October 2021

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From the Executive Director

Fall is ASABE membership renewal season, and I hope you have renewed or are planning to do so soon. The easiest way to renew your membership is to click the orange "Renew Now" box on the homepage, log into your member profile, and access your invoice via our secure server. While in your member profile, you can purchase ASABE options, donate to the Foundation, provide important demographic information, and take other actions. If you have any questions, call us at 269-932-7040 or 800-371-2723.

Speaking of membership, the Board of Trustees has recently announced that undergraduate students will get free membership in 2022! The pandemic has been especially hard on students, and virtual networking is just not the same as face-to-face meetings. Free undergraduate membership will give students a no-cost opportunity to learn about the benefits of joining ASABE, including scholarships and competitions, as we look forward to the in-person AIM next July in Houston. Some timely incentives are also available: CNH Industrial is offering four $2,500 undergraduate scholarships (click here for details), and the school with the most new members will receive a $500 grant from ASABE.
Free undergraduate membership is a great way to introduce students in ABE, and students outside the field, to ASABE. If you know of undergraduates who could benefit from this offer, reach out to them, or let us know and we will contact them. We especially welcome non-ABE students to give ASABE a try!

Darrin J. Drollinger
Executive Director

ASABE Annual International Meetings

2022 Annual International Meeting
July 17-20
Marquis Marriott, Houston

Call for Abstracts is Open
Scroll to the article below for details on submitting an abstract.

ASABE Events at a Glance

December 6-10, 2021
6th Decennial National Irrigation Symposium
San Diego, California

February 14-16, 2022
Agricultural Equipment Technology Conference
Louisville, Kentucky

May 16-19, 2022
Sustainable Energy for Sustainable Future
San Jose, Costa Rica

July 17-20, 2022
Annual International Meeting
Houston, Texas

Complete list of ASABE Events

New IDEA Award Honors Diversity, Inclusion Efforts

ASABE is now accepting nominations for the ASABE IDEA (Inclusion, Diversity, Equity, and Access) award.

This award will recognize ASABE members who have made significant improvements to inclusion, diversity, equity and access for under-represented groups. Individuals and groups of individuals are eligible for award consideration. Just for this inaugural year, nominations for the new award will be accepted until December 31.

For more information including nomination instructions, visit our webpage.

This award is generously endowed by Robert and Yvonne Gustafson.
AIM 2022: See You in Houston!

Join us as we gather in person this July in Houston, Texas. Share your expertise, professional insights, and industry best practices by becoming a presenter. Interact with the industry’s best and brightest engineers and engineering students while sharing your knowledge.

Check out the complete list of sessions. Answer the call for abstracts today and help advance, promote, and educate your profession! Click here to submit your abstract. The deadline for submission is Wednesday, January 5, 2022. Submitting an abstract indicates your intent to present at the annual meeting, so begin now to make plans to attend. Three submissions are allowed per author.

Questions should be directed to Jessica Bell.

Time to Renew! Enjoy Uninterrupted Access to Benefits

As 2022 quickly approaches, remember to renew your dues by December 31.

Your ASABE membership provides the opportunity to:

- Learn and advance your working knowledge of ag, bio, and food systems engineering
- Find your fit among more than 200 member-led committees
- Meet and network with more than 6500 industry professionals
- And help promote the ag and bio engineering profession

For questions related to membership contact Jasper Cunningham.

Undergrads to Enjoy No-Cost Membership in 2022

Do you know an undergraduate student interested in agricultural or biological engineering or related fields, including ag technology and systems management? Thanks to Board action, and an assist from CNH Industrial, we're making it easier than ever to recruit students to the preferred engineering society for technical professionals in agricultural, food, and biological systems.

Recognizing that online, distance, and hybrid learning during a global pandemic has had an impact on undergraduate student engagement within the Society, the ASABE Board of Trustees has voted to make undergraduate student membership free for 2022. This is a vital step in advancing the Society goal of cultivating a diverse, thriving, and engaged membership. This free membership offer is available for all undergraduate students throughout the world. An eligible student can sign up online from now until December, 31, 2022. Because of increased volume, onboarding time may be delayed.

CNH Industrial to Sponsor Scholarships for ASABE Undergrads

ASABE has a robust and diverse offering of events, awards, scholarships, and competitions for
Circular Systems: Autumn Member Hours Continue

Have you attended an ASABE Member Hour on Transforming Food and Agriculture to Circular Systems? To date, we've hosted three sessions, including a TFACS introduction and presentations on food security and carbon negativity, which were recorded and are available for playback here.

The next live session will take place Thursday, October 28, 1:00-2:00 pm eastern. Register here, and contact Jasper Cunningham with questions.

Member Hour: Transforming Food and Agriculture to Circular Systems

Waste to worth: a case study of the renewable natural gas circular economy in Pennsylvania

Stephanie Herbstritt, PhD Student

Thursday, October 28, 2021
1:00-2:00 pm eastern

AETC 2022 to Convene at Omni Louisville

February 14-16
Omni Louisville Hotel

The 2022 AETC will take us to the beautiful Omni Louisville Hotel, February 14-16. Register now through January 3 for the biggest savings.
Program details, registration rates, and information on the hotel and surrounding area are available on our web page.

Highlights include:
- Celebrating the 2022 AE50 award winners
- Keynote presentation and lunch
- Three continuing professional development courses
- Distinguished Lecture Series

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Global Initiative Conference Focuses on Sustainable Energy

May 16-19
San Jose, Costa Rica

The call for abstracts is now open for Sustainable Energy for a Sustainable Future, the third conference in the ASABE Global Initiative series. Submit now through January 31 to share your research and views about our global energy concerns.

The submission portal and program details can be found at the conference website.

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New Dates Announced for Soil Erosion Symposium

January 8-13, 2023
Puerto Rico

The planning committee made the difficult decision last month to move the Soil Erosion symposium to 2023. The decision was the result of extensive travel restrictions still in place that would prohibit a majority of our authors and guests from attending.

The rescheduled dates of the symposium are January 8-13, at the Punta Borinquen Resort in Puerto Rico.

A new call for abstracts opens November 1. If you previously submitted an abstract, we look forward to your continued interest in the symposium. Please be prepared to resubmit your abstract, as these are not automatically transferred to the new submission portal. Find instructions on submitting and the new deadlines at the symposium website.

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Register Now for the National Irrigation Symposium

December 6-10, 2021
All current ASABE members are offered registration at IA member pricing, simply use the code ASABE21 at checkout in the registration process to receive the discount off of non-member rates. Details on the symposium schedule and show are available at the IA site. For information regarding local testing and mandates, go to the FAQs & COVID-19 Guidelines page.

Order Your 2021-2022 Member Roster

The printed member roster, available exclusively to ASABE members, remains a popular publication thanks to its ease of use and rich content. This excellent reference publication offers not only contact information for fellow ASABE members around the world, but also organizational and historical details of the Society, like the constitution and bylaws, section officers, directories of past presidents and Fellows, and a staff directory. All at your fingertips—no clicking, typing, or login required. Contact us at www.asabe.org/OrderPeriodicals or call 800-695-2723 to order your copy.

Cost is only $39, plus postage and handling. Published and mailed in November.

ASABE Members Win Pellizi Prize

Every two years the Club of Bologna awards the Pellizi Prize, supported by FederUnacoma, for the worldwide best PhD in agricultural machinery and mechanization. ASABE members again did well, as the University of Tennessee's Hao Gan placed first and Mississippi State University's Xin Zhang placed third. Gan did his PhD under the direction of Daniel Lee at the University of Florida and Zhang did her PhD at Washington State University under the direction of Manoj Karkee and Qin Zhang. All are ASABE members.

Membership Council Seeks At-Large Members

The Membership Development Council (MDC) is seeking three additional members to serve on the council for a 2-year term each. These council members will serve as voting members, attending the council meetings and providing input regarding membership development. In addition, each will be asked to complete a special project to enhance ASABE member value based on their interest. Potential projects include:

- ASABE podcast
- Member Hour "Lunch and Learn"
- Professional development conference
- Webinars
- Technical community networking events
- Section growth
- Student growth and engagement

To nominate or self-nominate, send your name and a brief bio to Jasper Cunningham by November 12. Nominations will be presented at the MDC's December meeting.

Direct your questions to Cunningham, Chuck Roth, or Jason Schuster.
Educational Aids Blue Ribbon award entries are due by January 25, 2022.

Blue Ribbon awards are presented each year by ASABE in recognition of outstanding effort and achievement in the development of noteworthy educational materials. For more information, visit our website.

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Journal Name Change Takes Effect Soon

Our peer-reviewed journal Transactions of the ASABE will be renamed to Journal of the ASABE beginning in 2022. This change was made by the Journal Editorial Board after considering a number of different titles.

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ASABE Tractor History Books: A Great Gift Idea!

Order a unique gift from our Amazon store quickly with Prime shipping.

Can't find what you’re looking for? Call us at 800-695-2723.

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New Journal Special Collection on Preferential Flow

We're pleased to announce the latest addition to our journal special collection.

Preferential flow (PF) can critically reduce riparian buffer contaminant removal efficiency. This collection presents current research on subsurface PF measurement, visualization, modeling, and impacts on contaminant fate and transport at scales, ranging from the subsurface pore scale to the plot scale to the watershed scale.

Details here.

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2021 Standards Collection Available

The 2021 CD and flash drive each contain 283 current ASAE/ASABE standards, engineering practices, and data applicable to agricultural equipment and systems, irrigation and drainage, structures, turf and landscape equipment, food engineering, and electric power applications. Also included are the adoptions of international standards for which ASABE documents were not used as the basis and a list of active standards development projects. Not included in the collection are historic standards, withdrawn standards, or earlier versions of current standards as of the time they were produced.

A limited number are available—order now!
Student Oral/Poster Competition Winners Announced

ASABE congratulates the winners of this year's Student Oral/Poster competition winners. Winners, and the titles of their presentations, are listed below, by the technical community under which they competed.

Learn more about the competition here.

**Applied Science & Engineering**
**Education, Outreach, & Professional Development**
(categories combined)
- Al Ibtiba Sultana, "Capturing Carbon Dioxide on Deep Eutectic Solvent Functionalized-Superactivated Hydrochars Synthesized from Loblolly Pine"
- Trevor Voo, "Graphitization of Paper Waste into Anode Material for Lithium-Ion Batteries"
- Kaylyn Groce, "Using The FieldPrint Calculator To Improve Cotton and Peanut Sustainability Production Practices in Georgia"
- Kelly Sandner, "Categorization and Analysis of Past Farm Fatality Incidents to Inform Autonomous Machine Design and Risk Analysis"

**Energy Systems**
**Ergonomics Safety, & Health**
(categories combined)
- Max Salzer, "High-Solids Pretreatment and Enzymatic hydrolysis of Pelleted Corn Stover with Improved Sugar Yields"
- Youngjoon Jeong, "Simulation of Solar Irradiance Distribution under Agrivoltaic Facilities"
- Daniel Petti, "Graph Neural Networks for Plant Organ Tracking"

**Information Technology, Sensors, & Control Systems**
- Uddhav Bhattarai, "Simplifying Apple Flower/Fruit Counting: A Weakly Supervised Approach"
- Patricia Cadena, "Dry Matter Dynamics of Cassava Roots"
- Aanis Ahmad, "Comparison of Deep Learning Models for Corn Disease Identification, Tracking, and Severity Estimation using Images Acquired from UAV-Mounted and Handheld Sensor"

**Machinery Systems**
- Alysa Gauci, "Scalability of Yield Monitor Data for Supporting On-Farm Research"
- Samantha Teten, "Challenges and Opportunities of Active Sensor-Based Nitrogen Management in Maize"
- Ertai Liu, "Deep Learning-based Autonomous Downy Mildew Detection and Severity Estimation in Vineyards"
- Gabriel Johnson, "A Survey of Hydraulic Properties for Bioreactor Woodchips Available Across the U.S. Midwest"

**Natural Resources and Environmental Systems**
- Russell Smith, "Sampling and Estimation of Surface Phytoplankton Concentrations in Brackish Environments via Autonomous Surface and Aerial Vehicles"
- Brock Kamrat, "Influence of Age and Pre-Treatment on Nitrate Removal in a Free Water Surface Constructed Wetland"
- Emine Fidan, "Understanding Flood Water Quality Dynamics Using Flood Modeling and Contact Time Estimates"
- Qiong Su, "Improving the Reliability of Monthly and Seasonal Weather Forecasts of the North American Multi-Model Ensemble (NMME) for Regional Crop Modeling"
- Xiaohan Mei, "A Comparison of Daily Streamflow Prediction by an Artificial Neural Network and the Soil and Water Assessment Tool (SWAT) in Two Small Watersheds in Central South Texas"
- Darcy Bonds, "The Nose Knows! Interactions between Soil Smell and Soil Health"
Plant and Animal Facilities Systems

- Baitong Chen, "Mitigation of Acute H2S and NH3 Emissions from Swine Manure During Agitation Using Pelletized Biochar"
- Peiyang Li, "Basics of Ultraviolet C (UV-C) Light"
- Ryan Jeon, "Automated Visual Angle Measurements in Gilt Selection"

Processing Systems

- Sonali Raghunath, "Optimization and Effect of Processing Parameters of Pulsed Electric Field Treatment on Insolubility Index of Reconstituted Milk Protein Concentrate 85 (Mpc85)"
- Ke Wang, "Techno-Economic Analysis on an Industrial-Scale Production System of Biodegradable Plastics from Cheese by-Products by Haloferax Mediterranei"
- Elizabeth Seidl, "Phytic Acid"
- Allan Chio, "Heterotrophic Production of Microalgae Chlorella Sorokiniana Using Hydrolysed Lactose as Substrate"

New Additions to the ASABE Technical Library

Just posted to the Technical Library

Applied Engineering in Agriculture 37(5)
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or visit this journal's home page.

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The Manitoba Land Calculator: A Tool to Estimate Land Requirements for Manure Application in Manitoba, Canada
A Precision Agriculture Technology Course for Regions with Lower Technology Adoption Levels
Review: Dairy Farm Electricity Use, Conservation, and Renewable Production—A Global Perspective
Dry Matter Estimation of Standing Corn with Near-Infrared Reflectance Spectroscopy
Detecting Macropore Fingering Using Temporal Electrical Resistivity Imaging

In Memoriam—Roger Mayhew

Roger D. Mayhew, 83, passed away on September 29, 2021. Mayhew was born on September 24, 1938, in Monmouth, Ill., to David D. and Frances (nee Peterson) Mayhew. He earned his BS degree in engineering from the University of Illinois in 1961. On May 27, 1989, he married Sandra...
Mayhew was a 60-year member of ASABE.