVED to NRES Poster session. Poster 112  
Due to miscommunication received at ASABE headquarters, this presentation was moved to an oral presentation. This is no fault of the author Ehsan Ghane who informed us that 1801277 was to be a poster presentation. It is now included in the NRES Poster Session

### SESSION #259
**Time** 4:45PM  
**Paper #** 1801720  
**Title/Author** CANCELLED  
Compact Bed Plasticulture: A Novel Adaption Strategy to Unvertain Environmental and Market Forces  
Kira Hansen, University of Florida, Immokalee, FL United States (Presenter: Kira Hansen) (Kira Hansen, Sanjay Shukla, Nathan Holt, Rajendra Sishodia, Gregory Hendricks)

### SESSION #267
**LOCATION**: 355

### WEDNESDAY, AUGUST 1

#### SESSION #305
**Title/Author** RENEWABLE ENERGY RESOURCES AND TECHNOLOGIES – PART 2  
Moderators: Sarah Wu, University of Idaho, Moscow, ID; Hongjian Lin, University of Minnesota, St. Paul, MN

#### SESSION #311
**Time** 7:35AM  
**Paper #** 1801074  
**Title/Author** CANCELLED
SESSION #328  FOOD PROCESS AND ENGINEERING – PART 3  - Sponsored by PRS-703, PRS-701
Moderator: Lamin Kassama, Alabama A&M University, Normal, AL; Kaushik Luthra, University of Arkansas, Fayetteville, AR

SESSION #334  APPS IN AGRICULTURAL APPLICATIONS  - Sponsored by ITSC-254, ITSC-217, MS-54
Moderator: Sam Noel, Purdue University, West Lafayette, IN

SESSION #340  AUTOMATED AGRICULTURAL FIELD MACHINERY DATA COLLECTION, ANALYSIS, AND UTILIZATION  - Sponsored by MS-58, ITSC-254, ITSC-353, MS-54
Moderator: Tom Burks, University of Florida, Gainesville, VA

SESSION #346

Time         Paper #  Title/Author
12:05AM     1801676  A partial nitrogen (N) budget: inputs and potential outputs from corn fields in Florida sandy soils
Maria Zamora, University of Florida, Gainesville, FL (Presenter: Maria Zamora) (Maria Zamora, Michael Dukes, Sagarika Rath)

SESSION #351

Time         Paper #  Title/Author
11:35AM     1801236  Integration of data and advanced technologies to improve center pivot irrigation management
Lijia (Justin) Sun, Texas A&M University, Lubbock, Texas (Presenting Author: Lijia (Justin) Sun)
Dana Porter, Thomas Marek, Lijia (Justin) Sun, Yanxiang Yang, Jiang Hu, Kevin Heflin

SESSION #354  FOOD PROCESS AND ENGINEERING – PART 4  - Sponsored by PRS-703, PRS-701
Moderator: Phares Okelo, Center for Veterinary Medicine, FDA; Lamin S Kassama, Alabama A&M University, Normal AL

SESSION #355  FOOD SAFETY ENGINEERING – PART 2  - Sponsored by PRS-703
Moderator: Griffiths Atungulu, University of Arkansas, Fayetteville, AR; Stephen Walker, US Food and Drug Administration, Bedford Park, IL

Time         Paper #  Title/Author
12:20PM     1800604  Thermal inactivation of Staphylococcus aureus in walnut shells as influenced by water activity and heating rate
Lihui Zhang, Northwest A&F University, Yangling, Shaanxi China (Presenter: Lihui Zhang) Xiaoxi Kou, Rui Li, Xu Zhou, Shaojin Wang

COMMITTEES TO CONVENE:

AFRICAN NETWORK GROUP OF THE ASABE ANNUAL BUSINESS MEETING
  Tuesday, July 31 – 5:30PM-7:00PM

ASABE Publication Council
  Thursday, August 2 - CANCELLED