

American Society of Agricultural and Biological Engineers



Inside ASABE

News for and about ASABE members

June 27, 2017

[Forward this email](#)**In This Issue:**

- [From the Executive Director](#)
- [Teams Collect Honors at 20th 1/4-Scale Tractor Contest](#)
- [Online AIM Registration Closes June 28](#)
- [2017 Annual Meeting Paper Submission](#)
- [Nelson Receives IEEE Award](#)
- [Cooper's 77-Year Membership Noted at Alabama Section Meeting](#)
- [Superior Paper Awards](#)
- [Outstanding Reviewers, Associate Editors Announced](#)
- [ES Community Recognizes Outstanding Volunteer Efforts](#)
- [In Memoriam - Tom Edward Corley](#)
- [Recent Standards Activities](#)

From the Executive Director

It was exciting to participate in the inaugural event “Science Breakthroughs 2030: A Strategy for Food and Agricultural Research,” on June 14, in Washington, D.C. “Science Breakthroughs 2030” is an initiative by the National Academies of Sciences, Engineering, and Medicine to identify the most compelling research opportunities in food and agriculture in the next decade and beyond. ASABE Honorary Member Bob Easter, University of Illinois President Emeritus, kicked off the session and challenged the study committee to define “what is food and agriculture’s moonshot?” In other words, what are the greatest foreseeable needs, knowledge gaps, and areas where research can have transformational impacts in advancing the science for food and agriculture?

The study committee is now seeking [public input](#) and by spring 2018 will produce a consensus report that will be anonymously peer-reviewed prior to release. That report will emphasize what is needed to ensure a sustainable food and fiber supply, achieve better public health, strengthen the natural resource base, and create new jobs and economic opportunities. As agricultural and biological engineers, we can help identify food and agriculture’s moonshot.

Darrin J. Drollinger
Executive Director

*Upcoming
ASABE
CSBE/SCGAB
Section
Meetings
and
Other Events*

Minnesota
June 29

Michigan
July 13

NABEC
July 30 - Aug 2

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[Back to top](#)

Teams Collect Honors at 20th 1/4-Scale Tractor Contest



Always a respected competitor, Purdue University finally made it to the top of the podium to claim its first-ever win in the International 1/4-Scale Tractor Student Design Competition.

The Boilermakers took top honors at the 20th annual event, held earlier this month in Peoria,

Illinois. Enjoying its own best-ever finish, South Dakota State University claimed runner-up position.

Rounding out the top five were, in descending order, the University of Nebraska, Oklahoma State University, and Kansas State University. In addition to taking home the Detra-Wehner traveling trophy, the Purdue team received a plaque and \$1500. All other top-five finishers also received plaques, plus cash awards ranging from \$1200 to \$500.

[Read the full article.](#)

[Back to top](#)

Online AIM Registration Closes June 28

Register online until June 28 for the [2017 ASABE Annual International Meeting](#), taking place July 16 -19, 2017, at the Spokane Convention Center, Spokane, Washington.

Don't miss out on this great networking experience. Opportunities include: Local industry tours, Robotics and Fountain Wars competitions, career development courses and scheduled breaks for interacting with colleagues and peers. For a detailed listing of all options visit www.asabemeetings.org.

Hotels contracted for our 2017 ASABE Annual International Meeting are Davenport Grand and Doubletree by Hilton—book now!

[Back to top](#)

2017 Annual Meeting Paper Submission

Paper uploads were due June 9 in order to be published online in our Technical Library prior to the 2017 annual meeting. Late papers will not be posted to the Technical Library until the end of August—no exceptions. All presenters are required to register for the meeting. Presentations whose authors have not registered by June 9 will be removed from the program and not posted online. See www.asabe.org/AMPaperFAQ for details.

Use the newest Microsoft Word [template](#) every year. Do *not* use a template from a previous year. Enter your paper number in three places. Example: Paper Number is seven digits and begins with 17. For submission ID 1523, it is 1701523. The unique DOI number is 10.13031/aim.201701523 and <https://doi.org/10.13031/aim.201701523> links to it.

[Back to top](#)

Nelson Receives IEEE Award



Stuart O. Nelson, ASABE Fellow, was honored with the prestigious Career Excellence Award at the Institute of Electrical and Electronics Engineers (IEEE) International Instrumentation and Measurement Technology Conference in Torino, Italy, in May. The award is sponsored by the Instrumentation and Measurement Society of the IEEE.

Nelson worked as a research agricultural engineer for the US Department of Agriculture Agricultural Research Service, at the University of Nebraska and at the Russell Research Center in Athens, Ga. He retired with 55 years of federal service in

2007. He conducted pioneering research on measuring the dielectric properties of grain, seed, fruits and vegetables, insects, and other materials and their applications in treatment of agricultural products with radio-frequency and microwave energy. The studies included treatment of seed to improve germination and seeding growth, to control insects in grain and pecans through selective dielectric heating, to improve nutritional value of soybeans, and to preserve the quality of pecans in storage. The dielectric properties of grain and seed are used universally throughout the world for rapid measurement of moisture content, the most important characteristic of these products for safe storage and quality preservation.

Nelson grew up on a family farm in Stanton County, Neb., graduated from Pilger High School, served in the US Navy near the end of World War II, and earned several degrees in engineering and physics at the University of Nebraska and Iowa State University. He has held professorial appointments at the University of Nebraska and The University of Georgia. He was named Federal Engineer of the Year by the National Society of Professional Engineers in 1985 and was elected to the National Academy of Engineering in 1990.

He is a 67-year member of ASABE.

[Back to top](#)

Cooper's 77-Year Membership Noted at Alabama Section Meeting



Arthur W. Cooper, PE, ASABE Fellow and John Deere Gold Medal awardee, celebrated his 99th birthday on March 3, 2017. Later that month he was recognized with his 77-year member anniversary certificate at the Alabama Section banquet. Currently Cooper has the distinction of having the most years of ASABE membership, which he shares with one other member: Clarence Becker, from the Arizona Section. Congratulations Dr. Cooper!

In photo: Alabama Section Chair Daniel Mullenix presents Arthur Cooper with his anniversary certificate.

[Back to top](#)

Superior Paper Awards

The articles published by ASABE in its peer-reviewed journals during 2016 are eligible for 2017 superior paper awards. Each technical community selects up to 5% of the papers published by their community for paper awards based on the

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May
2017

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move. We're here to
help you succeed.



articles timeliness, fundamental value, originality, and benefits to society, as well as for the quality of writing. Winning paper award authors are presented with a certificate at the Annual International Meeting.

Energy Systems

K. Sahoo, S. Mani, "Engineering Economics of Cotton Stalk Supply Logistics Systems for Bioenergy Applications," *Transactions of the ASABE* 59(3): 737-747

Ergonomics, Safety, & Health

P. D. Ayers, F. Khorsandi, Y. John, G. Whitaker, "Development and Evaluation of a Computer-Based ROPS Design Program," *Journal of Agricultural Safety and Health* 22(4): 247-260

Information Technology, Sensors, & Control Systems

J. Zhang, Q. Zhang, M. D. Whiting, "Canopy Light Interception Conversion in Upright Fruiting Offshoot (UFO) Sweet Cherry Orchard," *Transactions of the ASABE* 59(4): 727-736

M. Mondaca, C. Y. Choi, "An Evaluation of Simplifying Assumptions in Dairy Cow Computational Fluid Dynamics Models," *Transactions of the ASABE* 59(6): 1575-1584

Machinery Systems

H. Liu, H. Zhu, "Evaluation of a Laser Scanning Sensor in Detection of Complex-Shaped Targets for Variable-Rate Sprayer Development," *Transactions of the ASABE* 59(5): 1181-1192

W. J. La, K. A. Sudduth, H. J. Kim, S. O. Chung, "Fusion of Spectral and Electrochemical Sensor Data for Estimating Soil Macronutrients," *Transactions of the ASABE* 59(4): 787-794

J. D. Luck, S. A. Shearer, B. D. Luck, M. P. Sama, "Recalibration Methodology to Compensate for Changing Fluid Properties in an Individual Nozzle Direct Injection System," *Transactions of the ASABE* 59(3): 847-859

Natural Resources & Environmental Systems

J. E. Gilley, A. J. Sindelar, B. L. Woodbury, "Removal of Cattle Manure Constituents in Runoff from No-Till Cropland as Affected by Setback Distance," *Transactions of the ASABE* 59(6): 1681-1693

C. A. Rotz, R. H. Skinner, A. M. K. Stoner, K. Hayhoe, "Evaluating Greenhouse Gas Mitigation and Climate Change Adaptation in Dairy Production Using Farm Simulation," *Transactions of the ASABE* 59(6): 1771-1781

V. Sharda, P. Srivastava, "Value of ENSO-Forecasted Drought Information for the Management of Water Resources of Small to Mid-Size Communities," *Transactions of the ASABE* 59(6): 1733-1744

M. T. Hobbins, "The Variability of ASCE Standardized Reference Evapotranspiration: A Rigorous, CONUS-Wide Decomposition and Attribution," *Transactions of the ASABE* 59(2): 561-576

D. S. Andersen, "A Runoff and Sediment Routing Model for Open Lot Beef Feeding Facilities," *Applied Engineering in Agriculture* 32(1): 69-78

Plant, Animal, and Facility Systems

Y. Ding, C. Cai, J. Xiong, A. Qian, J. Wei, B. Hu, W. Wu, Z. Han, H. Zhang, W. Ni, "Evaluation of Alternative Cover Materials for Reducing Hydrogen Sulfide Emission from Municipal Solid Waste (MSW) Landfills," *Transactions of the ASABE* 59(4): 949-957

Y. Zhao, H. Xin, J. D. Harmon, T. J. Baas, "Mortality Rate of Weaned and Feeder Pigs as Affected by Ground Transport Conditions," *Transactions of the ASABE* 59(4): 943-948

Processing Systems

W. Zhang, D. Cui, Z. Liu, Y. Ying, "Analysis of Pear Dynamic Characteristics Based on Harmonic Response," *Transactions of the ASABE* 59(6): 1905-1913

R. Bhadra, M. E. Casada, J. M. Boac, A. P. Turner, S. A. Thompson, M. D. Montross, R. G. Maghirang, S. G. McNeill, "Correlating Bulk Density (with Dockage) and Test Weight (without Dockage) for Wheat Samples," *Applied Engineering in Agriculture* 32(6): 925-930

[Back to top](#)

Outstanding Reviewers, Associate Editors Announced**Outstanding Reviewer Recognition**

The high quality of ASABE'S peer-reviewed journals could not be maintained without reviewers willing to spend hours evaluating author manuscripts and making suggestions for improvements.

The reviewer recognition program developed by the refereed publications committee honors 10 to 11 outstanding reviewers each year. For the 2016 publication year, more than 900 reviewers participated in the review process. During the year, associate editors ranked reviewer timeliness and review quality. Each technical community then selects an allotted number of reviewers based on the number of manuscripts reviewed.

Outstanding reviewers recognized for their efforts this past year are as follows.

Energy Systems

Igathinathane Cannayan

Ergonomics, Safety, & Health

Jie Zhou

Information Technology, Sensors, & Control Systems

Suraj Amatya

Machinery Systems

Mark C. Siemens

Jianfeng Zhou

Natural Resources & Environmental Systems

William John Elliot

Danny H. Rogers

Kelly R. Thorp

Plant, Animal, & Facility Systems

Sarah X Wu

Processing Systems

Donghai Wang

Outstanding Reviewer Recognition

The dedicated associate editors spend hours working closely with reviewers, authors and the editor during the peer review process for each manuscript. The Associate Editor Recognition program, developed by P-511 Refereed Publications committee, honors up to six outstanding associate editors each year. Editors of individual technical communities first submitted an allotted number of nominees to the P-511 selection committee, based on workload, timeliness, and review quality over the previous three years, from more than 170 associate editors. The P-511 selection committee then applied the same criteria plus the editor's justifications for each nominee to make the final selection of the award recipients.

Ali Demirci
John Gilley

Shafiqur Rahman
 Kelly Thorp
 Jan Pieters
 Shaojin Wang

[Back to top](#)

ES Community Recognizes Outstanding Volunteer Efforts

The Energy Systems technical community (ES) is committed to providing its members with networking and professional development opportunities while recognizing outstanding service to the community. ES leadership is pleased to announce ES Community awards, based on the recommendations of the Awards and Appreciation Committee, an ad hoc committee within ES-100, to the following members.

Certificates of Outstanding Service

- Sudhagar Mani for outstanding associate editor service to the Publications Review Committee
- Igathinathane Cannayan and Deepak Kumar for services as outstanding reviewers
- Sergio Capareda for providing outstanding Leadership to ES-210 Renewable Power Generation Committee
- Kaushlendra Singh and Ganti Murthy for providing outstanding services to the ES-100 community
- Scott Cedarquist for providing leadership in the area of standard development for ES community through ES-238
- Emily Carter for outstanding services to Forest Engineering through ASE-12

Letters of Recognition

- ES-100 Ganti Murthy, past chair
- ES-311 Electromagnetic Radiation Applications in Plants, Jianzong Jiao
- ES-300 Energy Utilization and Applications, Scott Sanford
- ES-310 Ag Lighting Group, Daniel Ciolkosz

All meeting attendees are invited to join the Certificate Award and Recognition ceremony during the ES-100 committee meeting at the AIM in Spokane.

[Back to top](#)

In Memoriam - Tom Edward Corley



Tom Edward Corley died June 9, 2017, in Auburn, Ala.

Corley was born April 25, 1921, in Coosa County, Ala., to Scott Maxwell and Florence McElrath Corley. He graduated from Auburn University in 1943 with a BS in agricultural engineering from Auburn University and served 3 1/2 years in the army, seeing action in France and Germany. He returned to Auburn University for a MS degree. He then served 36 years on the staff, 18 years in agricultural engineering and 18 years in

administration, retiring in 1984 as associate dean of the school of agriculture and associate director of the Alabama Agricultural Experiment Station.

Corley was widely recognized as a pioneer in the mechanization of cotton production. Auburn University honored him by naming the agricultural engineering (now biosystems) building the Tom E. Corley Building in 1998. He received the Outstanding Alumnus Award in Agricultural Engineering in 1995 and was elected to the Alabama Agricultural Hall of Honor in 1990. He was a member of the Kiwanis Club of Auburn for over 60 years, and the club named him a George F. Hixon Fellow. He was a charter member of the Auburn-Opelika Men's Camellia Club and the Chattahoochee Rhododendron Society. He was active in the Auburn Beautification Council, serving as treasurer for 10 years.

Corley was Civitan's 2010 Citizen of the Year. He served on the Auburn cemetery board and the water board. He and his wife had a 150-year old log house near his

birthplace dismantled and re-erected on their land in Loachapoka, Ala. He propagated and planted more than 3,000 camellias, rhododendrons, and native azaleas on the land surrounding the log house. The Corleys were always gracious hosts and scheduled meetings by request from all kinds of groups throughout the year. The garden has been featured in eight magazines and one book. For preserving a bit of the past and improving the environment, Corley received the W. Kelly Moseley Environmental Award. He was very generous in sharing his plants with other gardeners and visitors, and contributed hundreds of plants to Auburn and the surrounding area. He had a passion for "making new plants" and along with fellow gardeners Dennis Rouse and O'Neil Smitherman cultivated several new hybrid native azaleas, one named "Corley's Cardinal." He was especially proud of naming and registering the "Mary Corley" camellia.

He was a member of the First Presbyterian Church, in Auburn, where he served as deacon, elder, and trustee.

Corley is survived by his wife, Mary Will Simpson Corley, one son Tom E. Corley, Jr. (Sue) of Lakeland, Fla.; one daughter, Mary June Corley of Loachapoka, Ala.; two grandchildren, Stacey Corley Jenkins (Larry) and Pamela Corley Todd (Jason), both of Lakeland, Fla.; four great-grandchildren, and several nephews and nieces. He was preceded in death by his parents, four brothers, and three sisters. In lieu of flowers, a donation may be made to the First Presbyterian Church at 143 E. Thach Ave., Auburn, Ala. 36830.

[Back to top](#)

Recent Standards Activities

Proposed Projects

- X486.3, Shallow Post and Pier Foundation Design

New Revisions

- ASAE EP475.2 MAY2017, Design and Management of Storages for Bulk, Fall-Crop Irish Potatoes
- ANSI/ASABE AD26322-2-JUN2017 Tractors for agriculture and forestry - Safety - Part 2: Narrow-track and small tractors

Standard Withdrawn

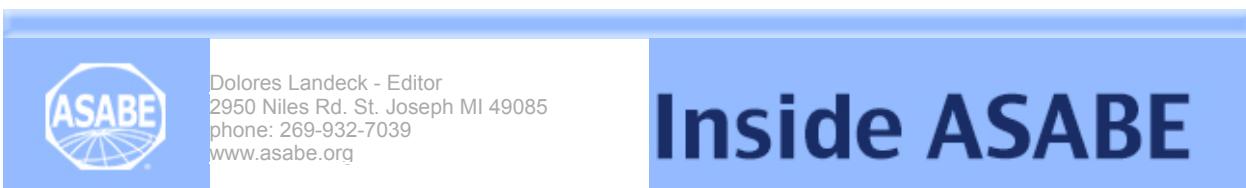
- ANSI/ASAE EP455 DEC1990 (R2012), Environmental Considerations in Development of Mobile Agricultural Electrical/Electronic Components

Press Releases

- June 2, 2017, ASABE Revises Standard for Storages of Bulk Potatoes

For a complete listing of ASABE Standards project activities, including recent press releases, click [here](#).

[Back to top](#)



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