

American Society of Agricultural and Biological Engineers



# Inside ASABE

News for and about ASABE members

February 28, 2020

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Join us in  
welcoming  
our most recent

NEW  
MEMBERS

January  
2019

Click

## From the Executive Director

While ASABE has long been engaged with controlled environment agriculture (CEA), we greatly expanded our involvement when we endorsed and participated in the first Indoor Agriculture Energy Solutions Conference, hosted by the [Resource Innovation Institute](#) in San Diego, California. This event attracted more than 150 attendees, with expertise in all aspects of CEA.



ASABE members Mark Lefsrud and Nadia Sabeh did a great job as the keynote presenters. They pointed out that CEA acreage is growing exponentially, and the opportunities for ABEs are huge. As engineers, we want to optimize resource use and minimize waste, and CEA brings that control to a wide variety of crops. Cannabis, with estimated global sales of \$15 billion, is the 800-pound gorilla in the grow room; however, most of the energy-efficient technologies are crop agnostic.

Partnering with other organizations is the key to our involvement in CEA. For example, we're working with ASHRAE on a standard to help CEA growers optimize their HVAC systems, considering humidity, heating, and cooling during the grow cycle.

Other work that ASABE is championing includes a series of indoor LED lighting standards. The first two published standards are:

- ANSI/ASABE S640 JUL2017, Quantities and units of electromagnetic radiation for plants (photosynthetic organisms)
- ANSI/ASABE S642 SEP2018, Recommended methods for measurement and testing of LED products for plant growth and development

The third standard in the series will deal with performance measurements for electromagnetic radiation systems for plants.

Darrin J. Drollinger  
Executive Director

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## Davidson Prize Awarded to Three Top Innovations

ASABE and the Association of Equipment Manufacturers presented the third annual Davidson Prize to three top innovative agricultural technologies, Thursday, Feb. 27, at Commodity Classic in San Antonio, Tex.

The [Davidson Prize](#) was designed to celebrate breakthrough innovations in areas of agricultural, food, and biological systems engineering. Winners are selected from the current [AE50 honorees](#) and thus represent the very highest achievements among the past year's new products.

This year's Davidson Prizes were awarded to:

- John Deere - Quik-Knect System
- Smart Guided Systems - Intelligent Spray Control System
- Agricultural Industry Electronics Foundation - Tractor Implement Management

The Davidson Prize is named for J.B. Davidson, the father of modern agricultural engineering. It gives a nod to the storied past of agricultural engineering and pays homage to those engineers, like J.B. Davidson, who aspire to find a better way. Winners were selected from the 2020 AE50 honorees, announced at the Agricultural Equipment Technology Conference earlier this month in Louisville.

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## NCEES Seeking PE Exam Survey Participants

Are you a licensed professional engineer? Please help contribute to the ASABE mission of promoting the ag and bio discipline and advancing career development opportunities by completing the survey.

Access and complete the survey at this [link](#) by March 26, 2020.



Upcoming  
Meetings  
and  
Other Events

Wisconsin  
Mar 25

Iowa  
Mar 26

New Mexico  
Apr 17

More  
Information



The results of this online survey will be used to update specifications for the exam, used throughout the United States for licensing purposes. A cross section of licensed professional engineers practicing agricultural and biological engineering is required—including those working in industry, consulting, the public sector, and academia—to complete an online survey about the tasks and knowledge required of a licensed agricultural or biological engineer with four to six years of experience to practice in a manner that safeguards the health, safety, and welfare of the public. The survey can be completed in approximately 40 minutes.

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## Giving Back Fund Awards Given to Two Projects

The Giving Back Fund recently awarded grants to two projects. One project is being carried out by the University of Minnesota chapter of Engineers Without Borders and is aimed at developing a drip irrigation system, horticultural plan, and associated educational materials for a rural community in Ethiopia. ASABE members Brian Aeling, Lucy DeBoer, Sandra Larson, and Walter Eshenaur are involved with the project.

A second awardee is the Louisiana State University Community Playground Project, directed by ASABE member Marybeth Lima. The project partners LSU students in a first-year engineering design class with local schools to create safe and accessible school playgrounds. The project involves not only engineering design, but also community outreach and collaboration. ASABE member David Constant is also involved with the project.

The Giving Back Fund is administered by the ASABE Foundation and aims to support humanitarian engineering projects that showcase the work of agricultural and biological engineers. Find more information [here](#).

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## Winning Videos Inspire with Creativity, Storytelling



asaBE INSPIRED - 2020 Winner!

33 views • Premiered Feb 12, 2020

1 0 SHARE SAVE ...

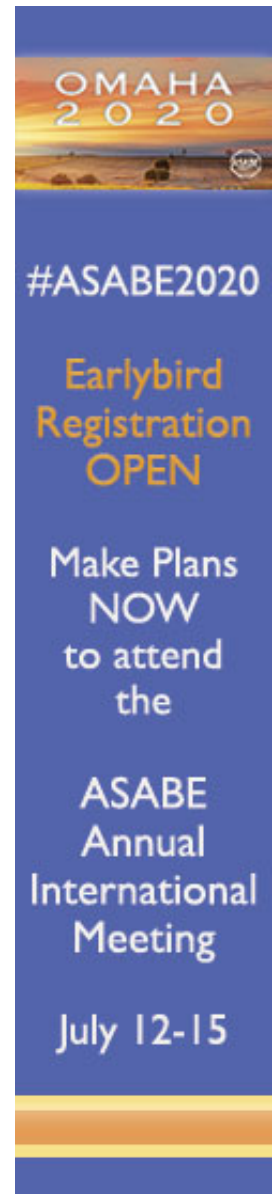
What inspires you toward a career in ag/bio engineering?

That was the challenge question posed in the asaBE INSPIRED One-Minute Video Challenge, sponsored by ASABE and Claas. And the

responses were as varied, earnest, and engaging as ASABE members themselves.

Top prize in the contest was given to Andrew Skidmore, of Atwater, Calif. Check out his winning entry [here](#). Also earning a cash award were the runner-up entries from [Chloe Wells](#), McGill University, who took second place, and [Lise Montefiore and Mahmoud Shehata](#), North Carolina State University, who claimed third. The top three videos earned cash awards ranging from \$1500 to \$3000 generously provided by Claas. "ASABE Bucks"--credits applicable toward ASABE services and products--were awarded to several other entries that garnered top engagement on YouTube.

The entire collection of entries will be uploaded to the [ASABE YouTube channel](#)



and featured throughout the year. Watch future issues of *Inside*, and follow us on [Twitter](#) and [Facebook](#), for announcement.

The contest was a great success by every measure--great creativity by participants, enthusiastic support from nearly two dozen volunteer judges, and excellent video content that will help illustrate the global impact of agricultural and biological engineers. Thanks to all who participated!

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## Supplied Reference Handbook Feedback Requested

The Society's Engineering Licensure committee, EOPD-414, is pleased to announce that a comprehensive ag/bio PE Exam Supplied Reference Handbook (SRH) is available for the agricultural/biological engineering professional engineering (PE) exam. The PE exams in all disciplines are moving to computer-based testing (CBT). The last paper version of the ag/bio PE exam will be given in April 2020 and the first computer-based version in October 2021. For the 18 months between these two dates an ag/bio PE exam will not be available.

When the ag/bio PE exam is given electronically, it will use two monitors. One will have the exam and the other this SRH, which has been developed by members of the EOPD-414 exam development committee, and a small set of ASABE standards available at [asabe.org](http://asabe.org). The handbook has been reviewed against the bank of questions that can be used on the exam and covers the topics exam candidates will find in the exam. EOPD-414 welcomes feedback about the book by sending email to [PE-SRH@asabe.org](mailto:PE-SRH@asabe.org). You may access the SRH [here](#). Comments are requested by May 8, 2020, to fit the schedule for the final draft of the SRH before use in the CBT version.

The final CBT-ready version is expected to be available on the NCEES website in fall 2020. The current version is set up for printing as a paper copy for use in the April 2020 exam. Formatting changes will be made for use on a computer screen beginning in May 2020.

Those taking the April 2020 exam are encouraged to print the draft SRH following the guidelines of the state in which they will take the exam (often a three-ring binder is allowed). In addition, EOPD-414 would appreciate review by practitioners and faculty, keeping in mind that this is not a comprehensive book of all things related to ag/bio engineering. This document focuses on the needs of a minimally competent engineer with about four years' experience looking to pass the ag/bio PE exam, which has questions developed according to the [exam specification](#).

Thank you for helping make this document a helpful tool for exam candidates and those working in the discipline of ag/bio engineering.

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## Journal Survey Results and Special Collections

Review the results of the 2019 survey about our journals in [Changes to ASABE Journals Guided by Member Feedback](#). While you're reading, take a look at our [Special Collections page](#).

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## Saur, Young Lead 2020 Class of New Faces of ASABE





Briana Saur and Sierra Young lead the 2020 class of New Faces of ASABE, outstanding young ASABE members who are demonstrating exceptional creativity and enthusiasm in advancing the profession.

Saur is a senior at North Carolina State University and will graduate in May of this year. As a future biological engineer, she hopes to recognize and design to a changing climate and weather

conditions in order to keep the health, safety, and welfare of the public at the utmost importance. Saur received a \$1000 scholarship to offset her educational expenses.

Young was selected this year's winner in the Professionals category. An assistant professor of biological and agricultural engineering at North Carolina State University, she is currently serving as vice chair of ASABE's Emerging Information Systems committee, ITSC-254, and has been deeply involved in a variety of other professional and STEM-outreach activities. As ASABE's top New Face in the Professionals category, Young traveled to Washington, DC, earlier this month to serve as a judge in the Future City Competition finals, where ASABE sponsors two special awards, for food sustainability and use of renewable fuels.

Other members of the 2020 class of New Faces--Professionals are:

**Yin Bao**, Auburn University  
**Richard "Trey" Colley**, Agri-AFC, LLC, Daphne, Alabama  
**Sarah Daly**, Purdue University  
**Randall Etheridge**, East Carolina University  
**Hao Gan**, University of Tennessee  
**Yu Jiang**, Cornell University  
**Kul Bikram Khand**, USGS EROS Center, Sioux Falls, South Dakota  
**Rebecca Muenich**, Arizona State University  
**Wen-Hao Su**, University of California, Davis

[Read more](#) about each of this year's honorees.

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## Fellow Nominations Open

*A Fellow shall be an engineer of unusual professional distinction, with outstanding and extraordinary qualifications and experience in, or related to, the field of agricultural, food or biological engineering.*

Do you know of someone worthy of this prestigious honor? If so, and if the individual has been a member of ASABE for at least 20 years and has actively practiced in, or related to the profession of engineering, the teaching of engineering, or the teaching of an engineering related curriculum for at least 20 years, consider nominating for Fellow of ASABE for 2021.

Nominations are due April 15. For nominating instructions and eligibility requirements, please visit [asabe.org/Fellows](http://asabe.org/Fellows).

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## USDA Launches Agriculture Innovation Agenda

The USDA recently launched a new initiative aimed at supporting agricultural



innovation and leadership as economic, human, and environmental challenges evolve.

The USDA Agriculture Innovation Agenda is an effort to align the agency's resources, programs, and research "to provide farmers with the tools they need and to position American agriculture as a leader in the effort to meet the food, fiber, fuel, feed, and climate demands of the future."

Goals include modernizing the regulatory framework to facilitate adoption of modern technologies, with the objective of achieving a 40% increase in U.S. agricultural production by 2050 while cutting the environmental footprint by half. Referencing the 2019 National Academies of Science report on food and agricultural research, the agenda's three-point plan includes aligning public and private research interests, integrating innovative conservation practices and technologies, and improving data collection.

[Read more.](#)

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## AIM 2020 Paper Upload - Deadline May 1

Presenting at the ASABE 2020 Annual International Meeting?

Be sure to use the 2020 [paper template](#) and read the FAQ for instructions. If your paper is not submitted by May 1 (midnight EST), it will not be added to our Online Technical Library until after the meeting.

Email [AIMpapers@asabe.org](mailto:AIMpapers@asabe.org) with questions.

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## ITSC Technical Community Paper Awards - Deadline April 20

The Information Technology, Sensors & Control Systems (ITSC) technical community is pleased to announce the ITSC Meeting Paper Award for the 2020 ASABE Annual International Meeting to be held July 12-15 in Omaha, Nebraska.

To be considered for the award, by April 20, 2020, papers must:

- Be submitted to ASABE via the standard conference paper submission process detailed at [asabemeetings.org](http://asabemeetings.org). Upload your paper [here](#).
- Be associated with an abstract that has been approved for presentation (any format) during an ITSC-sponsored or -cosponsored session at that year's AIM.
- Use the most current [annual meeting paper template](#).

Successful submission is ultimately the responsibility of the contact author. For questions, email [AIMpapers@asabe.org](mailto:AIMpapers@asabe.org).

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## Consultants Guide - Advertising Due March 5

Advertise your consulting expertise in the ASABE Guide to Consultants. It's easy, and rates start at only \$95.

[Review the details](#) and email the order form with your business card and 50-word description of your services to [GuideToConsultants@asabe.org](mailto:GuideToConsultants@asabe.org). See what others are doing by viewing the [current guide](#).

The stand-alone print directory will be mailed with the May/June issue of *Resource* magazine. It will also be posted on the ASABE website for twelve months and distributed when ASABE headquarters receives queries regarding available consultants.

Looking for other marketing opportunities? See the full listing of [advertising options](#), which include this monthly e-newsletter, Inside ASABE. Email [advertising@asabe.org](mailto:advertising@asabe.org).

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## 2020 Scholarships

For 2020, the ASABE Foundation has increased the undergraduate scholarship amounts for all three annual scholarships! The March 15 application deadline is quickly approaching. Click on the links for more information.

[William J. Adams, Jr., and Marijane E. Adams Scholarship](#) - \$1,750  
[ASABE Foundation Engineering Scholarship](#) - \$1,750

### *PhD Students*

[John C. Nye Graduate Fellowship](#) - \$1,750

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## What's Planned for Omaha?



Wondering what side trips, tech tours, and other events are available for the 2020 Annual International Meeting? Take a peek at some of the events

being planned for the 2020 AIM [here](#).

All of the events listed that require advanced registration are now available to add to your AIM registration. If you have already registered you can use the *Modify* button in your emailed confirmation to access your registration and add events to your itinerary. Don't wait until you get to Omaha to add these: Lack of registrations may cancel an event, and others might fill up without you! #ASABE2020

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## 2020 Student Awards and Competitions Entry Dates

ASABE hosts a variety of student competitions for a wide range of interests. Please visit the [ASABE Student Awards and Competitions](#) webpage for more details, including eligibility and entry instructions for each competition.

### *March 15*

Boyd-Scott Graduate Research Award

### *April 15*

Agricultural Robotics Student Design Competition

G.B. Gunlogson Environmental Fountain Wars Design Competition

### *April 20*

Student Honor Award

### *May 15*

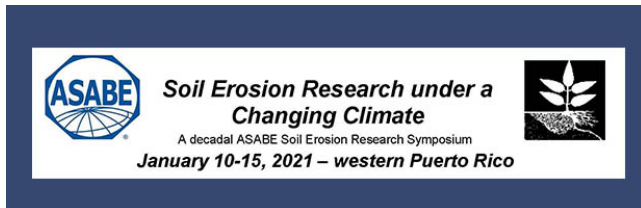
K.K. Barnes Student Paper Competition

### *AIM Student Oral/Poster Presentation Competition*

All students who submitted an abstract to present at the 2020 AIM will automatically be contacted to participate in this competition, keep an eye on your email for more details!

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## **Abstract Deadline Extended: ASABE's Erosion Research Symposium**



Great news if you missed the deadline: You now have until March 2 to submit to the 2021 Soil Erosion Research Symposium being held in Puerto Rico January 10-15, 2021.

[Submit today](#) and commit to being a part of this longstanding event.

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## **Global Evapotranspiration Symposium - Call for Abstracts Now Open**

Abstract submissions continue until March 14 for the 2nd ASABE Global Evapotranspiration Symposium, taking place in Nanjing, China, October 25-29, 2020.

The symposium will bring together educators, managers, scientists, engineers, and other professionals to exchange ideas, establish and foster collaborations, and work together to address grand challenges related to water resources, food production, ecosystem management, and environmental services. More details are available [here](#).

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## **Edwards Named New Head of Biological Systems Engineering at Virginia Tech**



Dwayne Edwards has been named head of the Virginia Tech Department of Biological Systems Engineering.

Edwards, who most recently was a professor of biosystems and agricultural engineering at the University of Kentucky, has a background in watershed-scale hydrology and water-quality protection with specialized knowledge of information analysis and data-driven assessments and decision-making. He assumed his role on January 1 and takes over the department during an exciting time as it celebrates its 100-year anniversary.

“This department has been successful over the last century because it has been a leader in issues such as biotechnology and the environment,” said Edwards. “As we look to the future, we will continue to innovate in these fields to find practical solutions with broad impacts on the communities we serve.”



Edwards earned his PhD in agricultural engineering from Oklahoma State University, a master's of science in strategic studies from the U.S. Army War College, and bachelors and master's degrees in agricultural engineering from the University of Arkansas. His area of expertise is water resources and environmental research that identifies sustainable solutions to contemporary challenges of water quality and availability.

Edwards has won the American Society of Agronomy Excellence in Extension Award, the ASABE New Holland Young Researcher Award, and an Environmental Excellence Award from the Environmental Protection Agency, among others.

Edwards was also a brigadier general in the U.S. Army Reserve from 2009 to 2014, when he served as the commanding general of the 98th Training Division and exercised statutory authority over 3,000 soldiers stationed from Maine to Puerto Rico.

View the full, official [announcement](#).

Edwards is a 24-year member of ASABE.

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