

ASEE SOUTHEASTERN ANNUAL SECTION CONFERENCE

DELIVERING STUDENT-ORIENTED ENGINEERING EDUCATION



SAMUEL GINN College of Engineering



MARCH 8-10, 2020

AUBURN UNIVERSITY • AUBURN, ALABAMA

ASEE SOUTHEASTERN ANNUAL SECTION CONFERENCE

DELIVERING STUDENT-ORIENTED ENGINEERING EDUCATION

MARCH 8-10, 2020 • AUBURN UNIVERSITY • AUBURN, ALABAMA

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The Samuel Ginn College of Engineering occupies most of the northeast corner of Auburn University's main campus, located at the famous fixture called Toomer's Corner. On the map, the **AU Hotel** and **Brown-Kopel Engineering Student Achievement Center (B-K) are highlighted in dark navy** – an 8-minute walk.



The majority of ASEE-SE activities, as well as the K-12 special workshop day, will be on **Level 2 of Brown-Kopel**. Enter the building on Level 1. Most doors are on the north side (Grand Atrium), but there is one door on the east side of Level 1 (look for signs to the Atrium). The registration desk is in the Grand Atrium. Take the wide staircase up to Level 2. Elevators (cross-boxes on the map) and restrooms are on the ends of the building.



MOBILE APP

We are using a conference app called "Sched".

- > On a computer/laptop go to: https://aseese2020.sched.com/
- > Mobile device users download and install the Sched app, and then search for the meeting name: ASEE-SE 2020

NUMBERS TO KNOW

PROCEEDINGS

Proceedings are available at:

http://www.asee-se.org/proceedings/ASEE2020/2020proceedings.htm or https://paper.asee-se.org

REGISTRATION DESK

The Registration desk is on Level 1 (Grand Atrium) of the Brown-Kopel Center.

Saturday - 8:00 am - 1 pm (for attendees registered for "Regular Plus" or "Graduate Plus") Sunday - 11:30 am - 1:00 pm Monday - 7:30 am - 3:00 pm (closed for lunch) Tuesday - 8:00 am - 10:00 am

STUDY ROOMS

Located in the Grand Foyer area, nine 6-seat study rooms (2125, 2127, 2135, 2137, 2145, 2147, 2153, 2159, 2161) have been reserved for ASEE-SE impromptu meetings. Other study rooms in the area may also be open. Feel free to use any of these facilities on a first-come, first-served basis.

WEBPAGE

Conference website URL: https://aub.ie/asee-se-2020

WI-FI ACCESS

There are two options for Wi-Fi access.

Option A: For participating eduroam members:

- a) Connect to WiFi network: eduroam
- b) When prompted for username/password, enter your full e-mail address for the user name and the password from your home institution.

Option B: Using Auburn University-provided Guest account

- a) Connect to WiFi network: AU-Open
- b) Open a web browser and authenticate using the guest username/password provided.

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K-12 WORKSHOPS SCHEDULE

Saturday, 7 March 2020

Note: This is an add-on event for ASEE-SE 2020. Conference attendees are welcome to add this day to their regular registration (\$20 to cover lunch and coffee breaks).

8:00 AM - 1:00 PM	Registration desk
9:00 AM - 11:30 AM	K-12 workshops
11:45 AM - 1:15 PM	Lunch + Curriculum exposition
1:30 PM - 4:00 PM	K-12 workshops

K-12 workshop titles are on the ASEE-SE website https://aub.ie/asee-se-2020

ASEE-SE 2020 CONFERENCE AT A GLANCE

Sunday, 8 March 2020

12:00 PM – 300 PM	. ASEE-SE workshops
1:00 PM - 4:00 PM	. Tours
3:00 PM - 5:00 PM	. Executive Board Meeting
6:00 PM - 8:00 PM	. Welcome Reception

Monday, 9 March 2020

8:30 AM - 9:30 AM	Opening & Plenary Session
9:30 AM - 10:30 AM	Student Poster session
10:00 AM - 11:30 AM	Technical Session 1
11:30 AM - 12:30 PM	Roundtable discussions
1:00 PM - 3:30 PM	Technical Session 2
3:45 PM - 5:15 PM	Technical Session 3
6:00 PM - 9:00 PM	ASEE-SE awards dinner

Tuesday, 10 March 2020

9:00 AM - 10:30 AM	Technical	Session	4
10:30 AM - 12 PM	Technical	Session	5

DIVISION MEETINGS

ASEE-SE Division meetings are concurrent with breakfasts on Monday and Tuesday, in Room 2151/2157 (Grand Hall 1 & 2). Feel free to also meet in the study rooms around the Grand Foyer area.

Monday morning Divisions (5)

- Administrative
- Instructional
- Research
- Professional Skill
- K-12

Tuesday morning Divisions (10)

- Bioengineering
- Chemical Engineering
- Civil Engineering
- Computer Engineering
- Electrical Engineering

- Engineering Graphics
- Engineering Technology
- Industrial Engineering
- Mechanical Engineering
- Software Engineering

Sunday

Executive Board meeting EB

W-x Workshop

room	X 2101	X 2102	2117	2133	2116	2143	2151 & 2157	2174	Grand Foyer
Time									
12:00-3:00 pm			W-1	W-2	W-3	W-4	Refreshments @ 2:00 pm		
3:00-5:00 pm					EB				
6:00-8:00 pm							Welcome Reception		

Mand

room	X 2101	X 2102	2117	2133	2116	2143	2151 & 2157	2174	Grand Foyer
Time									
7:00 – 8:20 am							Breakfast w/ Division meetings		SP
8:30 – 9:30 am							Plenary Session		setup
9:30 – 9:45 am							Break		
9:45–10:00 am									SP
10:00-10:30 am			T1-A	Т1-В	Т1-С	T1-D			
10:30–11:30 am									
11:30 am–12:30 pm	R-1	R-2	R-3	R-4	R-5	R-6	R-8 is in room 2151	R- 7	
12:30-1:45 pm							Lunch w/ Education Award Paper presentation		
2:00-3:30 pm			Т2-А	Т2-В	Т2-С	T2-D			
3:30-3:45 pm							Break		
3:45-5:15 pm	· · · · · · · · · · · · · · · · · · ·		T3-A	Т3-В	Т3-С	T3-D			

Tuesday

Tx-v Technical session

room	X 2101	X 2102	2117	2133	2116	2143	2151 & 2157	2174	Grand Foyer
Time									
7:30-8:50 am							Breakfast w/ Division meetings		
9:00-10:30 am			T4-A	T4-B	T4-C	T4-D	Coffee @ 10 am		
10:30 am-12:00 pm			T5-A	Т5-В	T5-C	T5-D			
12:00-1:00 pm							Lunch		

Monday, March 9

Technical Session 1						
	Session	T1-A	T1-B	T1-C	T1-D	
		Mechanical	Instructional	K-12	Civil Engineering	
	Topic	Engineering I	Ι	Ι	Ι	
	Room	2117	2133	2116	2143	
	Moderator	Chuck Margraves	Aaron Smith	Ramana Pidaparti	Jason Clark	
Presentation	Time					
Slot 1	10:00 - 10:15 AM	33	130	69	56	
Slot 2	10:15 - 10:30 AM	61	67	113	59	
Slot 3	10:30 - 10:45 AM	109	101	86	99	
Slot 4	10:45 - 11:00 AM	110	4	123	64	
Slot 5	11:00 - 11:15 AM	133	108	116	23	
		Techni	cal Session 2			
	Session	T2-A	Т2-В	T2-C	T2-D	
		Mechanical	Instructional	K-12	Civil Engineering	
	Topic	Engineering II	II	II	II	
	Room	2117	2133	2116	2143	
	Moderator	Anna Howard	Daniel Kohn	Dimitra Michalaka	Chuck Newhouse	
Presentation	Time					
Slot 1	2:00 - 2:15 PM	19	57	103	26	
Slot 2	2:15 - 2:30 PM	39	32	126	28	
Slot 3	2:30 - 2:45 PM	132	62	87	68	
Slot 4	2:45 - 3:00 PM	91	17	42	51	
Slot 5	3:00 - 3:15 PM	95	76	9	52	
		Techni	cal Session 3			
	Session	ТЗ-А	ТЗ-В	ТЗ-С	T3-D	
		Mechanical		Electrical &		
		Engineering	Instructional	Computer	Engineering	
	Торіс		III	Engineering	Design	
	Room	2117	Todd	2116	2143	
	Moderator	Monika Bubacz	Schweisinger	Rami Haddad	Cecelia Wigal	
Presentation	Time					
Slot 1	3:45 - 4:00 PM	60	11	13	10	
Slot 2	4:00 - 4:15 PM	96	71	46	41	
Slot 3	4:15 - 4:30 PM	14	90	47	34	
Slot 4	4:30 - 4:45 PM	129	12	73	70	
Slot 5	4:45 - 5:00 PM	131	72	85	80	

R

Tuesday, March 10

	Technical Session 4						
	Session	T4-A Mechanical	T4-B	T4-C	T4-D Professional		
	Topic	Engineering IV	Research I	Software Engineering	Skills I		
	Room	2117	2133	2116	2143		
	Moderator	Sally Pardue	Jason Clark	Cheryl Seals	John Brocato		
Presentation	Time						
Slot 1	9:00 - 9:15 AM	111	22	30	81		
Slot 2	9:15 - 9:30 AM	44	35	83	84		
Slot 3	9:30 - 9:45 AM	45	127	58	88		
Slot 4	9:45 - 10:00 AM	50	16	8	98		
Slot 5	10:00 - 10:15 AM	5	25	117	104		
		Techn	ical Session 5				
	Session	Т5-А	Т5-В	Т5-С	T5-D		
		Mechanical & Industrial			Professional Skills		
	Topic	Engineering	Research II	Admin	II		
	Room	2117	2133	2116	2143		
	Moderator	Harry Powell	M. A. Karim	Chuck Newhouse	Peter He		
Presentation	Time						
Slot 1	10:30 - 10:45 AM	2	7	75	36		
Slot 2	10:45 - 11:00 AM	15	66	79	65		
Slot 3	11:00 - 11:15 AM	54	107	94	24		
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ASEE-SE roundtable discussions introduced in 2019 by host North Carolina State Univ. were very well-received, so the same topics are appearing again in 2020. Meetings are scheduled for Monday morning.

No.	Торіс	Room
R-1	Teaching Engineering Grand Challenges Moderators: Jason Clark (Auburn University), Ed Davis (Auburn University)	X2101
R-2	Laboratory Practices Moderator: Sally Pardue (Tennessee Tech University)	X2102
R-3	Homework & Ethics in the Age of the Internet Moderator: Thaddeus Roppel (Auburn University)	2116
R-4	Flipping the Classroom Moderator: Anna Howard (North Carolina State University)	2117
R-5	Using Engineering Case Studies Even When They Get Political Moderator: John Brocato (University of Georgia)	2133
R-6	Getting Started with Engineering Education Research Moderators: Joni Lakin (Auburn University), Todd Schweisinger (Clemson University)	2143
R-7	Engineering Curricula Moderator: Steve Duke (Auburn University)	2174
R-8	Diversity & Inclusion in the Classroom Moderators: Cheryl Seals (Auburn University), Cecelia Wigal (University of Tennessee Chattanooga)	2151

Workshops

ASEE-SE workshops are scheduled for Sunday afternoon. Additional information is available online: http://www.eng.auburn.edu/sites/asee/workshops.html

No.	Торіс	Room
W-1	Data Science Education in Engineering Q. Peter He and Shiwen Mao (Auburn University)	2116
W-2	Survey and Assessment Design for Educational Evaluation Joni Lakin and Chih-hsuan Wang (Auburn University)	2117
W-3	Developing Facilitators of Learning for a Holistic-Style STEM Professional Pedro E. Arce, Andrea Arce-Trigatti, Stephanie Jorgensen, J. Robby Sanders (Tennessee Technological University)	2133
W-4	K-12 Tour of Engineering Workshop Dimitra Michalaka (The Citadel), Emanuele Giogli (Volvo Car US Operations)	2143



Christopher B. Roberts, Dean Samuel Ginn College of Engineering

ASEE Southeastern Section Members,

Welcome to Auburn University and the Samuel Ginn College of Engineering!

I would like to thank you for attending the ASEE Southeastern Section Annual Conference in beautiful Auburn, Alabama. It is a tremendous honor to host fellow engineering educators here on the Auburn campus as we collectively strive to advance

our ability to educate the next generation of engineers. This is a tremendously important endeavor, and we are delighted and proud to host you on our campus.

This year's conference theme is "Delivering Student-Centered Engineering Education," and Auburn is the perfect fit for such a charge. As the 23rd largest undergraduate engineering program in the nation, the Samuel Ginn College of Engineering is fully committed to providing our students with a truly exceptional student-centered engineering experience. Moreover, our faculty and students have built a highly transformative research enterprise that is changing lives and driving economies in strategic areas such as advanced manufacturing and materials; infrastructure and transportation; cybersecurity and intelligent systems; energy and the environment; and health and biomedical engineering, among others. In order to have this impact, we have assembled an exceptional team of engineering educators and researchers on our faculty who exemplify excellence and innovation in their actions. I am very pleased that you will be spending time with members of our Auburn Engineering team as we learn together through this conference.

We hope you will take the time to explore our magnificent new Brown-Kopel Engineering Student Achievement Center, along with the rest of our beautiful campus. As *The Princeton Review* recently named Auburn students as the happiest in the nation, we hope you'll experience that same joy during your time here.

Thank you again for visiting us here in Auburn, and we hope you will come back soon.

War Eagle!

1 Mat



Tim Wilson ASEE-SE Section President

On behalf of the leadership of the ASEE Southeastern Section, I want to welcome you to our 2020 conference. Whether you are a repeat participant or joining us

for the first time, I believe you will find these few days an opportunity to join with like-minded individuals in seeking ways to facilitate our students' learning experiences. The conference theme, "Delivering Student-Centered Engineering Education" reminds us of why we are engaged in this enterprise in the first place: For our students. Of all the professions, engineering (in the USA, at least) is unique in not requiring a post-baccalaureate degree. We are responsible to ensure that those who complete our undergraduate programs are ready to assume their professional duties. The conference's technical sessions, roundtables, and opportunities to network with colleagues from other institutions all give each of us a chance to improve and grow as guides, resources, mentors, and future colleagues to our student charges.

An outstanding feature of this conference is the way we break bread together. Besides our opening reception, our Monday luncheon (featuring ASEE VP for Member Affairs, Gary Steffen, and a presentation by the recipient of our Thomas Evans Outstanding Engineering Education paper) and our Monday evening Awards Banquet, please join us at our other meals, where we conduct section business, primarily the election of division, unit, and section officers. Monday morning's breakfast will see us choose officers for "operational" divisions (Administrative, Instructional, Research, Professional Skills, and K-12) as well as those of the Programs Unit. On Tuesday morning, we'll select officers for "technical" divisions (Bioengineering, Civil Engineering, Engineering Graphics, Engineering Technology, Industrial Engineering, Computer Engineering, Chemical Engineering, Electrical

Engineering, Mechanical Engineering, Software Engineering) plus unit officers for the Awards and Recognition Unit and the Publications and Promotions Unit. Division and unit officers service is structured as a progression: One volunteers for and serves one year as secretary, moves up to vice chair the year after that, and then to chair in the third year. Division chairs are responsible for assigning reviewers to papers in that division and are eligible to serve as unit officers. Finally, I hope you will still be here for our Tuesday lunch meeting, where we elect our section officers from a slate prepared by the section's Nominations Committee as part of our annual business meeting. I have found serving at each of the division, unit, and section levels highly rewarding, and I hope you will, too. If you are able, please volunteer and join us in leading this organization.

On behalf of the section, let me express our gratitude to our hosts at Auburn University: To Dr. Jay Gogue, Auburn's President, to Dr. Bill Hargrave, its Provost and Vice President for Academic Affairs, and to Dr. Christopher Roberts, Uthlaut Professor and Dean of the Samuel Ginn College, we extend our deepest thanks for making your state of the art facilities, particularly the Brown-Kopel Engineering Student Achievement Center, available for our use. We are also indebted to our local hosts, Dr. John Hung, of Auburn's Electrical and Computer Engineering department, and his team, who have made extraordinary efforts to ensure you have a productive and enjoyable conference.

I presume that you, like me, enjoy learning: otherwise, why would we be in the academy? This conference affords each of us multiple opportunities to learn something new, to be reminded of something we'd forgotten, and to try on different perspectives regarding how we approach our roles. Just as we seek to support student-centered education, ASEE and your section's leadership look to support your growth and success as an educator. If I can do anything to make your time with us more productive and rewarding, please don't hesitate to reach out and let me know. I hope you have a wonderful and successful conference.



John Hung 2020 Site Coordinator

War Eagle, and welcome to Auburn! We are delighted that you're here, and look forward to serving you throughout the event. Please do not hesitate to call the conference phone number (919-349-1925).

I echo Tim Wilson's observation that Section service is highly rewarding - that has certainly been my experience over the past two years. Great professional friendships

birthed and grew, especially with the Section officers (see the listing on page 20), past presidents Sally Pardue (Tennessee Tech University) and Hodge Jenkins (Mercer University), and the 2019 conference coordinator Anna Howard (North Carolina State University). It has been a delight to work with Technical Program Chair David Calamas (Georgia Southern University).

Please join me in thanking these members of the local team. Each one truly embodies the spirit that make Auburn University a wonderful place.

Danny Doyle	Program booklet, working down to the wire Visionary "John Jet's delay a year and host in 2020: Brown-Kopel will be finished"
Faith Fain	Correcting my day-to-day errors. "Set the right atmosphere – NO black tablecloths!"
Katie Hardy	Brown-Kopel Center manager, "We can certainly do that (everything I requested)."
Joni Lakin	K-12 workshops coordinator
Angie Lemke	Hotel liaison
Aileen Manos	Registration
Tyler Patterson	Website support
P. K. Raju	Tours
Jeffrey Rice	ASEE-SE workshops coordinator
Thad Roppel	"Sched "online app



Bonnie Ferri

Georgia Tech

Bonnie Ferri is the vice provost for Graduate Education and Faculty Development at Georgia Tech. Ferri is also a professor in Electrical and Computer Engineering (ECE). She previously was associate chair for undergraduate affairs in ECE and also served as the associate chair for graduate affairs in ECE.

Ferri does research in embedded control systems and in engineering education, and has received honors including the 2017 IEEE Undergraduate Teaching Award and the 2016 Regent's Award for the Scholarship of Teaching and Learning. In addition, Ferri is the co-chair of a campus-wide commission at Tech on the future of higher education, and she was an invited speaker at a National Academy of Engineering workshop on education.

Ferri has been active with the IEEE Control Systems Society and served two terms on its Board of Governors. She received a bachelor's degree in electrical engineering from the University of Notre Dame and a master's degree in mechanical engineering and aerospace engineering from Princeton University. Ferri then worked for Honeywell for two years prior to returning to school to earn her Ph.D. in electrical engineering from Tech.

THOMAS C. EVANS ENGINEERING EDUCATION PAPER AWARD

An assessment of bias and precision in instructor grading was undertaken at several private and public institutions with civil engineering programs. At five institutions, undergraduate civil engineering majors completed a concept inventory at the conclusion of their first course in geotechnical engineering. The ten-guestion instrument focused on fundamental concepts in geotechnical engineering to assess students' knowledge gained throughout the course. A random sample of ten surveys was collected from each of the five institutions, leading to a dataset of n = 50 concept inventories encompassing a breadth of student populations. A team of geotechnical engineering professors from nine institutions (including four institutions not included in the dataset) independently graded the 50 concept inventories, using an established solution to the instrument. The end result was a distribution of nine instructor scores for each question within the dataset of student responses. The objectives of this study were (1) to quantify instructor bias in grading concept inventories by examining whether there are differences between instructors' grading of their own students and instructors' grading of anonymous surveys, and (2) to quantify instructor precision (instructor-to-instructor variability) in grading. Statistical analyses were performed on the scores of the concept inventories to quantify the distributions of instructor grading within the distributions of student scores. In the context of an undergraduate geotechnical engineering course, this paper discusses the concept inventory, grading criteria, institutional contexts, statistical analyses, and suggestions for future research. Recommendations are provided for reducing bias and increasing precision in instructor grading in undergraduate civil engineering courses.

THOMAS C. EVANS ENGINEERING EDUCATION PAPER AWARD (cont.)

- Simon Thomas Ghanat P.E., (The Citadel Associate Professor of Civil and Environmental Engineering) received Ph.D., M.S., and B.S. degrees from Arizona State Univ. His research interests are in engineering education and geotechnical earthquake engineering. He previously taught at Bucknell Univ. and Arizona State Univ.
- James Kaklamanos, (Merrimack College Associate Professor of Civil Engineering/ Zampell Family Faculty Fellow) received B.S., M.S. and Ph.D. degrees from Tufts Univ. He specializes in geotechnical engineering, foundation engineering, earth retaining structures, earthquake engineering, engineering mechanics, and engineering probability and statistics.
- **Tanya Kunberger P.E.,** (Florida Gulf Coast Univ. Professor and Chair of the Environmental and Civil Engineering Dept.) received her B.C.E. from the Georgia Institute of Technology, and M.S. and Ph.D. from North Carolina State Univ. Her areas of specialization are geotechnical and geo-environmental engineering, self-efficacy and persistence in engineering, and developing STEM interest in K-12 students.
- **Corrie Walton-Macaulay, P.E.,** (Saint Martin's Univ. Assistant Professor of Civil and Environmental Engineering) received B.S. and M.S. degrees from the Univ. of Arkansas, and the Ph.D. from the Univ. of Kentucky. He teaches soil mechanics, civil engineering materials, mechanics of materials, and pavement design. His research is in unsaturated soil mechanics, energy geotechnics, and infrastructure resiliency.
- Suresh Immanuel P.E., (Univ. of Evansville Associate Professor of Civil Engineering) holds a Ph.D. from Auburn Univ. His research interests are in engineering education, pavement design and analysis, pavement management, and pavement instrumentation. He teaches courses such as transportation engineering, soil mechanics, geotechnical engineering, advanced pavement design and management, and surveying.
- **David A. Saftner,** (Univ. of Minnesota Duluth Associate Professor) received a B.S. from the United States Military Academy, and M.S. and Ph.D. in Civil Engineering from the Univ. of Michigan.
- **Brock E. Barry P.E.,** (U.S. Military Academy Professor of Engineering Education) holds a B.S. from Rochester Institute of Technology, M.S. from Univ. of Colorado, and Ph.D. from Purdue Univ. His areas of research include assessment of professional ethics, teaching and learning in engineering education, nonverbal communication in the classroom, and learning through historical engineering accomplishments.
- Shawn Griffiths, (Univ. of Wyoming Assistant Professor of Civil Engineering) holds a B.S from Utah State Univ.,
 M.S. from the Univ. of Arkansas, and a Ph.D. from the Univ. of Texas. He believes school is the place to make mistakes, and encourages students to be brave enough to "try, try again," until they succeed.
- **Craig M. Shillaber,** (Northeastern Univ. Assistant Teaching Professor of Civil and Environmental Engineering) earned B.S. from the Univ. of New Hampshire, and the M.S. and Ph.D. from Virginia Tech. His research interests include sustainability education in civil engineering, geotechnical subsurface characterization, developing and improving methods for assessing life-cycle embodied energy and carbon emissions for the geotechnical profession, and sustainable geotechnics.
- **Chris Swan,** (Tufts Univ. Dean of Undergraduate Education, School of Engineering; Associate Professor) His engineering education research interests focus on community engagement, service-based projects and examining whether an entrepreneurial mindset can be used to further engineering education innovations. He also does research on the development of reuse strategies for waste materials.

AWARDS BANQUET FEATURED GUEST



Larry Monroe

B.S. Chemical Engineering, Auburn University '79 Ph.D. Chemical Engineering, Massachusetts Institute of Technology '89 Southern Company (retired)

The quality of life for the people of Alabama is better because of Larry Monroe's attention to environmental innovation. His research and development efforts made a significant bottom-line impact in the production of clean, affordable electricity. He served as a public leader, industry expert and a research innovator to make the

environment a better place, leaving a legacy sure to be felt by generations to come.

Monroe demonstrated his commitment to protecting and conserving natural resources through research and development in academia as well as government and industry research. He retired as Southern Company's chief environmental officer in 2017.

Growing up in Arab, Alabama, he graduated from Auburn University in 1979 with a bachelor's degree in chemical engineering. He went on to earn his doctoral degree, also in chemical engineering, from the Massachusetts Institute of Technology in 1989. He arrived back in Alabama in 1990 to work for the Southern Research Institute in Birmingham. In 1998, he joined Southern Company and served in a wide variety of capacities, including research consultant and program manager, before his leap to chief environmental officer and senior vice president of research and environmental affairs. Among his work was groundbreaking research on mercury control from power plants at Alabama Power's Plant Gaston in Wilsonville, which highlighted mercury emissions and regulations. Gaining national media attention, the work also garnered an R&D 100 Award from R&D magazine in 2003.

Included among his honors is being ranked in 2013 as No. 16 among the top 25 most influential people in the power industry during the past 25 years, according to Power Engineering magazine. He was also honored by the Electric Power Research Institute with six technology transfer awards, which recognize leaders who transfer research into applied results. In late 2017, he was appointed by the Environmental Protection Agency's Administrator to serve on EPA's Science Advisory Board.

Section Officers

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Be Prepared to Moderate the Session

Arrive 10 minutes early to the room where the session you are moderating is being held. Meet the presenters as they enter the room and go over the pronunciation of their names. Make sure all presentations are loaded on the classroom computer and ready to go before the session starts. Bring a timing device (smartphone, watch).

Provide Presentation Guidelines at the Beginning of the Session

Introduce yourself at the beginning of the session. Remind presenters of the time limitations and that you will give a hand signal to warn that there are 5 minutes and then 2 minutes remaining.

Introduce the Presenter (or presenters) Prior to Their Presentation

At the end of each presentation, the next speaker should come up and ready their slide show. Introduce the presenter when ready.

Maintain the Presentation Schedule

One primary responsibility of the moderator is to ensure that the presenters begin and finish their presentations on time, as shown in the Technical Session Paper Placement tables. Maintaining the presentation schedule helps to guarantee fair treatment for all presenters. If a presenter (who is not last in the session) is not present or has canceled, please wait to begin the next paper at the scheduled time, so that all who planned to attend the remaining paper(s) can do so. The moderator has the authority to stop a presentation in a respectful manner that is about to run overtime.

This conference abides by the ASEE Meeting Code of Conduct found at:

www.asee.org/documents/conferences/annual/2019/Code_of_Conduct_for_ASEE_Meetings.pdf

Moderators should feel empowered to curtail any inappropriate behavior they witness. For assistance during the conference, call the phone number 919-349-1925.



ASEE Southeastern Section Conference

March 7-9, 2021 George Mason University Volgenau School of Engineering Fairfax, VA



ENGINEERING EDUCATION 4.0:

PREPARING GRADUATES FOR THE NEXT WAVE OF INNOVATION

The ASEE-SE Conference is open to everyone interested in improving the engineering education experience. Participants include faculty, students, department chairpersons, college deans, and industry leaders in engineering, engineering technology, and computing education. The conference is an excellent opportunity to interact and reflect with colleagues over a myriad of engineering education issues and topics, as well as chart new directions and collaborations.

CALL FOR PRESENTATION PAPERS AND ABSTRACTS

Authors are invited to submit full-length manuscripts (6 pages) for presentation at the conference and inclusion in its proceedings. Papers addressing the conference theme will have first priority and may include topics related to the following:

- Innovative Curricula or Courses
- First Year Engineering Programs
- Cross-Discipline Practices
- Online, Distance, and Blended Approaches
- Technologies for Efficient Learning
- K-12 Outreach Programs
- Learning Communities
- Innovative and Theorhetical Concepts Exploring DEI

- Experiential Learning
- ABET Accreditation Projects
- Recruitment and Retention
- Industry Partnerships
- Engineering Common Cores
- Capstone Design Courses or Projects
- Ethics and Professional Development
- Promoting Classroom Inclusivity w/ Social Media

Authors may also address other topics of interest to the engineering education community. Guidelines for manuscript preparation are available via the Author Instructions at http://www.asee-se.org at the Conference page.

Full-length papers will be accepted based on a peer review of manuscripts. Authors are expected to present their papers at the conference to facilitate the transfer of knowledge through discussion and debate. All accepted papers presented by a timely registered author will be included in the conference proceedings.

A limited number of abstracts may be accepted for presentation. These abstracts will be neither peer-reviewed nor included in the conference proceedings.

An author/co-author can be associated with as many papers/presentations as is appropriate, but a registrant can serve as the presenter of record on a maximum of three (3) papers or presentations.

The conference will include a student program, including poster presentations for lower- and upper-division design and for undergraduate research. Details will be announced in Fall 2020.

SCHEDULE FOR SUBMISSION OF FULL-LENGTH PAPERS

Friday, September 11, 2020	Abstracts submitted by authors for consideration
Friday, September 25, 2020	Authors notified regarding acceptance
Friday, November 6, 2020	Draft manuscripts due from authors for review
Friday, December 4, 2020	Reviewed manuscripts returned to authors
Friday, January 8, 2021	Final manuscripts due from authors
Friday, January 15, 2021	Notification of final paper acceptance
Friday, January 22, 2021	Deadline for presenters to register for conference

Submit a 250-300 word abstract in doc, docx, or pdf file format by September 11, 2020. Please visit <u>http://www.asee-se.org</u> throughout Summer 2020 for details.

CONTACTS

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NOTES



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