American Society of Agricultural and Biological Engineers



News for and about ASABE members

September 28, 2018

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From the Executive Director



We just concluded the 10th International Livestock Environment Symposium (ILES) in Omaha, Nebraska, which reminded me how events like this support the goals and strategies that the Board of Trustees defined for our Society. ASABE has five overarching goals (see the list here), and we are working to structure all our services and activities toward meeting them. Our first goal is to "Raise the prominence of the agricultural and biological engineering profession globally," which includes sponsoring relevant conferences. The strategies for meeting this goal include enhancing the visibility

of the profession, partnering with other societies, and facilitating interactions across cultural, geographic, and disciplinary boundaries. The ILES hit all of these strategies, and hearty congratulations to chair Morgan Hayes and her planning committee for delivering such a successful conference!

A highlight of the ILES was the historical keynote address by Leroy Hahn and Jim DeShazer, who brought the ILES to life 44 years ago. Leroy and Jim co-chaired the first ILES, and they were clearly proud to see that the event remains strong today.

Jim held a signing session for his 2009 monograph <u>Livestock Energetics and Thermal Environmental Management</u>, and a great crowd lined up to get an autographed copy. He signed a few extra copies for us to bring back to headquarters, so let us know if you'd like one of these keepsakes.

Darrin J. Drollinger Executive Director

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New District Reps Elected

We're pleased to announce the election of three new District Representatives to serve the sections within their districts and act as representatives to the Membership Development Council (MDC). Each holds a position on the MDC through the 2020 annual international meeting. Elected by section members within their districts were:

District 1: Paula Steiner, USDA-NRCS, Lansing, Mich. District 3: Scott Mueller, USDA-NRCS, Madison, Wisc.

District 5: Shafiqur Rahman, North Dakota State University, Fargo, N.D.

Congratulations, and thank you for your service to ASABE!

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Recognize and Nominate a Deserving Colleague or Student for a 2019 ASABE Major Award

ASABE has partnered with an awards platform in order to simplify and streamline the ASABE awards nomination process. All ASABE Major Award nominations are due by midnight on October 31. Please visit our <u>website</u> to access nomination preparation materials and obtain more information on each award.

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ASABE Joins Others in Letter on NIFA Relocation



ASABE recently joined dozens of other stakeholders in signing on to a letter related to the Trump administration's August 7 announcement of its <u>intent to move</u> the USDA's National Institute of Food and Agriculture from its present Washington, DC, location to a site outside the national capital region.

The letter, initiated by the Association of Public and Land Grant Universities, did not take a stance except to advocate for an extension of the specified 30-day

Expression of Interest period. Subsequently, the original deadline of September 14 was <u>extended</u> to October 15.

The USDA indicates that the move will produce economic and workforce benefits, as well as place the agency closer to stakeholders. The APLU letter, which can be read here, identified numerous issues and concerns that merit thorough evaluation unattainable in 30 days.

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ILES Founders Attend Tenth Anniversary Event

Leroy Hahn and Jim DeShazer, founders of ASABE's International Livestock Environment Symposium (ILES) share a moment with ASABE President Maury Salz. This year

Upcoming
ASABE
CSBE/SCGAB
Section
Meetings
and
Other Events

Wisconsin Oct 3

> GWSC Oct 3-6

Arkansas Oct 5

Texas Section Oct 10

> lowa Oct 16

Louisiana Oct 17

Quad City Oct 23

Red Riv Valley Oct 23

Chicago October 26

North Carolina Oct 26

> Click for details



marked the tenth ILES, first held in 1974.

Nearly 200 participants from 12 countries networked, shared research and discussed engineering solutions for improved livestock management.

ILES X took place earlier this week in Omaha, in conjunction with the First Precision Livestock Farming Symposium.

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Technical Communities Announce Student Oral/Poster Competition Winners

Congratulations to all of the finalists of the ASABE Student Oral/Poster Presentation competition, held in Detroit at the Annual International Meeting. Each finalist received a \$250 prize check. For more information on the competition, please visit our website.

ASE and EOPD communities

First place: Christopher Stubbs, "Determining the role of the leaf Sheath on the strength of corn stalks"

Second place: Jun Li, "Rapid and simultaneous determination of furfural and 5-hydroxymethylfurfural in biomass hydrolysate by high-performance liquid chromatography"

Third place: Kyle Proctor, "Systems analysis at farm scale model combining biogeochemical, life cycle, and economic models for agri-voltaic systems"

ES & ESH communities

First place: Ross Houston, "Computational fluid dynamic modeling of catalytic hydrous pyrolysis in a fluidized bed reactor to produce refinery-ready bio-crude oil" Second place: Enshi Liu, "Submerged production of aryl alcohol oxidase using a genetically modified Aspergillus nidulans strain"

Third place: Caleb Lindhorst, "Dynamic ROPS test for tractors over 6,000 kg"

ITSC Community

First place: Mohammad Mousaviraad, "Effect of moisture content of corn on discrete element modeling simulation of grain handling systems"
Second place: Samuel Noel, "Real-time on-farm yield trials powered by open-source: connecting ISOBlue, OADA, and the Trials Tracker app"
Third place: Keith Halcro, "The prospect of thermal imagery"
Fourth place: Yaguang Zhang, "Generate product traceability trees for harvesting from GPS tracks"

MS Community

First place: Daniel Flick, "Creating high-density bales with an auger baler concept" Second place: HannahJoy Kennedy, "Weed vs. crop differentiation using crop marking systems"

Third place: Cyrus Nigon, "Development and evaluation of a particle-size screener for crop residues"

NRES Community First place: Pawan Upadhyay, "An empirical model to simulate pothole inundation cycle in prairie pothole region"

Second place: Charles Stillwel, "A statistical machine learning approach to guide stormwater management in North and South Carolina, USA"

Third place: Matthew Campbell, "Hydrodynamic effects on oyster aquaculture systems"

Fourth place: Meetpal Kukal, "Canopy water and radiation use variability and efficiency within and across crop species"

Fifth place: Kritika Kothari, "Assessing the impacts of climate change on seasonal irrigation and water use efficiency of grain sorghum and cotton in the Texas high

WELCOME New Members! August 2018 Click to see who's joined your network of colleagues

plains"

Sixth place: Yike Chen, "Particle size distribution and effect of solid removal on

biomethane potential reduction in flushed dairy manure"

Seventh place: Kelley Drechsler, "A comprehensive stress index for evaluating plant water status in almonds"

Eighth place: Kelsey McDonough, "Validation of the SPoRT-LIS surface soil moisture product in the Missouri and Arkansas Red-White River basins"

PAFS Community

First place: Yongzong Lu, "Design and experiment on artificial radiation-frost chamber based on temperature difference between leaves and air dew point" Second place: Darren Joseph Murphy, "Development of a labour utilisation decision support tool to efficiently measure grass herbage mass using a rising plate meter" Third place: Guoming Li, "Effect of red-supplement light spectrum at chicken perceived light intensity on broiler feeding and drinking behaviors"

PRS Community

First place: Sravanthi Budaraju, "Comparative study of artificial neural network versus response surface methodology for predicting the recovery of phenolic compounds from spent coffee grounds by conventional and microwave assisted extraction systems"

Second place: Zusongying Zhao, "Factors that affect allicin degradation and color change in the dehydration of garlic"

Third place: Michael Omodara, "Permeability of polypropylene grain storage bags" Fourth place: Shirin Ghatrehsaman, "Measurement of thermal diffusivity of wheat and maize and comparison by Dickerson method"

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1/4-Scale Competition Announced

2019 will mark the 22 year of the ¼-Scale Tractor Student Design Competition, set for May 30–June 2, 2019, at the Expo Gardens in Peoria, III. Teams planning to enter the 2019 competition, should email the following information to <u>Tina Schultz</u> as soon as possible:

- School/Team name
- Advisor's name, phone number, e-mail address
- Team captain's name, mobile phone number, e-mail address
- Shipping Address for Tires and Engine (for new teams)

Each team will be given a 31-hp Briggs and Stratton engine, and a set of Titan tires. With the goal of rewarding the best overall tractor design, the competition includes a written design report, team presentation, design judging, and a performance competition. The performance competition is comprised of three events—a maneuverability course, a multi-stage tractor pull using a progressive sled, and a durability course.

The ¼-Scale Tractor Student Design Competition is sponsored by AGCO Corp., Briggs & Stratton, Campbell Scientific, Inc., Case IH, Caterpillar, Danfoss, Deere & Company, Kubota, New Holland, SolidWorks, Thomson, and Titan International. Additional support is provided by Claas, GSI Grain Systems, Katie McDonald Photography, and MacDon.

Good luck with your designs. We look forward to seeing you in 2019!

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Encourage Young Minds toward ABE

Here's a startling thought: Most kids will *never* have the chance to meet an engineer. And we know that chances are even slimmer they'll ever meet an ag/bio engineer.

Care to help change those odds? Take advantage of ASABE resources, and those of our STEM partner, DiscoverE, to get started in career outreach. The recent issue of *Resource* magazine is packed with ag/bio engineering facts, interviews,



and college info. It's free and fully <u>downloadable</u>. Share the digital version with acquaintances, especially educators and friends with pre-college children, and through your social-media channels.

Ready for bricks-and-mortar outreach? <u>DiscoverE</u>, home of such programs as <u>Engineers Week</u> (that's the 2019 poster at left) and the <u>Future City</u> competition, maintains an exceptionally useful <u>portfolio</u> of volunteer resources. Whether you have thirty minutes or a full day to give, you'll find fun, engineering-related activities, games, lesson plans and more for every pre-college grade level. To enrich your efforts, you'll also find training webinars for volunteers, along with engineering facts and

career outlooks. There's even a page on conversation starters.

Don't put it off! Be that someone who inspires a future engineer!

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2019 Fountain Wars Rules Posted

Fountain Wars is a hands-on, real time design competition where students design and model their entry before arriving at the Annual International Meeting (AIM), in Boston, and build and test their actual entry under time constraints during the competition at the AIM. Fountain Wars requires a modest design document and limited expenditures. As such, it is primarily targeted at student clubs or participants in sophomore/junior–level class design projects. Teams will arrive at the competition with a design for their fountain, along with the necessary PVC pipe, couplers, fittings, valves, nozzles, and pumps to assemble their design. They will construct their system during a 120-minute build period. After final construction and testing period, the contest will begin with an aesthetic display.

The technical tasks for 2019 will be 1) the Boston Beach Ball Marathon and 2) the Beach Ball Balancing Act. February 1, 2019 is the deadline to email your team's intent to enter the competition. Click here for access to the rules, guidelines, and general information about the competition.

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Visual Challenge 9: Enter by October 5



ASABE's first-ever Visual Challenge was a big success. The winning entries were published in the November/December 2010 issue of *Resource* magazine, and members have been commenting on it ever since.

Now the competition is on again: our ninth year of photography, illustrations, drawings, or graphics, showing the world what agricultural and biological

engineering really means. How do you see it? Use the Visual Challenge as an opportunity to convey and celebrate the beauty of your work, your research, or your technical community. It's up to you and your camera, so be creative!

Feel free to submit as many entries as you want. All entries should be original work, and the image resolution must be 300 dpi or greater. The deadline for submissions is October 5, 2018. For inspiration, see <u>last year's winners</u>.

Email your entries, as attachments, to mitro@asabe.org. Write "Visual Challenge 9" in the subject line, and include a title and brief description of each image. If necessary, please include a name for crediting the image and written assurance that permission has been granted to submit and possibly publish the image.

The best images will be selected by ASABE staff and published in the January/February 2019 issue of *Resource*. Good luck, and have fun! We'd love to see what you do!

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"Discover" - Resource Special Issue Now Available



The "Discover" issue of *Resource* magazine is published every three years as one of the six *Resource* issues. "Discover" spotlights schools and students that are leading the way and promotes agricultural and biological engineering to prospective students. It explores the academic, industry internship, and foreign study opportunities that are available. In addition, it highlights students and job newcomers with interesting backgrounds and résumés and provides up-to-date career possibilities and job scenarios.

Copies are distributed via Discover Engineering Family Day in Washington, D.C., the FFA National Convention, requests for career materials from individuals and teachers, and other outreach. See the most <u>recent issue</u>.

Would you like to order copies for your school? Visit us at www.asabe.org/OrderPubs.

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Journal Article Indexing

Our journals are indexed for search engines by various discovery services. We also send our journal metadata to CrossRef and register a DOI number for each article, which makes the articles easy to find and cite. In addition to the indexers, others obtain our metadata directly from CrossRef, further expanding the exposure your article receives.

Read more at www.asabe.org/DiscoveryServices.

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Journal Editors and Associate Editors

We would like to thank the members of the editorial review team within each technical community. The sustained excellence of ASABE journals depends on the dedicated, volunteered contributions of these highly qualified editors and associate editors working together with many volunteer reviewers. For the list of editors, see www.asabe.org/JournalEditors.

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Recent Standards Activities

Proposed Projects

 X431.4, 2000-RPM Front and Mid PTO for Lawn and Garden Ride-on Tractors

New Standards

• ANSI/ASABE S624 AUG2018, Grain Bin Access Design Safety

New Revisions

ANSI/ASAE S354.7 SEP2018, Safety for Farmstead Equipment

Press Releases

• September 10, 2018, ASABE Finalizes Grain Bin Access Standard

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