

AIChE Annual Student Conference 19

Conference



NOVEMBER 8-11, 2019 | HYATT REGENCY, ORLANDO, FL

AIChE Young Professional (YP) MEMBERSHIP BENEFITS

Belong to Something Bigger with AIChE



At AIChE, we know that graduating with a Chemical Engineering degree is no small feat. That is why AIChE is dedicated to helping you be the best you can be, at every stage of your career as a professional Chemical Engineer.

In keeping with this commitment, AIChE is excited to announce that the AIChE Board of Directors is gifting recently-graduated AIChE student members with their **first year of Young Professional (YP) membership at no charge**. We hope that you will take advantage of all the AIChE benefits for Young Professional members and continue to belong to something bigger. Bigger ideas. Bigger networks. Bigger paths for career advancement. Belong to AIChE, the global home of chemical engineers.

Young Professional MEMBERSHIP DUES

Membership Level	Dues per Year
1st year YP	\$0
2nd year YP	\$50
3rd year YP	\$100
4th year YP	\$150
5th year YP	\$199*
Graduate Student	\$50

* Annual professional membership dues

Young Professional Membership Benefits at a Glance

As you begin your career, continue to access a vast array of technical information, educational opportunities and career tools developed for your professional growth. The many benefits of belonging to this chemical engineering community include:

- Technical information in the form of **webinar bundles**, **CEP article bundles** and **conference proceedings tailored for First Year Professionals**
- Opportunities to expand your network by joining a **Division or Forum** in your specialty area, your **Local Section** and the **Young Professionals Committee**
- Members only rates to attend **AIChE conferences**
- **AIChE career resources** and online leadership trainings
- Keeping up to date on new developments in the chemical engineering profession through **CEP magazine**, and via **AIChExchange**, the AIChE YP Newsletter and **Smart-Brief** electronic newsletters
- Belonging to the supportive **global network** of 60,000+ members

AIChE Young Professionals Committee Volunteer Opportunities

Volunteer with the AIChE Young Professionals Committee through its various subcommittees focusing on:

- Publications
- YP Retention & Recruitment
- Conference Programming
- Local Sections
- AIChE's Beer Brewing Competition

Contact YPC's leadership at ypc@aiche.org or learn more at www.aiche.org/yp.

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A Note on Sustainability at AIChE Meetings

AIChE constantly reviews the materials used at and produced for Meetings in terms of sustainability. Every attempt is made to use sustainable products within the economic framework of the meeting. Specific items may include the use of recycled or FSC certified papers, environmentally friendly inks and solvents, use of electronic (pdf) instead of printed materials, limiting the quantities produced and use of production facilities closer to the meeting site.

Neither the American Institute of Chemical Engineers (AIChE), the presenters and author(s) of this work, their employer, nor their employer's officers and directors, warrant or represent expressly or by implication, the correctness or accuracy of the content of the information presented. As between (1) the AIChE, the presenter and author(s) of this work, their employers, and their employers' officers and directors, and (2) the user/viewer of this work, the user/viewer accepts any legal liability or responsibility whatsoever for the consequence of its use or misuse.

2019 ASC WELCOME

AICHE®, the University of South Florida and the Executive Student Committee would like to welcome you to Orlando and to the 2019 Annual Student Conference

BADGES AND ON-SITE REGISTRATION

Hyatt Regency Orlando, Regency Foyer

Friday, November 8
5:00 PM – 7:00 PM

Saturday, November 9
8:00 AM – 5:00 PM

Sunday, November 10
8:00 AM – 5:00 PM

Be sure to wear your badge at all times — it is your ticket to all Student Conference events and the AIChE Annual Meeting.

SPECIAL THANKS

Annual Student Conference Hosts

University of South Florida
Executive Student Committee

Student Chapters Committee

Derek Englert, *Chair*
Stephanie Loveland, *1st Vice Chair*
Stephen Martin, *2nd Vice Chair*
Tracy Benson, *Past Chair*

Download the 2019 Annual Student Conference App to Navigate the Event like a Pro

Scan the QR code to quickly find.



Search for “AIChE Events” and download from the App Store or Google Play.



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2019 ASC SPONSORS

Chem-E-Car Competition® Sponsor | ASC Platinum & AIChE ScaleUp Platinum Sponsor



ASC Gold Sponsors



ASC Bronze Sponsors



AIChE ScaleUp Gold Sponsors





A NOTE ON PHOTOGRAPHY AND VIDEOGRAPHY FROM THE MEETING ORGANIZERS

Recording & Photography Policy

AIChE Meetings are one of the primary ways the Institute fulfills its mission to advance the development and exchange of relevant knowledge. The content presented at this event is the property of the presenters and the firms where they work. **Recording of sessions or taking photos of slides is strictly prohibited.**



General Photography Notice

Sessions and events at the meeting are being photographed by a professional photographer. These photos will be used to illustrate articles in CEP Chemical Engineering Progress® Magazine, on the AIChE website and in promotional materials for future Meetings. By registering for this conference, you consent to your likeness being used for such purposes without compensation and release AIChE from any liability on account of such usage.



SAFETY TIPS

Enhance your experience at the AIChE Meeting by staying safe. Here are some safety tips to observe:



- When off the hotel grounds, please do not wear your badge in public. Doing so can give professional opportunists access to your name, which they may then exploit to your detriment.
- When you are through with your badge, turn it in to registration. Do not leave it laying in the open so that unscrupulous individuals have access to it. In addition, please do not let anyone have access to your badge for any purpose. Lending badges to others for access to the meeting is strictly prohibited.
- Have your room key out and ready when entering your hotel room. Fumbling in an attempt to locate it in either a pocket or purse outside your door could be a security risk.
- Never give a stranger your room number.
- Upon check-in to your room, note where the nearest fire exits are, so you know in which direction to go quickly in case of a fire emergency. Remember – smoke rises, so if necessary, while exiting, get as close to the floor as possible when there is heavy smoke present.
- When out in an urban area, it is advisable to travel in groups or pairs.
- Looking down and concentrating on a mobile device while texting or listening to music through earbuds can be a hazardous activity. Doing so while you are attempting to cross a street, get on or off an escalator, walk in a crowd, or make your way through an exhibit area can all be harmful to your safety and the safety of others. Recently, there have been many incidents of distracted meeting attendees who have attempted to walk up the down escalators or walk down the up escalators in our meeting venues.
- Please take advantage of the ample seating provided in our meeting facilities in order to use your mobile device(s) in a calm setting, so that you have a safe, enjoyable experience at AIChE meetings.
- Avoid excessive consumption of alcohol. Alcohol reduces inhibitions and impairs the capacity to reason – a perfect formula to make you a target for unscrupulous behavior.

This security advisory was implemented by AIChE's Executive Board of the Program Committee (EBPC) with your safety in mind. We welcome any other suggestions you may have to help attendees have a safe and pleasant experience at our meetings.

TIPS FOR A SUCCESSFUL MEETING



Say **hello** to everyone.
You might make someone's day.



Introduce yourself to people you don't know.
They may be your next good friends.



Stop and **smile**.
You will brighten the room considerably.



Be **understanding**.
Everybody makes mistakes.



Help those with less experience.
We were all novices at some point.



Respect others.
We all have something valuable to contribute.



Value staff and volunteers.
They are here for you.



Be **kind**.
You will never like everybody, but you can be cordial to all.



Enjoy the meeting!
You can have fun while sharing, learning and networking.

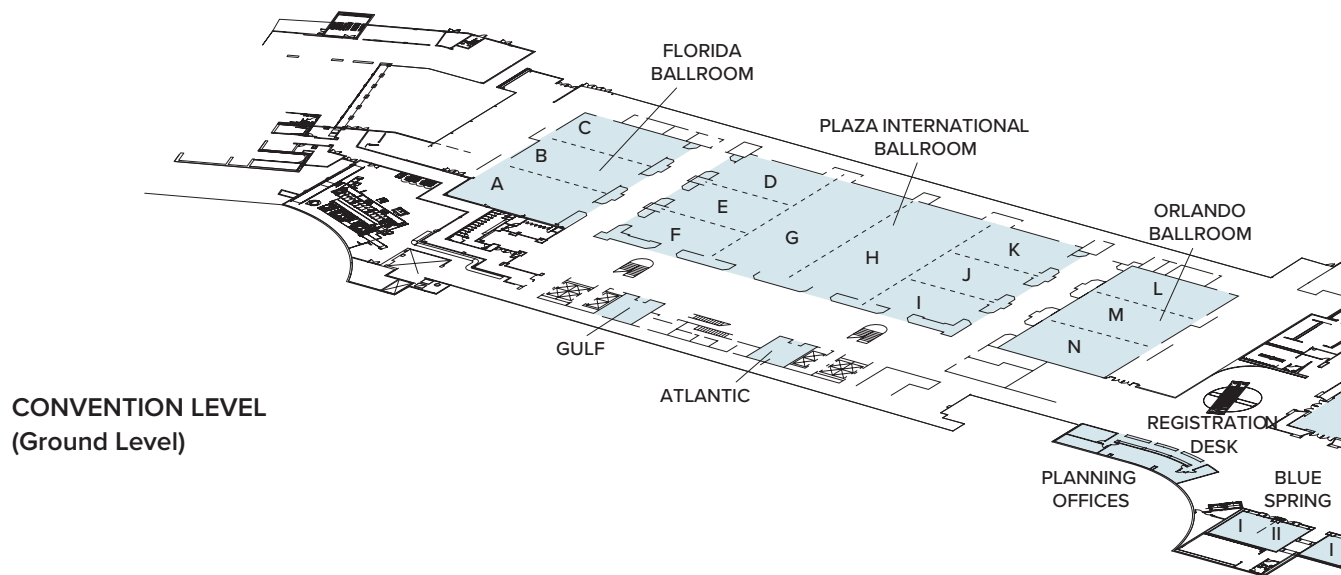
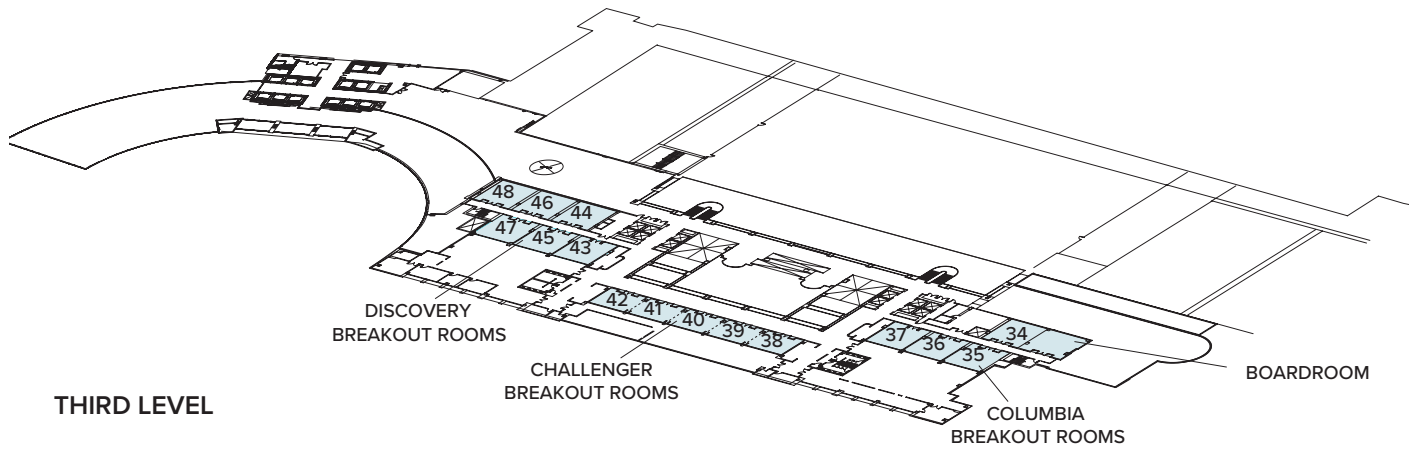
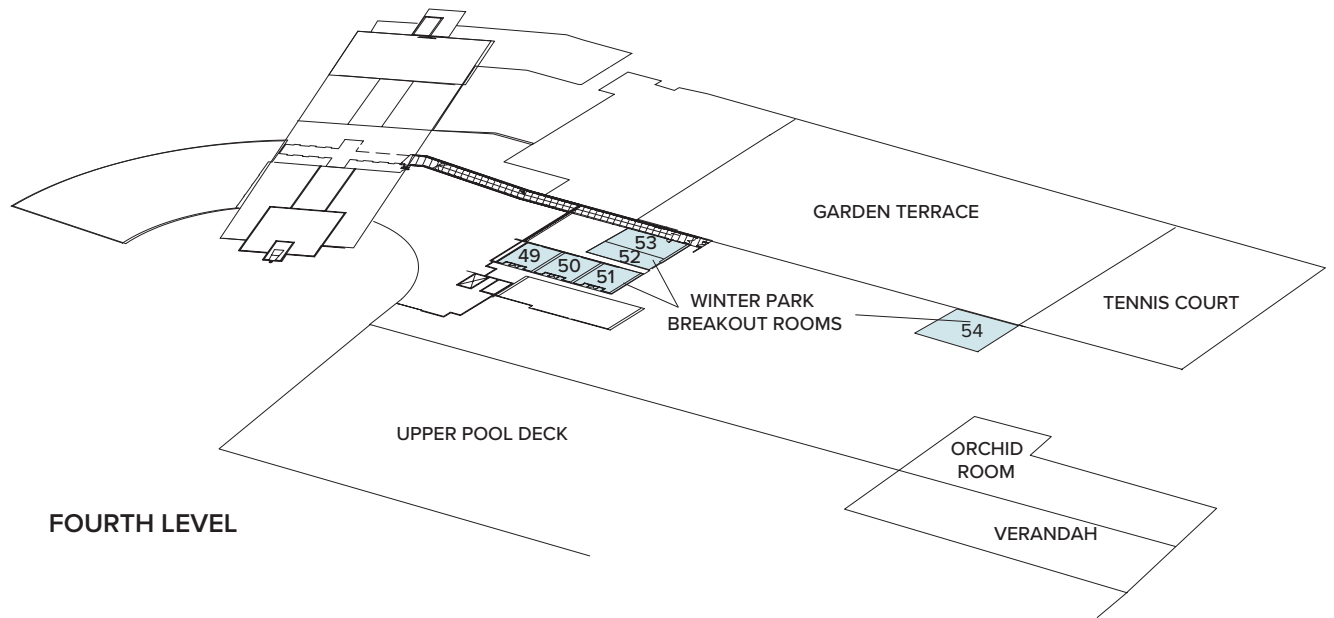
DOWNLOAD THE 2019 ASC MEETING APP

Stay organized with up-to-the-minute exhibitor, speaker and event information. Build a personalized schedule and interactively locate sessions and exhibitors on the meeting venue maps.

PERSONALIZE YOUR ANNUAL STUDENT CONFERENCE EXPERIENCE.
DOWNLOAD THE APP TODAY.

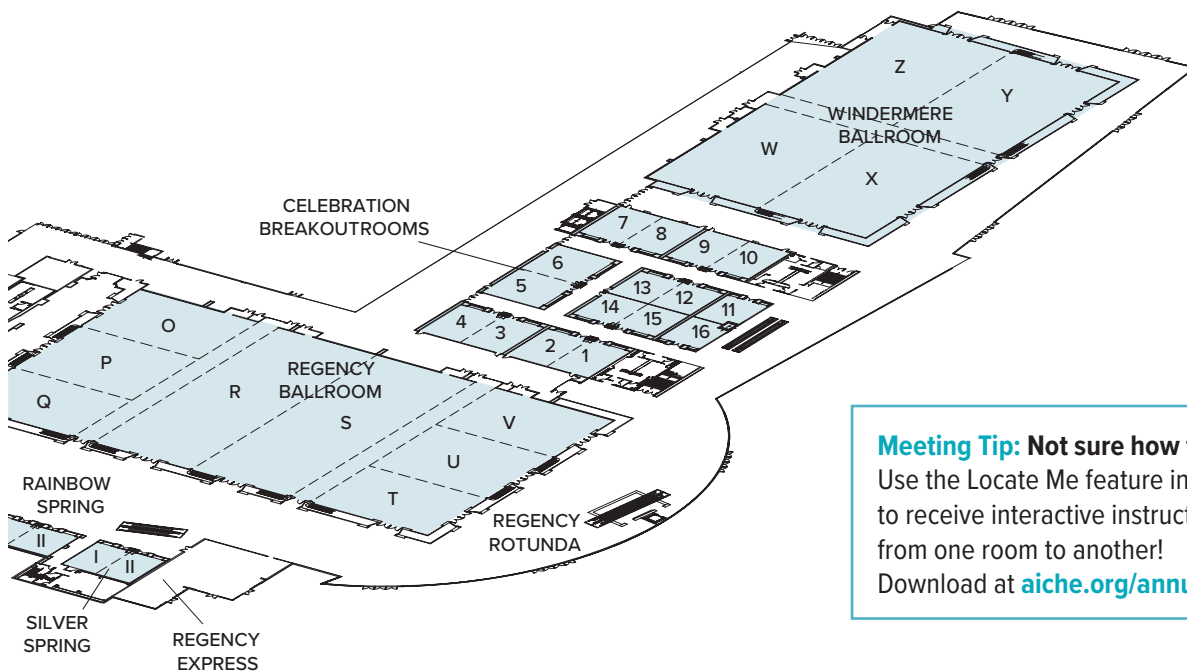
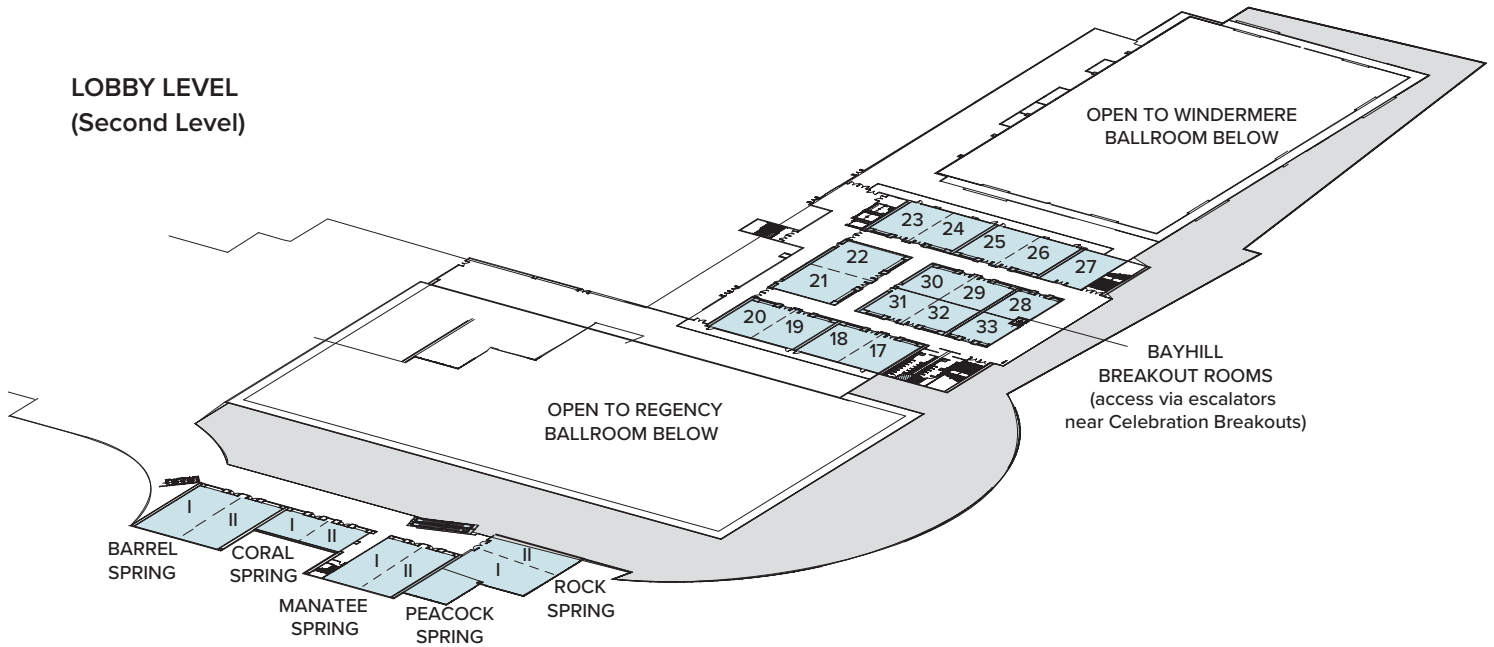


HYATT REGENCY FLOOR PLANS



HYATT REGENCY FLOOR PLANS

LOBBY LEVEL (Second Level)



Meeting Tip: Not sure how to get there?

Use the Locate Me feature in the Mobile App to receive interactive instructions on traveling from one room to another!

Download at aiche.org/annualapp

STUDENT CHAPTER + CAREER WORKSHOPS

Saturday, November 9, 2019 | 10:45 AM - 4:30 PM | Hyatt Regency Orlando

Session Breakouts	Student Chapters	Research & Professional Development	Preparing for a ChemE Career	Sponsored Workshops	Spotlight: Town Hall with AIChE Leadership		
Room ►	Blue Spring I/II	Orlando Ballroom N	Plaza International Ballroom J/K	Plaza International Ballroom D/E	Orlando Ballroom M		
10:45 AM - 11:30 AM	DEVELOPING YOUR CHAPTER Making a Lasting Impact: The Lifetime Engineering Applications Project <i>University of California, Los Angeles Student Chapter</i> Mentorship <i>University of Michigan - Ann Arbor Student Chapter</i>	Finances and Your First Job – Financial Planning for ChemE Careers <i>Young Professionals Committee</i>	A Day in the Life of a Process Engineer <i>Mieke Groothuizen & Kristine Pizarro, Chevron</i>	Process Simulation in the Real World <i>Whitney Garcia & Carla Lara, Chemstations</i>	Town Hall with AIChE Leadership: Innovation & Inclusion Moderator: Billy Bardin , <i>Global Operations Technology Director, The Dow Chemical Co.</i> Panelists: Kimberly Ogden , <i>Director, Institute for Advanced Energy Solutions & Professor, University of Arizona</i> Monty Alger , <i>Director, Institute for Natural Gas Research & Professor, Pennsylvania State University</i> Kate Gawel , <i>Project Lead, Campbell Soup Company</i> Ana Davis , <i>Head HSE Crop Protection, Syngenta Crop Protection</i>		
11:30 AM - 11:45 AM	Break						
Session Breakouts	Student Chapters	Research & Professional Development	Preparing for a ChemE Career	Landing the Job	Specialty Areas of Chemical Engineering I	Specialty Areas of Chemical Engineering II	Sponsored Workshops
Room ►	Blue Spring I/II	Orlando Ballroom N	Plaza International Ballroom J/K	Plaza International Ballroom D/E	Orlando Ballroom M	Orlando Ballroom L	Plaza International Ballroom I
11:45 AM - 12:30 PM	DEVELOPING YOUR CHAPTER How to Create a Diverse, Encouraging and Socially Responsible Chapter <i>Centro Universitário SENAI CIMATEC Student Chapter</i> Marketing Your Chapter <i>Purdue University Student Chapter</i>	Washington Internships for Students of Engineering <i>Josh Leonard, WISE</i>	Starting Your Career with Evonik <i>Ryan Morrison, Evonik</i>	Effective Interviewing for Industrial Positions <i>Gregory Yeo, ExxonMobil</i>	Green Collar Career Opportunities for Chemical Engineers <i>Environmental Division</i>	Chemical Engineers in the Pharmaceutical Industry <i>Pharmaceutical Discovery, Development, Manufacturing Forum</i>	Elsevier Data Analytics Tools for Undergraduate Research <i>Chris Cogswell, Elsevier</i>

STUDENT CHAPTER + CAREER WORKSHOPS

12:30 PM	Annual Student Conference Lunch Regency Ballroom O-R						
	Spotlight: Leadership Panel						
01:30 PM - 02:30 PM	Leadership Panel Regency Ballroom O-R Moderator: Michelle Bryner , <i>Lead Engineer, Facilitation Process Manager, AIChE</i> Panelists: Cynthia Murphy , <i>Manager of University Partnerships & Association Relations, Chevron</i> Gregory Yeo , <i>Chief Engineer, ExxonMobil Chemical Company</i> Nada Anid , <i>Vice President, Strategic Communications & External Affairs, New York Institute of Technology</i> Donna Bryant , <i>Senior Process Engineer, Johnson Matthey</i>						
02:30 PM - 02:45 PM	Break						
Session Breakouts	Student Chapters	Research & Professional Development	Preparing for a ChemE Career	Landing the Job	Specialty Areas of Chemical Engineering I	Specialty Areas of Chemical Engineering II	Sponsored Workshops
Room ►	Blue Spring I/II	Orlando Ballroom N	Plaza International Ballroom J/K	Plaza International Ballroom D/E	Orlando Ballroom M	Orlando Ballroom L	Plaza International Ballroom I
02:45 PM - 03:30 PM	CHAPTER & INDUSTRY COLLABORATION Developing and Maintaining Connections to Industry Partners <i>Purdue University Student Chapter</i> How to Develop Your Sister Chapter Program <i>University of Michigan & Universidad Nacional de Colombia - Medellin Student Chapters</i>	Career Planning and Job Searching for Entrepreneurial-Focused Science and Engineering Professionals <i>Alaina Levine</i>	The Professional Engineering Career Path <i>Licensing and Professional Development</i>	Applying to Graduate School and Research Fellowships <i>Young Professionals Committee</i>	Nuclear Workforce for Chemical Engineers <i>Nuclear Engineering Division</i>	The Role of Mixing in Fast, Competitive Chemical Reactions <i>North American Mixing Forum</i>	WIN an Internship with AVEVA Software <i>AVEVA</i>
03:30 PM - 03:45 PM	Break						

STUDENT CHAPTER + CAREER WORKSHOPS

Session Breakouts	Student Chapters	Research & Professional Development	Preparing for a ChemE Career	Landing the Job	Specialty Areas of Chemical Engineering I	Specialty Areas of Chemical Engineering II	Sponsored Workshops
Room ►	Blue Spring I/II	Orlando Ballroom N	Plaza International Ballroom J/K	Plaza International Ballroom D/E	Orlando Ballroom M	Orlando Ballroom L	Plaza International Ballroom I
03:45 PM - 04:30 PM	SECRETS TO SUCCESS: REGIONAL CONFERENCE PLANNING Hosting a Successful Regional Student Conference <i>University of Toledo Student Chapter</i> How to Organize a Successful Conference? PROCESA 2019: 1st AIChE Colombia Student Regional Conference <i>Universidad Nacional de Colombia - Medellín Student Chapter</i>	Executing a Chapter's Garbage Idea Using Entrepreneurship Principles <i>Texas Tech University Student Chapter</i>	Inflection Points: a Panel on Critical Career Decisions in Chemical Engineering <i>Management Division</i>	Successfully Navigating an International Job Search <i>Alaina Levine</i>	A Hitchhiker's Guide through Nanoscale Science and Engineering Forum <i>Nanoscale Science and Engineering Forum</i>	World of Particle Technology <i>Particle Technology Forum</i>	Electrolyte Modeling Basics <i>OLI Systems, Inc.</i>

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Exploring opportunities. Growing together.



SCHEDULE OF EVENTS + PRESENTATIONS

FRIDAY, NOVEMBER 8

Graduating Senior Networking Mixer

Sponsored by Evonik

Ticketed Event (\$5)

7:00 PM – 9:00 PM

Hyatt Regency Orlando, Regency Foyer

This mixer is an opportunity for our graduating seniors to network amongst peers and AIChE Professionals. Please note that this is a 21+ event. *If capacity allows, tickets will be available for purchase at the Conference Registration Desk.*

SATURDAY, NOVEMBER 9

Annual Student Conference Welcome Breakfast

8:45 AM – 9:30 AM

Hyatt Regency Orlando, Regency Ballroom O-R

Continental breakfast will be served for all attendees before the Annual Student Conference Keynote address. Be sure to wear your Annual Student Conference badge.

Annual Student Conference Welcome Ceremony & Keynote Address

9:30 AM – 10:40 AM

Hyatt Regency Orlando, Regency Ballroom O-R

Kick off the Annual Student Conference with an exciting keynote speaker, **Karen McKee**, President of ExxonMobil Chemical Company in Spring, TX. AIChE leaders will also be on hand to review the schedule for the weekend.

Karen will be delivering her talk titled **Providing the Spark: A Call to Leadership**. Society has always faced grand challenges and today is no different. As chemical engineers, we are called to identify the technologies and develop the innovations that will help advance human process. Together, we can do so responsibly, with a focus on protecting resources for future generations.

Student Chapter & Career Workshops

10:45 AM – 4:30 PM

Hyatt Regency Orlando

See full schedule as a grid on previous page. Lunch is served from 12:30 PM – 1:30 PM.

Town Hall with AIChE Leadership: Innovation & Inclusion

10:45 AM – 11:30 AM

Hyatt Regency Orlando, Orlando Ballroom M

AIChE Board of Directors

Moderator: Billy Bardin, *Global Operations Technology Director, The Dow Chemical Co.*

Where do you see the profession going? Why did you major in chemical engineering and how do you think you will contribute to the future of the profession? All AIChE Student Members are invited and encouraged to attend and share your thoughts about the future of chemical engineering with the AIChE Board of Directors. This panel discussion will provide an open forum for the board to share their insights, and for students to voice their own thoughts about where they see the profession headed and how AIChE can continue to support its members at all stages of their career.

Panelists:

Kimberly Ogden, *Director, Institute for Advanced Energy Solutions & Professor, University of Arizona*

Monty Alger, *Director, Institute for Natural Gas Research & Professor, Penn State University*

Kate Gawel, *Project Lead, Campbell Soup Company*

Ana Davis, *Head HSE Crop Protection, Syngenta Crop Protection*

Developing Your Chapter I

10:45 AM – 11:30 AM

Hyatt Regency Orlando, Blue Spring I/II

Here from fellow student chapter leaders on ways to improve your chapter. Two 20-minute sessions will be held.

10:45 AM

Making a Lasting Impact: The Lifetime Engineering Applications Project

Allyson Abad & Keegan Kim, *University of California, Los Angeles*

11:10 AM

Mentorship

Alex White, *University of Michigan, Ann Arbor*

Finances and Your First Job - Financial Planning for ChemE Careers

10:45 AM – 11:30 AM

Hyatt Regency Orlando, Orlando Ballroom N

Julia Lin & Victoria Muir, *Young Professionals Committee*

How do I start saving money? What benefits should I enroll in? How do I start planning for retirement? Join the Young Professionals Committee (YPC) for a discussion on the benefits and rewards of financial planning when starting your first job. This session will feature YPC members in a variety of careers (graduate school, industry, government, etc.) and discuss tips for money management and planning for retirement.

SCHEDULE OF EVENTS + PRESENTATIONS

YPC members will discuss topics such as investing in 401Ks, budgeting, benefits packages, student debt, and planning for retirement. YPC members will also discuss topics that they wish they knew when starting their first jobs.

A Day in the Life of a Process Engineer

10:45 AM — 11:30 AM

Hyatt Regency Orlando, Plaza International Ballroom J/K

Mieke Groothuizen & Khristine Pizarro, Chevron

What does a Process Engineer do at an energy company? What are some of the daily tasks that Process Engineers work on and challenges they face? What skills are needed beyond engineering skills to excel? How do you transition from the academic environment to the professional world? Join Process Engineers at Chevron as they describe what they do on a daily basis and how they integrate a variety of professional skills including teamwork, communication and networking, to be successful.

Process Simulation in the Real World

10:45 AM — 11:30 AM

Hyatt Regency Orlando, Plaza International Ballroom D/E

Whitney Garcia & Carla Lara, Chemstations

Most universities only use process simulators in the senior design course. What happens when you graduate? Where would you use these types of tools in the “real world”? Join our interactive workshop & win some fun ChemE prizes!

Developing Your Chapter II

10:45 AM — 11:30 AM

Hyatt Regency Orlando, Blue Spring I/II

Learn how to build and market your student chapter more efficiently and effectively, while being more thoughtful and inclusive. Two 20-minute sessions will be held.

11:45 AM

How to Create a Diverse, Encouraging and Socially Responsible Chapter

Leonardo Barbosa & Catarina Ferracini, Centro Universitário SENAI CIMATEC

12:10 PM

Marketing Your Chapter

Chandani Patel, Purdue University

Washington Internships for Students of Engineering

11:45 AM — 12:30 PM

Hyatt Regency Orlando, Orlando Ballroom N

Josh Leonard, WISE program

Since 1980, the Washington Internships for Students of Engineering program has prepared future leaders of the engineering profession in the United States for the increasingly important issues at the intersection of science, technology, and public policy. Every year AIChE's WISE program selects

outstanding engineering students to conduct research on a public policy issue and learn how engineers can contribute to public policy decisions in complex technological matters. This session will feature AIChE WISE program alumni, who will be sharing stories about their experience and will talk about career opportunities for chemical engineers in public policy. The deadline to apply for the 2019 AIChE WISE Program is December 31, 2019. All students who are interested in applying are encouraged to attend.

Starting your Career with Evonik

11:45 AM — 12:30 PM

Hyatt Regency Orlando, Plaza International Ballroom J/K

Ryan Morrison, Evonik

We may not manufacture tires, mattresses, medications or animal feeds, but Evonik is part of all of those products—and many more. While we often contribute only small amounts of material, those contributions are precisely what make the difference. That's because Evonik products make tires fuel efficient, mattresses more elastic, medications more effective and animal feeds healthier. That's what specialty chemicals are all about. And when it comes to specialty chemicals, we're among the best in the world. Evonik stands for attractive business and innovation prowess. Our corporate culture is geared toward results, profitable growth and increasing the value of the company. Operating in over 100 countries, we benefit from close customer relationships and leading market positions. Over 36,000 employees are united by the understanding that no product is so perfect that you can't make it better.

During this workshop, we will present the common career pathways for recently graduated engineers to develop into experts and leaders. We will also discuss international opportunities to work at any of our global locations. See what chemistry can do for you at careers.evonik.com #HumanChemistry.

Effective Interviewing for Industrial Positions

11:45 AM — 12:30 PM

Hyatt Regency Orlando, Plaza International Ballroom D/E

Gregory E. Yeo, ExxonMobil Chemical Company

Successful interviewing isn't a matter of tricks and techniques - it's about principles and preparation. It's about knowing the company you're speaking to, knowing what you have to offer and being able to engage in a professional discussion with a potential colleague. Greg has interviewed hundreds of chemical engineering students for jobs in industry and will share insights and approaches you can use to make your job interviews more effective.

SCHEDULE OF EVENTS + PRESENTATIONS

Green Collar Engineering Opportunities for Chemical Engineers

11:45 AM — 12:30 PM

Hyatt Regency Orlando, Orlando Ballroom M

Environmental Division

Debalina Sengupta, *Texas A&M Engineering Experiment Station*

Richard Siegel, *R&B Consulting Services*

This workshop will engage students in an interactive discussion about the challenges, advantages, and career opportunities for chemical engineers in the environmental field. A brief overview presentation of opportunities in industry, academia, consulting and government will be followed by an extensive question and answer session to help the students better understand their potential career options.

Chemical Engineers in the Pharmaceutical Industry

11:45 AM — 12:30 PM

Hyatt Regency Orlando, Orlando Ballroom L

Pharmaceutical Discovery, Development, Manufacturing Forum

Dana Alhasson, *Abbvie*

Keith Mattern, *Merck*

Chris Wilbert, *BMS*

Workshop panelists will discuss various roles and responsibilities of chemical engineers in the pharmaceutical industry by presenting their work experiences to the audience. These discussions will showcase the interesting technical challenges encountered by chemical engineers in our field and highlight the roles chemical engineers play in pharmaceutical research, development, and manufacturing. A question and answer segment will follow the panelists' presentations to provide the audience with further information.

Elsevier Data Analytics Tools for Undergraduate Research

11:45 AM — 12:30 PM

Hyatt Regency Orlando, Plaza International Ballroom I

Chris Cogswell, *Elsevier*

Research as an undergraduate student can be a challenge, requiring a significant commitment outside of the classroom and oftentimes eating up a large portion of an undergraduate student's free time. Although undergraduate research experience is often well worth the extra effort, maximizing the value obtained from the undergraduate-graduate student/PI relationship is a goal which all who partake in these efforts share. In order to help maximize the understanding of the underlying research literature, as well as the goal of the individual research project, Elsevier has a suite of research tools which can be used by both student and mentor to help improve the undergraduate research experience. In this session, we will discuss how to use these tools to promote overall understanding of the existing literature and spaces where gaps exist, as well as improving knowledge of the

underlying science required for valuable contribution in the lab. Whether you are a new professor hoping to foster a strong undergraduate research team within your lab, a freshman student looking to get into research, or a senior writing your NSF GRFP application this session will provide helpful tools and valuable time saving search strategies.

AIChE Annual Student Conference Lunch

12:30 PM — 1:30 PM

Hyatt Regency Orlando, Regency Ballroom O-R

Lunch will be served for all prior to the Leadership Panel. Be sure to wear your Annual Student Conference badge.

Leadership Panel

1:30 PM — 2:30 PM

Hyatt Regency Orlando, Regency Ballroom O-R

Moderator: Michelle Bryner, *Lead Engineer, Facilitation Process Manager, AIChE*

The 2019 Annual AIChE Student Conference will feature a Leadership Panel that will give students the opportunity to learn about the experiences and obstacles of successful Chemical Engineers in a variety of career paths.

Panelists include:

Cynthia Murphy, *Manager of University Partnerships & Association Relations, Chevron*

Gregory Yeo, *Chief Engineer, ExxonMobil Chemical Company*

Nada Anid, *Vice President, Strategic Communications & External Affairs, New York Institute of Technology*

Donna Bryant, *Senior Process Engineer, Johnson Matthey*

Chapter & Industry Collaboration

2:45 PM — 3:30 PM

Hyatt Regency Orlando, Blue Spring I/II

Collaboration is an important tool available to all student chapters, whether its between multiple chapters or with industry partners. Learn how to get more involved with peers and partners!

2:45 PM

Developing and Maintaining Connections to Industry Partners
Rohan Dighe & Chandani Patel, *Purdue University*

3:10 PM

How to Develop Your Sister Chapter Program
Juanita Mejia Restrepo & Maria Paula Giraldo Agudelo, *Universidad Nacional de Colombia – Medellín*
Alex White, *University of Michigan, Ann Arbor*

SCHEDULE OF EVENTS + PRESENTATIONS

Career Planning and Job Searching for Entrepreneurial-Focused Science and Engineering Fundamentals

2:45 PM — 3:30 PM

Hyatt Regency Orlando, Orlando Ballroom N

Alaina Levine, Quantum Success Solutions

Thinking of starting your own business or consultancy? Or perhaps you are interested in working in or with an entrepreneurial venture? This presentation will address careers in entrepreneurship, of which there are many. We will discuss the entrepreneurial ecosystem, and how to prepare for and find and land jobs in this ecosystem. And for those of you interested in being the entrepreneur, we will address how to design a career plan that will incorporate your goals with your interests, passions, and skills. Learn about the basics of launching your own company, developing your brand, and finding and solidifying customers.

The Professional Engineering Career Path

2:45 PM — 3:30 PM

Hyatt Regency Orlando, Plaza International Ballroom J/K

Joseph J. Cramer & William Parrish, Licensing and Professional Development

This presentation discusses how becoming a Professional Engineer (PE) can enhance a chemical engineer's career. Students learn about the PE licensure process and the two exams required to become licensed. The Computer Based Testing (CBT) exam content for both the Fundamentals of Engineering (FE) Exam and Practice of Engineering (PE) exams are described. The presentation utilizes embedded videos of young PEs and stresses the value of taking the FE exam before, or shortly after, graduation. It aims to demystify the FE/PE process. The workshop leaders are Joe Cramer and Bill Parrish who are chemical engineering PE's and active members of the AIChE's Licensing and Professional Development Committee as well as the National Council of Examiners for Engineering and Surveying's Chemical PE Exam Committee. Both have also served on AIChE's Career and Educational Operating Council which oversees licensing for AIChE. The workshop encourages Q&A and interaction with attendees.

Applying to Graduate School and Research Fellowships

2:45 PM — 3:30 PM

Hyatt Regency Orlando, Plaza International Ballroom D/E

Victoria Muir, Young Professionals Committee

Why should you pursue a graduate degree in engineering? What should you consider when applying to graduate school? How do you ace your fellowship and graduate program applications? How can AIChE help you prepare for graduate school and excel as a graduate student as you pursue your degree? Members of AIChE's Young Professionals Committee (YPC) will be discussing answers to all of these questions and more. This session will feature a presentation followed by a panel

of current graduate students and recent graduates in YPC. Join us for a great session discussing everything you need to prepare for your graduate school career.

Nuclear Workforce for Chemical Engineers

2:45 PM — 3:30 PM

Hyatt Regency Orlando, Orlando Ballroom M

Nuclear Engineering Division

Supathorn Phongikaroon, Virginia Commonwealth University

The main objective of this workshop is to highlight a rise in nuclear workforce and to point out the sheer number of positions that will become available to graduates from chemical engineering programs. Students will have an opportunity to learn about how to become a part of nuclear science, engineering and technology and how to ensure that young professionals in chemical engineering major to relate themselves for the foreseeable future of the nuclear national laboratories, suppliers/industries, and universities.

The Role of Mixing in Fast, Competitive Chemical Reactions

2:45 PM — 3:30 PM

Hyatt Regency Orlando, Orlando Ballroom L

North American Mixing Forum

Richard K. Grenville, Philadelphia Mixing Solutions Ltd.

Many valuable products are made by reactions that are both fast and competitive. In a perfectly mixed reactor the concentrations of the reacting species are uniform throughout the volume and the outcome of the reaction is determined by kinetics. In order to achieve this condition, the reactants must be mixed at a rate that is at least equal to the rate of reaction. The ratio of these rates is a Damkohler number. When scaling-up the Damkohler number must be kept constant to endure that the reaction environment is the same at the two scales. If it is not, the yield of the desired product will reduce and more by-products will be formed. In this seminar a qualitative approach to characterizing the performance of impellers operating in the turbulent regime will be discussed. Impellers in stirred tanks can be considered pumps (as they are machines that move fluid) and can be characterized in terms of their power input, flow and shear generation and efficiency. This understanding can help to determine which impeller type is best suited to a mixing process.

WIN an internship with AVEVA Software

2:45 PM — 3:30 PM

Hyatt Regency Orlando, Plaza International Ballroom I

AVEVA

Enter the 2020 competition with AVEVA and get the opportunity to apply your process design skills to solve a real-world design problem using the new generation Simulation Platform SIMCENTRAL.

This workshop will be presented by Dr. Richard Turton, the lead author of two textbooks, "Analysis, Synthesis, and Design

SCHEDULE OF EVENTS + PRESENTATIONS

of Chemical Processes” (5th edition) and “Chemical Process Equipment Design”, both books are published by Prentice-Hall (Pearson). He has extensive experience in the process systems engineering area and routinely teaches courses in the design and simulation areas. This workshop will also be presented by Mike Donahue, Senior Consulting Manager, Aveva. He received his MS in Engineering and BS in Chemical Engineering from Cal Poly where he also teaches Process Design as an Adjunct Lecturer.

Secrets to Success: Regional Conference Planning

3:45 PM — 4:30 PM

Hyatt Regency Orlando, Blue Spring I/II

Student chapters share their tips on how to successfully plan and host a regional student conference. Two 20-minute sessions will be held.

3:45 PM

Hosting a Successful Regional Student Conference

Kayla Piezer, McKenna Wirebaugh & Daniel Reichenbach,
University of Toledo

4:10 PM

How to Organize a Successful Conference: PROCESA 2019:
1st AIChE Colombia Student Regional Conference

Mayra Bejarano & Jefferson Quiroz Fabra,
Universidad Nacional de Colombia - Medellín

Executing a Chapter's Garbage Idea Using Entrepreneurship Principles

3:45 PM — 4:30 PM

Hyatt Regency Orlando, Orlando Ballroom N

Yogi Paturu, Koch Industries & Texas Tech University
Jazmine Good & Harish Parvatam, Texas Tech University

On November 2017, the Texas Tech University Student Chapter had an unsophisticated idea: to pick up trash. By May 2019, they picked up 4,500+ pounds of trash in Lubbock neighborhoods. While coming up great ideas is important, executing garbage ideas well has tremendous value. An AIChE Student Chapter, a startup, and a large innovative company all reside in environments of high uncertainty. For this reason, the Lean Startup method's entrepreneurship principles apply: (1) entrepreneurs are everywhere, (2) entrepreneurship is management, (3) validated learning, (4) innovation accounting, (5) build-measure-learn. Learning objectives: - understand what the 5 principles of Lean Startup method are - see how they apply to an AIChE Student Chapter event, MyCleanLBK - empower chapters with tools to execute events well - put chapter leadership at ease by illustrating that although coming up with great ideas is hard/important, executing “garbage ideas” well is easy and has tremendous value.

Inflection Points: a Panel on Critical Career Decisions in Chemical Engineering

3:45 PM — 4:30 PM

Hyatt Regency Orlando, Plaza International Ballroom J/K

Austin S. Lin, Management Division

Study hard, graduate, get your first chemical engineering job: these are the typical career steps outlined to any student looking at their career choices ahead after graduation. But what's that like in real life? This panel will be a facilitated discussion of chemical engineers at different stages of their careers focusing on the critical career decisions they made along the way. This mix of personal stories and audience interaction will show that there is no one answer to building a chemical engineering career. Panelists include speakers from Google, Wacker Chemical, Shell, and Lubrizol.

Successfully Navigating an International Job Search

3:45 PM — 4:30 PM

Hyatt Regency Orlando, Plaza International Ballroom D/E

Alaina Levine, Quantum Success Solutions

Applying for a job in one country while finishing up education and training in another can be challenging, but it can be done with success. This presentation will discuss specific strategies to finding jobs in another country while one is abroad and how to leverage networks in country to access opportunities, especially those that are hidden. Special emphasis will be placed on establishing a reputation as a leader in a field with professionals in the target country or region in which you wish to work. Case studies will be shared.

A Hitchhiker's Guide through Nanoscale Science and Engineering Forum

3:45 PM — 4:30 PM

Hyatt Regency Orlando, Orlando Ballroom M

Nanoscale Science and Engineering Forum
Reginald E. Rogers Jr., University of Missouri

The world of nanoscale materials has become vast and overly complex. Numerous avenues for research, development, and application have made understanding the impacts of the world of nano more complicated. Whether it is nanobiotechnology or energy-related fields, nanoscale materials have become an important thrust for future growth of science and technology. In this workshop, we will delve deep into the world of nanoscale science and engineering. Examples from nanobiotechnology, carbon nanomaterials, and nanomaterials for energy-related applications will showcase how you can be a part of this ever-growing world. An interactive discussion panel will help audience members understand the different career paths available for pursuing work involving nanoscale materials. It is expected participants will leave with a broader and fuller understanding of nanoscale science and engineering and the importance of their contributions to its continual evolution.

SCHEDULE OF EVENTS + PRESENTATIONS

World of Particle Technology

3:45 PM — 4:30 PM

Hyatt Regency Orlando, Orlando Ballroom L

Particle Technology Forum

Mayank Kashyap, SAB/C

Ben Freireich & Reddy Karri, Particulate Solid Research, Inc.

The use of nanoscale materials continues to drive many of today's industries. From consumer products to medicine, nanomaterials play a pivotal role in how society functions on a day-to-day basis. Being able to develop such materials at the benchtop scale and scaling up to manufacturing levels is no small feat. Various parameters (e.g. equipment capabilities, safety metrics, or raw material availability in large quantities) all play critical roles in translating from bench to product. In this workshop, we will discuss the impact of nanoscale science and engineering on today's product markets. Why has there been an explosion in the use of nanomaterials? What are the pros and cons of advancing the development of nanomaterials for consumer use? In the end, it will be shown how you can play a significant role in driving the future of nanoscale science and engineering in our society.

Electrolyte Modeling Basics

3:45 PM — 4:30 PM

Hyatt Regency Orlando, Plaza International Ballroom I

OLI Systems

The Electrolyte Modeling Basics workshop is designed for students interested in learning (or to re-learn) about electrolyte chemistry concepts and the fundamentals of modeling aqueous solutions. A lecture using OLI Studio and OLI Flowsheet software will be used to demonstrate how complex electrolyte systems can be modeled. Students will leave with a qualitative picture of how ions and molecules behave in water and a better understanding of solution properties such as pH, activity coefficients and alkalinity. This course is appropriate for those new to OLI studio, professionals working with this software and those looking for a refresher course in its underlying theory.

Chem-E-Car Competition® Safety Inspection and Poster Competition

3:30 PM — 6:30 PM

Hyatt Regency Orlando, Windermere Ballroom

This is a mandatory session for those participating in the Chem-E-Car Competition. Student teams should bring their car, poster and full printed Engineering Design Package for the Safety Inspection and Poster Competition. Judging will begin by 4:00PM.

Posters will remain displayed throughout Sunday afternoon and all are welcome to come learn about the design and chemical reactions that made these cars winners in the regional competitions. Choose which car you think will win on Sunday afternoon!

ChemE Jeopardy

Sponsored by Omega Chi Epsilon

4:00 PM – 8:00 PM

**Hyatt Regency Orlando, Florida Ballroom A,
Florida Ballroom B, Florida Ballroom C &
Plaza International Ballroom F**

Regional ChemE Jeopardy winners will compete for the 1st place title. This year's competition will feature a bracket of the top 14 qualifiers from the 2019 USA Regionals, which will begin at 4PM. An International Final round of the top 3 qualifiers from Regionals outside the USA will be held at 6PM.

4PM: USA PRELIMINARY ROUND

Florida Ballroom A

University of Idaho (1st, Pacific Northwest Region)

Louisiana State University (2nd, Southern Region)

University of Southern California (1st, Western Region)

Florida Ballroom B

Johns Hopkins University (1st, Mid-Atlantic Region)

University of Iowa (2nd, Mid-America Region)

University of Notre Dame (1st, North Central Region)

Florida Ballroom C

Brigham Young University (1st, Rocky Mountain Region)

University of Pennsylvania (2nd, Mid-Atlantic Region)

University of Massachusetts Amherst (1st, Northeast Region)

Plaza International Ballroom F

Benedictine College (1st, Mid-America Region)

Massachusetts Institute of Technology (2nd, Northeast Region)

South Dakota School of Mines (2nd, Rocky Mountain Region)

5PM: USA SEMI FINAL ROUND

Florida Ballroom A

1st Place winner - Preliminary Round, Florida Ballroom A

Highest non-winning score from Preliminary Round

Clemson University (1st, Southern Region)

Florida Ballroom B

1st Place winner - Preliminary Round, Florida Ballroom B

1st Place winner - Preliminary Round, Florida Ballroom C

3rd highest non-winning score from Preliminary Round

Florida Ballroom C

1st Place winner - Preliminary Round, Plaza International Ballroom F

2nd highest non-winning score from Preliminary Round

University of Texas, Austin (1st, Southwest Region)

6PM: INTERNATIONAL FINAL ROUND

Florida Ballroom A

Universidad de Ingeniería y Tecnología (Perú) [1st, Colombia Region]

Vellore Institute of Technology (1st, India Region)

National Institute of Technology, Rourkela (2nd, India Region)

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7PM: USA FINAL ROUND

Florida Ballroom A

1st Place winner - Semi Final Round, Florida Ballroom A

1st Place winner - Semi Final Round, Florida Ballroom B

1st Place winner - Semi Final Round, Florida Ballroom C

LGBTQ+ & Allies Ice Cream Social

Supported by LGBTQ+ & Allies Initiative & the AIChE Foundation

4:30PM – 5:30PM

Hyatt Regency Orlando, Regency Ballroom Q

I scream, you scream, we all scream for ice cream! Please join the LGBTQ+ Allies ice cream social at this year's Annual Student Conference! Mingle and network with friends and colleagues while enjoying a scoop or two.

Student Conference Night of Networking

6:00 PM – 7:30 PM

Hyatt Regency Orlando, Regency Foyer

All students are encouraged to attend the first ever Student Conference Night of Networking. Enjoy refreshments while developing relationships with future ChemE coworkers or research partners. Prizes will be available for the students who make the most connections at the event.

SUNDAY, NOVEMBER 10

Executive Student Committee Meeting

8:00 AM – 8:50 AM

Hyatt Regency Orlando, Regency Ballroom Q

AIChE's Executive Student Committee (ESC) will meet to discuss student chapter and regional initiatives, conference involvement and the opportunities and challenges facing students. All students interested in becoming a part of ESC are welcome.

Freshman & Sophomore Recognition

8:00 AM – 9:00 AM

Hyatt Regency Orlando, Plaza International Ballroom G

This event recognizes this year's freshman and sophomore award winners. All are welcome to this event to show support for their fellow classmates.

Recruitment Fair

9:00 AM – 4:00 PM

Hyatt Regency Orlando, Windermere Ballroom Foyer

Join us at AIChE's 2019 Recruitment Fair to meet ScaleUp sponsors, representatives from graduate schools, and corporate recruiters with open entry-level positions and internships. This exciting event will be your chance to decide which path is best for you after graduation. Representatives

of graduate schools and companies from across the country will be on hand to describe their degree programs along with job and internship opportunities. You will learn about current research, new and emerging study options and interesting venues for continuing your studies and starting your career.

ChemE Sports Competition

8:30 AM – 3:00 PM

Hyatt Regency Orlando, Manatee Spring I/II

This year's program will feature a live ChemE sports competition on optimization and safety, open to academia and industry, using a simulated distillation column provided by Simulation Solutions Inc. The hosts will set up two simulations to be run simultaneously on laptop computers. The competitors will be given real-life scenarios that could be observed in a plant and an objective to complete within a given timeframe.

Student Chapter Presidents Meeting

9:00 AM – 9:50 AM

Hyatt Regency Orlando, Regency Ballroom Q

This session is an opportunity for AIChE Student Presidents and the Executive Student Committee to discuss opportunities and challenges facing their regions and chapters. Attendees will have the opportunity to break out into smaller groups to discuss any ongoing business or challenges within their specific Region. *All student chapter leaders are encouraged to attend.*

Undergraduate Professional Workshop for Women & Minorities

Ticketed Event (\$5).

9:00 AM – 12:00 PM

Hyatt Regency Orlando, Barrel Spring I

Women in Chemical Engineering

Undergraduates! Join us for a half-day workshop that helps answer your questions on career choices. Students interested in pursuing graduate school: Come and hear what graduate students from various schools have to say about their experiences. The moderators will guide discussions about experiences in graduate school, application processes, selecting a school and an adviser, fellowship applications, career development activities, and life-work balance. For students interested in industrial opportunities, this workshop also includes a "Perspectives from an Industrial Recruiter" session and a panel discussion on "Academia vs Industry vs National Labs as Career Choices". *Tickets must be purchased for this event, either online or onsite at the registration desk.*

SCHEDULE OF EVENTS + PRESENTATIONS

Developing Your 30-Second Value Statement (aka Your Elevator Pitch)

10:00 AM — 10:50 AM

Hyatt Regency Orlando, Celebration 5

Alaina Levine, Quantum Success Solutions

A brand is simply a promise of value and every successful professional and company is successful in part because they know how to articulate their brand. The ability to communicate your promise of value is vitally important for not only crafting your own career path, but also for finding out about hidden opportunities and jobs. In this presentation, attendees will learn the fundamentals of branding as it relates to career development and planning strategy. Participants will work together to develop their own 30-second brand statement for use in networking, and informational and job interviews. Participants will discuss the connection between brand, attitude and reputation, and why every interaction with someone affects how people perceive their brand. Attendees will leave this workshop with the ability to elucidate their own brand to whomever they meet, giving a critical competitive edge in the job market.

How to Make the Most of your Omega Chi Epsilon Chapter

10:00 AM — 11:00 AM

Hyatt Regency Orlando, Regency Ballroom T

Omega Chi Epsilon

Officers and members of Omega Chi Epsilon, the National Chemical Engineering Honor Society, are encouraged to attend this session to meet with national officers and share best practices and favorite activities. Students from schools that do not have an Omega Chi Epsilon chapter are also invited to attend to learn more about establishing a chapter on their campus.

Student Chapter Advisors Meeting

10:00 AM — 10:50 AM

Hyatt Regency Orlando, Regency Ballroom Q

Officers from the Student Chapters Committee will give overview of Student Chapter Committee Structure and discuss student activities, conferences and how important the role of Chapter Advisor is to a Chapter's success. Attendees will also break out into smaller groups to discuss any ongoing business or challenges within their specific Region. *All Student Chapter Advisors are encouraged to attend.*

10 Principles of Engineering and Science that Can Transform Your Career, Your Team, and Your Life

11:00 AM — 11:50 AM

Hyatt Regency Orlando, Celebration 5

Alaina Levine, Quantum Success Solutions

As an engineer or scientist, you gain, develop, and master very specific and strategic skills that can position you for success no matter what career or industry you choose. These skills go beyond technical know-how; they involve abilities in leadership, conflict resolution, and even crisis management. And there is another benefit here- there are many aspects of the STEM fields themselves which can help you advance and transform your career. In this presentation, we will identify the very unique value that you acquire from studying engineering and science, actual principles of these subjects, that can make a positive difference in your career advancement and developing your unicorn career.

Student Chapter Awards Ceremony

11:00 AM — 12:00 PM

Hyatt Regency Orlando, Plaza International Ballroom G

The Student Awards Ceremony recognizes this year's scholarship, award and competition winners. All are welcome to this ceremony to show support for their fellow classmates.

2019 Chem-E-Car Competition® Finals

Sponsored by Chevron

First Place Prize funded by the H. Scott

Fogler Endowment



12:30 PM — 3:30 PM

Hyatt Regency Orlando, Windermere Ballroom

A highlight of the Annual Student Conference, more than 40 student teams from around the world will be racing their chemically powered vehicles. Come and cheer for your favorite team as they compete for the international title! Please note that the first run of the competition will begin at 12:30pm.

AICHe K-12 STEM Showcase & STEM Outreach Competition

Sponsored by the AICHe Foundation

12:30 PM — 1:30 PM

Hyatt Regency Orlando, Regency Ballroom U

During the inaugural AICHe K-12 STEM Showcase, K-12 students, along with their parents and educators, will receive an introduction to STEM and Chemical Engineering, and interact with STEM experiments being led by teams of AICHe members as part of the 1st AICHe K-12 STEM Outreach Competition. Swing by the AICHe K-12 STEM Showcase and get inspired by your ChemE peers participating in this year's competition. Your 2019 AICHe Annual Meeting or Annual Student Conference badge is required for entry.

SCHEDULE OF EVENTS + PRESENTATIONS

Disability OutReach Inclusion Community (DORIC) - Expanding Opportunities and Creating Community

Sponsored by the AIChE Foundation

2:00 PM — 3:30 PM

Hyatt Regency Orlando, Bayhill 33

Disability OutReach Inclusion Community (DORIC)

Did you know that people with disabilities have unique abilities which can actually be a competitive advantage in the classroom, laboratory, and workplace? Yes, being “different” can be awesome! Meet fellow students and professional with a history of a disability and allies at an event which will remind you that you belong here! The Disabilities OutReach and Inclusion Community (DORIC) is part of AIChE’s ever-expanding efforts promoting diversity and inclusion. We are here for you.

Hear experiences and insights from: Chris Pope, the founder of DORIC; Missy Postlewaite, a chemistry senior and member of the American Chemical Society’s Chemists With Disabilities (CWD) Committee; and Ted Conway, a current Chem.E. professor and department chair. PLUS... an hour-long “Career Prep Workshop for Students with Disabilities” by Doug Stage, head of Kimberly-Clark’s Capabilities First recruitment program. As you reach for your dreams, remember that we at AIChE are here with you.

Public Affairs and AIChE: A PAIC Town Hall

3:00 PM — 4:15 PM

Hyatt Regency Orlando, Orlando Ballroom M

Public Affairs and Information Committee

Phillip R. Westmoreland, *North Carolina State University*

Deborah Grubbe, *Operations and Safety Solutions, LLC*

Mary Ellen, *Ternes Earth & Water Law, LLC*

Dale Keairns, *Deloitte Consulting LLP*

AIChE’s Public Affairs & Information Committee (PAIC) will hold its third annual Town Hall discussion in this session. As a prelude, invited experts will brief the audience on critical issues impacting our profession: we’ll use a broader town-Hall-style discussion, polling software and breakout groups to engage the audience and hear their point of view.

Chemical Engineering in Sustainability (YCOSST) and Policy (WISE) Award Recipient Talks

4:15 PM — 4:50 PM

Hyatt Regency Orlando, Orlando Ballroom M

One of three sessions highlighting undergraduate research on various topics on Chemical Engineering. Topics and its relation to development of strategic and comprehensive government policy. This sessions will be presented by WISE interns and the YCOSST Award winner.

4:18 PM

YCOSST Award Presentation to Prof. **Kory C. Russel** for University of Oregon project on “Sanitary Green Space: a Closed-Looped Sanitation System for Growing Green Communities”

4:30 PM

Preparing for the Worst: The Case for Solar Geoengineering Research and Oversight

Bradie S Crandall, *University of South Carolina*

4:50 PM

Addressing Management Challenges Within the Nuclear Weapons Complex to Streamline Plutonium Disposition

Cameron Hong, *Bucknell University*

Order of the Engineer

5:00 PM — 6:30 PM

Hyatt Regency Orlando, Plaza International Ballroom I

Licensing and Professional Development Committee

AIChE Center for Ethical Practice is exploring programs to encourage and acknowledge the ethical practice of our profession for all AIChE Global members. As a pilot program to increase awareness of ethical practice of engineering, AIChE has been chartered to offer the Order of the Engineer (OoE). OoE is a nationally recognized organization “Upholding devotion to the Standards and Dignity of the Engineering Profession.” An induction ceremony acknowledges a professional’s commitment to ethical practice of their profession and will receive a steel ring. Wearing the OoE ring is an outward manifestation of the pledge to protect society and the public, and it is a foundational step towards professionalism. The goal is to bridge the gap between training and experience, and to present to the public a visible symbol identifying the engineer. The OoE is open to the following AIChE Members: all graduates of ABET accredited engineering programs, all licensed Professional Engineers, and Seniors who are within one academic year of graduation from an ABET-accredited engineering course of study. The induction ceremony is a joint project of the License and Professional Development Committee and the Center for Ethical Practice, and is endorsed by the Young Professionals Committee. If you would like to participate in the induction ceremony, please email darls@aiche.org to register and include your ring size of the little finger on your “working” hand (generally considered the hand you use to sign documents). *Note that that participation in the ceremony requires pre-registration. All are welcome to attend the ceremony.*

2019 AIChE Annual Meeting Opening Reception

6:30 PM — 7:30 PM

Hyatt Regency Orlando, Regency Foyer

Meet and network with professionals from around the world.

SCHEDULE OF EVENTS + PRESENTATIONS

MONDAY, OCTOBER 29

Undergraduate Research Presentations – Chemicals & Environment

8:00 AM — 10:30 AM

Hyatt Regency Orlando, Bayhill 31

Young Professionals Committee (YPC)

This session will feature presentations given by undergraduate researchers on topics within the topic range of general chemical engineering and environmental applications.

8:00 AM

Monoethanolamine based DESs for CO₂ Absorption: Insights from Molecular Dynamics Simulations

Dina Kussainova, *Nazarbayev University*

8:25 AM

Production of Biopesticide against Maize Aphids on Maize Crop (*Zea Mays*) from Moringa (*Moringa Oleifera*: Moringaceae)

Maud Gracious Fuko, *Harare Institute of Technology*

8:50 AM

Point of Entry Water Purification System in Quiche, Guatemala

Kylee Kramer, *University of Toledo*

9:15 AM

On site Electrochemical Detection of Heavy Metal Pollution

Nicholas Bruns, *Colorado State University*

9:40 AM

Acute Oral Toxicity Prediction with Gradient Boosted Trees and Neural Networks

Hyukjae Kwark, *Carnegie Mellon University*

Student Paper Competition

Sponsored by Omega Chi Epsilon

8:00 AM — 11:00 AM

Hyatt Regency Orlando, Bayhill 29/30

This session features oral presentations from the winners of undergraduate student paper competitions from each student regional conference. The session features a wide variety of chemical engineering topics. These papers are the best of the best of undergraduate research projects and some research from co-ops and internships. Papers will be presented to a panel of judges who will select the top three papers, which will be awarded cash prizes sponsored by Omega Chi Epsilon.

8:05 AM

Enhanced virus removal in a practical sand filter

Andrew Pei, *The Pennsylvania State University*

8:20 AM

Effect of the NiO/SiO₂ Nanoparticles-Assisted Ultrasound Cavitation Process on the Rheological Properties of Heavy Crude Oil: Steady State Rheometry and Oscillatory Tests

Daniel Montes Pinzon, *Universidad Nacional de Colombia Sede Medellín*

8:35 AM

Carbon Encapsulated Iron Nanoparticles for Removal of Heavy Metals from Aqueous Solutions

Chee Yang Ng, *The University of Tulsa*

8:50 AM

Characterization of Fluid Dynamics in CPOT

Lexy LeMar, *California Institute of Technology*

9:05 AM

Mathematical Model of the Performance of the Einstein-Szilard Refrigeration Cycle for Rural Vaccine Refrigeration

Jay Bender, *Cornell University*

9:30 AM

Asphaltene Deposition and its Mitigation in Porous Media

Harrison Sarsito, *University of Washington*

9:45 AM

Combinatorial Synthesis of Mg_xZn_{1-x}O thin films for use in CdTe solar cells

Gavin Yeung, *Colorado School of Mines*

10:00 AM

Electrochemical Band Marking- An experimental evaluation

Chinmayi Gudi, *B.M.S College of Engineering*

Student Design Competition

Sponsored by Omega Chi Epsilon

8:00 AM — 10:30 AM

Hyatt Regency Orlando, Bayhill 25

The winners of the AIChE Student Design Competition present their winning solutions.

INDIVIDUAL CATEGORY - Best Overall Design for Problem

Statement “Design for a Wastewater Treatment Facility (WWTF) and a Scrubber System for a Biopharmaceutical Plant”

- **1st Place - The A. McLaren White Award**

Mason Sitar, *Michigan State University*

- **2nd Place - The A.E. Marshall Award**

Hailee Perrett, *Michigan State University*

- **3rd Place - The Omega Chi Epsilon Award**

Joshua Bowman, *Trine University*

INDIVIDUAL CATEGORY - Best Overall Design for Problem

Statement “Manufacturing Facility for a Biopharmaceutical: Monoclonal Antibody”

- **1st Place - The A. McLaren White Award**

Michael Li, *University of California, Berkeley*

SCHEDULE OF EVENTS + PRESENTATIONS

TEAM CATEGORY - Best Overall Design for Problem

Statement "Design for a Wastewater Treatment Facility (WWTF) and a Scrubber System for a Biopharmaceutical Plant"

- **1st Place - The William Cunningham Award**
Grace Jansen & Aleksandra Salic, Michigan State University
- **Honorable Mention**
Madison Fain, Ayasha Faria, Ryan Kosek & Kevin O'Malley, Trine University

TEAM CATEGORY - Best Overall Design for Problem

Statement "Manufacturing Facility for a Biopharmaceutical: Monoclonal Antibody"

- **1st Place - The William Cunningham Award**
Naomi Butler-Abisrorr, Linh Pham & Aditya Ponukumati, Virginia Polytechnic Institute and State University
- **Honorable Mention**
Cardin Hart, James MacNaughton, Colin O'Day & Sarah Rechtin, Oklahoma State University

SACHe STUDENT DESIGN COMPETITION AWARDS for Best Applications of the Principles of Chemical Process Safety

TEAM AWARD - The Jack Wehman Design Award

Naomi Butler-Abisrorr, Linh Pham & Aditya Ponukumati, Virginia Polytechnic Institute and State University

INDIVIDUAL AWARD - The Walter Howard Design Award

Vance Burnau, Trine University

SAFETY AND HEALTH DIVISION STUDENT DESIGN

COMPETITION AWARD for the Appropriate Application of Inherent Safety in the Designs

(The Ted Ventrone, Ephraim Scheier & Walt Silowska Awards)

- **Caroline Houston, Alexander Nguyen, John Prud'homme & Karl Wieck, University of New Hampshire**
- **Ryan Hamm, Daniel Langemann, John Nicoll & Chelsea Tam, Colorado School of Mines**
- **Mark Elinski & Kip Mitchell, Michigan State University**
- **Vance Burnau, Trine University**

Undergraduate Student Poster Competition

Sponsored by Omega Chi Epsilon

10:00 AM — 12:30 PM

Hyatt Regency Orlando, Regency Ballroom R/S

Over 350 students are expected to present their research in poster format. Topics include catalysis and reaction engineering; sustainability, food, pharmaceutical and biotechnology; separations, environmental, education & general, fuels, petrochemicals and energy; computing and process control; materials engineering and sciences. Prizes will be awarded in several categories. This year's poster competition will also feature posters from the Microbes at Biomedical Interfaces research area due to the presence of the Topical Conference at the 2019 Annual Meeting.

Getting Your Research Published

1:30 PM — 3:00 PM

Hyatt Regency Orlando, Rainbow Spring I/II

Graduate students, young faculty and post-docs: Join a panel of distinguished journal editors for a discussion of what they look for when selecting material for publication, both in broad-based and specialty titles. Some of what you will learn: What is the best format for your results: research article or rapid communication? What file formats are preferred? When should you use supplementary material? How do you effectively work with co-authors? What are the ethical guidelines for authors, reviewers and editors?

Invited Speakers: **Michael Harold**, Editor, *AIChE Journal*, and M.D. Anderson Professor of Chemical and Biomolecular Engineering at the University of Houston; **John Morgan**, Editor, *Biotechnology Progress*, and Professor of Chemical Engineering at Purdue University; **Samir Mitragotri**, Editor, *Bioengineering & Translational Medicine* and Hiller Professor of Bioengineering and Wyss Professor of Biologically Inspired Engineering at Harvard; **Martin Abraham**, Editor, *Environmental Progress & Sustainable Energy*, with Western Illinois University; **Matthew Realff**, Editor of *Journal of Advanced Manufacturing and Processing* and Professor at Georgia Tech; **Mia Ricci**, Executive Editor, *Research & Society Services*, John Wiley & Sons, Hoboken, NJ.

Negotiation and Evaluating a Job Offer for Nerds

3:30 PM — 4:40 PM Hyatt Regency Orlando, Orlando Ballroom L

Alaina Levine, Quantum Success Solutions

Did you know that the salary of your very first job after graduation determines your salaries for the rest of your life? Learn how to create a win-win situation and negotiate right from start to finish in the job decision process. Discover how to develop metrics to evaluate a job offer and ensure it meets your needs (and hopefully wants, too!). After all, in negotiation, clarifying your needs and wants, and those of the other party are key. The negotiation skills you learn are valuable in that they can be applied to any situation in your professional (and even personal) life.

Free Forum on Engineering Education: Junior and Senior Years II

3:30 PM — 6:00 PM

Hyatt Regency Orlando, Bayhill 23

This session will cover broad topics in ChE education focused on the junior and senior years. Potential topics include novel teaching techniques, career planning, communication skills, mentoring, and capstone design.

3:30 PM

National Academies Transforming Separation Science Report: Chemical Engineering Separations Curricula

Joan F. Brennecke, University of Texas at Austin

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3:45 PM

Regional, Institutional, and Departmental Factors Associated with Gender Diversity Among Chemical and Electrical Engineering Graduates

Laura Jarboe, *Iowa State University*

4:00 PM

Implementing a Small-Scale Heat Transfer Radiative Experiment for Classroom Implementation

Jacqueline Burgher Gartner, *Campbell University*

4:15 PM

Knowledge Laboratories: Approach to Facilitate Independent Inquiry and Experiential Learning for 2nd Year Students

Umang V. Shah, *Imperial College London*

4:30 PM

Improved Homework Effectiveness in a Problem-Solving Course

Carl R. F. Lund, *University at Buffalo, SUNY*

4:45 PM

Work in Progress: An Undergraduate "Introduction to Research Methods" Course for Honors Students

Joseph H. Holles, *University of Wyoming*

5:00 PM

Participatory Design As a Tool to Develop Advanced Experiential Learning Projects for Chemical Engineering Students

Pavan Inguva, *Imperial College London*

Engineers Can Do Anything: Explore Your Passions and Catalyze Your Potential to Create Your Unicorn Career

4:45 PM — 6:00 PM

Hyatt Regency Orlando, Orlando Ballroom L

Alaina Levine, *Quantum Success Solutions*

As an engineering-educated professional, you have a lot more career opportunities than you realize. The key is being able to identify and articulate your unique value and problem-solving abilities to diverse decision-makers. In this presentation, we will address the unique skill set that you have mastered simply by pursuing a degree in engineering and we will discuss ways in which we can communicate that value to others who can make a difference in your career opportunities. We will address ways to amplify your brand (your promise of value) and your reputation and we will delve into avenues that allow you to recognize your potential and align it with your passion for a truly satisfying and exciting career. Case studies of STEM professionals who have designed their own novel career paths will be shared. This presentation is especially useful for early-career engineers who are about to graduate!

Undergraduate Research Presentations - Materials & Biotechnology

12:30 PM — 3:00 PM

Hyatt Regency Orlando, Bayhill 31

Young Professionals Committee

This session will highlight undergraduate research presentations given by undergraduate researchers on topics within the materials and biotechnology areas.

12:30 PM

Peripheral Nerve Repair via 3D Printed PLLA-Pluronic-PLLA Triblock Copolymers to Direct Nerve Growth

Robert Newman, *Northeastern University*

12:55 PM

Structure-property Relationship of High-spin State Donor-acceptor Polymer

Obinna Muoh, *Mississippi State University*

1:20 PM

AKT Blocks Oxidative Metabolism

Matthew Jeon, *University of Southern California*

1:45 PM

Applications of Synthetic and Natural Cannabinoids on Beta-Amyloid Peptide Aggregation

Emily Rhodes, *University of Washington*

2:10PM

Development of a Hyaluronic Acid Electrochemical Sensor

Jahnvi Pejavar, *Case Western Reserve University*

Undergraduate Research Presentations - Energy & Petrochemicals

3:30 PM - 6:00 PM

Hyatt Regency Orlando, Bayhill 31

Young Professionals Committee

This session will highlight undergraduate research presentations given by undergraduate researchers on topics within energy and petrochemical processing.

3:30 PM

High Efficiency Encapsulation of Fischer-Tropsch Catalyst in ZSM-5

Aime Laurent Twizerimana, *University of Rochester*

3:55 PM

An Ultrafast Rechargeable Aluminum Battery

Joyceline Marealle, *University of Rochester*

4:20 PM

Plastic Waste Recycling for a Sustainable World

Enyonam Ahadzi, *Kwame Nkrumah University of Science and Technology*

4:45PM

Fuel Cell Technology To Recover Flare Gas In Oil And Gas Industries OR To Produce Electricity

Aaisha Al Maktumi, *National University of Science and Technology Oman*

SCHEDULE OF EVENTS + PRESENTATIONS

TUESDAY, OCTOBER 30

DORIC: Supporting Our Students with Disabilities

8:00 AM — 10:30 AM

Hyatt Regency Orlando, Bayhill 31

Disability OutReach Inclusion Community (DORIC)

2.5-hour invited speaker panel with discussions, co-sponsored by the Education Division, and possibly crosslisted with the proposed topical conference on transformative technologies in education. The primary focus of the session will be on creating supportive entities which increase retention and successful completion of chemical engineering students with disabilities. The session will have four or five invited speakers who are faculty members from chemical engineering and related disciplines or campus administrators with expertise in inclusion and enablement of STEM students with disabilities.

IACChE's James Y. Oldshue Lecture

8:00 AM — 10:30 AM

Hyatt Regency Orlando, Plaza International Ballroom H

This lecture was jointly established, in 2008, in memory of James Y. Oldshue by the American Institute of Chemical Engineers (AIChE) and the Interamerican Confederation of Chemical Engineering (CIIQ/IACChE). Jim Oldshue was an important leader and supporter of the CIIQ/IACChE. He was President of the AIChE in 1979 and President of the CIIQ/IACChE in 1995. Jim was a recipient of the prestigious Víctor Márquez award in 1983, which is conferred by the CIIQ/IACChE. Jim was an ambassador of the profession who visited more than 100 countries. It is envisioned that this lecture provide a global perspective of a specific contingent topic. The Oldshue Lecture alternates between the AIChE Annual Meetings and the Interamerican Congresses, which take place every two years.

8:00 AM

Response of Magnetic Nanoparticles to Time Varying Magnetic Fields: Ferrohydrodynamics, Nanoscale Thermal Therapy, and Magnetic Particle Imaging

Carlos Rinaldi, *University of Florida*

Meet the Innovators: Transforming the Future through Chemical Engineering

11:00 AM — 12:30 PM

Hyatt Regency Orlando, Plaza International Ballroom G

Innovation has been, and will continue to be central to making large contributions to human development and for solving global problems. This session will feature invited plenary talks from innovators who will present the role of chemical engineering innovation in transforming the world and assuring a sustainable future for the earth, as well as the role of society, corporations and governments in resourcing innovation. These talks will be followed by a panel discussion with audience participation.

11:00 AM

Chemical Engineering Innovations for a Renewable Economy
Rakesh Agrawal, *Purdue University*

11:20 AM

Innovations in Synthetic Biology

Jay D. Keasling, *Joint BioEnergy Institute, Lawrence Berkeley National Laboratory University of California, Berkeley*

11:40 AM

Engineering Materials for Clinical Application

Christine Schmidt, *University of Florida*

Andreas Acrivos Award for Professional Progress in Chemical Engineering Lecture

Supported by the AIChE Foundation

11:15 AM — 12:15 PM

Hyatt Regency Orlando, Plaza International Ballroom H

Supported by the generous donors of the AIChE® Foundation. Recognizes outstanding progress in the field of chemical engineering. 1. The recipient must be less than 45 years of age at the end of the calendar year in which the award is presented. 2. The awardee will have made a significant contribution to the science of chemical engineering through one of the following means: a) A theoretical discovery or development of a new principle in the chemical engineering field. b) Development of a new process or product in the chemical engineering field. c) An invention or development of new equipment in the chemical engineering field. d) Distinguished service rendered to the field or profession of chemical engineering. 3. The recipient is invited to deliver an address either at the time of the award presentation or later.

11:15 AM

Control of Interfacial Stability in Electrochemical Systems

Martin Z. Bazant, *Massachusetts Institute of Technology*

LGBTQ+ Inclusion in Engineering

Sponsored by the AIChE Foundation

3:30 PM — 6:00 PM

Hyatt Regency Orlando, Bayhill 23

This session will include presentation and a panel on how to best attract, engage and include LGBTQ+ engineers into your workplace, department or classroom. Strategies will be given for allies of the LGBTQ+ community to better support their colleagues and influence the overall climate. Topics include basic LGBTQ+ terminology, managing bias and microaggressions, introduction of intersectionality and more. The panel features perspectives and experiences from leaders in industry and academia. AIChE thanks the following Founders Circle companies for their early leadership and support to fostering Inclusion in Engineering: Dow, Chevron, Lyondellbasell, BASF, Chemours, AdvanSix, Covestro, DuPont, Eastman, Ecolab, Univar, Celanese. Additional support comes from generous donations to the AIChE Foundation's Doing a World of Good Campaign.

SCHEDULE OF EVENTS + PRESENTATIONS

SBE's James E. Bailey Award Lecture

Sponsored by the Society for Biological Engineers

6:00 PM — 7:00 PM

Hyatt Regency Orlando, Regency Ballroom V

In memory of Professor Jay Bailey for his many pioneering contributions to biotechnology, the award is presented to an individual who has had an important impact on bioengineering and whose achievements have advanced this profession in any of its aspects. The recipient should have a distinguished record of service to the profession. They should also be involved in the direct engagement of biology with engineering.

6:00 PM

Systems Biology of Metabolism : Role in Production of Advanced Biofuels, Obesity and Cancer

Jens Nielsen, *Chalmers University of Technology
BioInnovation Institute*

WEDNESDAY, OCTOBER 31

John M. Prausnitz AIChE Institute Lecture

Supported by the AIChE Foundation

11:15 AM — 12:15 PM

Hyatt Regency Orlando, Plaza International Ballroom H

The Executive Board of the Program Committee invites a distinguished member of AIChE to present a comprehensive authoritative review of the chemical engineering science in his or her field of specialization. Selection criteria include: 1. the quality and relevance of the accomplishments of the lecturer in the technical field likely to be the subject of the lecture, 2. the communication skills of the lecturer, 3. the value of the lecture to the meeting attendees and the members of the Institute

11:15 AM

From Chemical Engineering Fundamentals to the Commercialization of Vapor Deposited Polymers

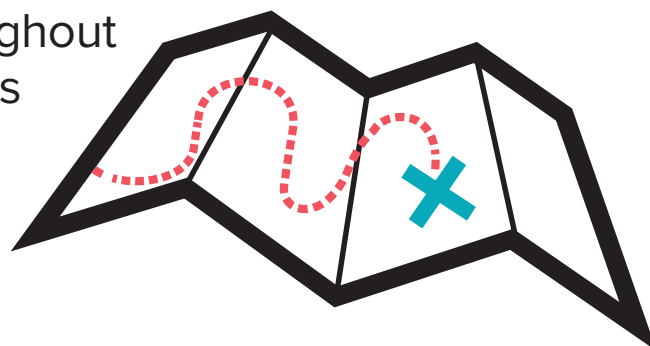
Karen K. Gleason, *Massachusetts Institute of Technology*

The ASC Scavenger Hunt Is On!

Collect and find codes throughout the conference to earn points and climb the leaderboard. Be one of **5 lucky winners** of a fantastic prize!

aiche.org/ASCHunt

Winners will be notified via email by November 22, 2019.



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AICHE Student Awards Ceremony

Sunday, November 10, 2019 | 11:00 AM – 12:00 PM

John J. McKetta Undergraduate Scholarship Award

Sponsored by the Dekker Foundation

Awarded for the seventeenth year in 2019, this scholarship, named in honor of Professor Emeritus John J. McKetta, recognizes a chemical engineering undergraduate who is planning a career in the chemical engineering process industry.

Jayme Currie, *North Carolina State University*

Scale Up Sponsor Essay Contest

Under the aegis of AIChE and its ScaleUp Program, ScaleUp corporate sponsors are awarding scholarships to be used as travel stipends for this year's AIChE Annual Student Conference. To qualify, students must have a declared major in chemical engineering and complete a written essay on a topic determined by the corporate sponsor.

CHEVRON AWARDS

Varun Desai, *National University of Singapore*

Richa Ghosh, *University of California, Los Angeles*

UOP AWARD

Julia Sanger, *Bucknell University*

Donald F. and Mildred Topp Othmer Scholarship Awards

Each year students are awarded scholarships based on outstanding academic achievement and involvement in Student Chapter activities.

Kassidy Adams, *Mississippi State University*

Daniela Bushiri, *New Jersey Institute of Technology*

Kimberly Cox, *Virginia Commonwealth University*

Nathanael-David Gardner, *Howard University*

Richa Ghosh, *University of California, Los Angeles*

Kendra Jones, *Oregon State University*

Jingwei Kang, *University of California, Berkeley*

Michael Leyden, *University of Iowa*

Ayush Mishra, *Maharashtra Institute of Technology, Pune*

James Owens, *Virginia Tech*

Dan Reichenbach, *University of Toledo*

Aya Shahin, *An-Najah National University*

Colton Van Wagoner, *Brigham Young University*

Cecilia Villanueva Boone, *Rice University*

Lucas Wylie, *North Carolina State University*

AWARDS CEREMONY

Donald F. Othmer Sophomore Academic Excellence Awards

Presented to one student in each Student Chapter who has attained the highest scholastic grade point average during his or her freshman and sophomore years.

Kotoe Abe, *Lafayette College*

Ryan Bain, *Brown University*

Tyler Banas, *Western Michigan University*

Saurabh Bhalerao, *MIT – World Peace University*

Hannah Boyce, *Northeastern University*

Caroline Bridges, *Lamar University*

Andrea Carolina Cárdenas Herrera, *Universidad Nacional de Colombia - Sede Bogotá*

Marcel Chlupsa, *Kansas State University*

Isaac Clapp, *Mississippi State University*

Karen Corrotea Reyes, *New Jersey Institute of Technology*

Alexander Curylo, *Rice University*

Logan Draffen, *University of Kentucky Paducah Campus*

Jim Ervin, *University of Delaware*

Kevin Fruth, *University of Toledo*

Nathanael-David Gardner, *Howard University*

Hank Gerst, *The University of Iowa*

Briley Graves, *University of South Alabama*

Alyssa Hansen, *University of Akron*

Emily Heckard, *North Carolina State University*

Skyler Trenton Hornback, *University of Kentucky*

Melanie Huynh, *Oregon State University*

Dongrun Ju, *Stevens Institute of Technology*

David Kennedy, *The Pennsylvania State University*

Emil Khusnatdinov, *Texas Tech University*

Aniket Kumbhar, *Indian Institute of Technology, Roorkee*

Melina Le, *Georgia Institute of Technology*

Nadege L'Esperance, *University of Louisville*

Simeng Li, *University of British Columbia*

Sarah Lynam, *Bucknell University*

William Lyon, *University of Illinois at Urbana-Champaign*

Kimberley Mannikum, *Illinois Institute of Technology*

Kevin Mauge, *University of California, Santa Barbara*

William McDevitt, *University of Virginia*

Tara McIntosh, *Virginia Commonwealth University*

Zachary Meduna, *University of North Dakota*

Naomi Muggli, *Benedictine College*

Alaa Mwafy, *College of Engineering, United Arab Emirates University*

Gregory Novotny, *University of New Hampshire*

Ryen O'Meara, *University of Michigan*

Evan Penrod, *University of Cincinnati*

Anjali Rathore, *Vellore Institute of Technology, Vellore*

Nathan Reed, *University of New Haven*

Pedro Seber, *Vanderbilt University*

Sorcha Sterritt, *New Mexico Tech.*

Anjali Suthar, *Ahmedabad University*

Kawin Swaddiwudhipong, *University of California, Berkeley*

James Trottier, *University of Massachusetts Amherst*

James Wang, *University of California, Los Angeles*

Connor Wescott, *Syracuse University*

Noah Weston, *Trine University*

Isaac Wheeler, *Brigham Young University*

Holly Wilhelm, *Colorado School of Mines*

AWARDS CEREMONY

Minority Affairs Committee Scholarship Awards for College Students & Incoming Freshman

Sponsored by the AIChE Foundation

The AIChE Minority Scholarship Awards are presented to selected AIChE undergraduate student members & incoming college freshman annually.

Justin Abram, *University of Illinois Urbana-Champaign*
Luis Acevedo, *University of Illinois at Urbana Champaign*
Abriel Armour, *Virginia Commonwealth University*
Abidemi Awojuyigbe, *Prairie View A&M University*
Kevin Bahati, *University of Virginia*
Amar Bhardwaj, *Columbia University*
Megan Brooks, *University of Michigan*
Daniela Bushiri, *New Jersey Institute of Technology*
Karlas Christopher, *The City College of New York*
Taylor Collins, *University of Southern California or Howard University*
Annai Cuvelier, *University of California Berkeley*
Raquel Domingos, *Louisiana State University*
Gerald Flores, *Highline College*
Kendra Ford, *University of Louisville*
Deonante Frazier, *Mississippi State University*

Jaime Fuentes, *St. Edward's University*
Nathan Garcia, *University of Florida*
Melayah Horton-Muhammad, *Prairie View A&M University*
Destney Johnson, *Lane College*
Quynh Bao Ngoc Le, *University of California San Diego*
Abel Locklear, *North Carolina State University*
Pamela Okaro, *University of Tulsa*
Esmeralda Orozco, *University of Iowa*
Carlos Prieto Perez, *Virginia Polytechnic Institute and State University*
Isabela Ramirez, *Syracuse University*
Zeshan Rizvi, *Prairie View A&M University*
Janessa Sandoval, *SUNY College of ES&F*
Gabriel Shlain, *University of Michigan - Ann Arbor*
Sebastian Villanueva, *George Mason University*
Tyler Void, *North Carolina State University*



Get the Recognition and Benefits You Deserve

with

AIChE® Student Awards and Competitions

You may be eligible for over \$50,000 worth of scholarships, grants and prizes, recognizing academic skills and student chapter achievements. Take advantage of this exclusive AIChE student member benefit granted to both individuals and student chapters.

To learn more and apply, visit:

aiche.org/studentawards or contact awards@aiche.org.

Enrich your résumé

Awards

Expose your Skills

Competitions

Certificates

Honors

Earn Recognition

Scholarships

AWARDS CEREMONY

Freshman Recognition Awards

Presented to the one student member in each Student Chapter who has been the most active in their Student Chapter during their freshman year.

Garrison Allen, *Oklahoma State University*

Yulisa Alvarez, *Lamar University*

Swapnil Banerjee, *Vellore Institute of Technology, Vellore*

Rachel Berland, *Kansas State University*

Ryan Berry, *Lafayette College*

Zachary Berta, *University of Tennessee at Chattanooga*

Jonah Blanchard, *Trine University*

Dylan Boone, *University of Louisville*

Adam Boyer, *Bucknell University*

William Carsten, *Rice University*

Keaton Connelly, *Western Michigan University*

Matthew Conner, *Benedictine College*

Sonakshi Daga, *MIT-World Peace University*

Justin Ebert, *The University of Akron*

Jordan Fernandes, *Stevens Institute of Technology*

David Fikhman, *Syracuse University*

Glen Fisher, *Mississippi State University*

Dylan Gresl, *University Of New Haven*

Abigail Gunderson, *Illinois Institute of Technology*

Yuyan Guo, *University of California, Berkeley*

Lucas Hall, *University of Toledo*

Kate Johnson, *Vanderbilt University*

Sean Kauder, *NC State University*

Alexa Lowman, *Brigham Young University*

Daniel MacIntosh, *University at Buffalo*

Brandon McReynolds, *New Mexico Tech*

Aditya Middha, *University of Michigan*

Dylan Miller, *Northeastern University*

William Moe, *University of North Dakota*

John Monte, *University of South Florida*

Joshua Neronha, *Brown University*

Hong Nguyen, *University of Massachusetts Amherst*

Nathaniel Nichols, *University of New Hampshire*

Lahari Pallerla, *University of Cincinnati*

Ryan Park, *Colorado School of Mines*

Parth Patel, *Ahmedabad University*

Emily Peterson, *Penn State University*

Jayson Pinals, *Tufts University*

Joshua Polevoy, *Georgia Institute of Technology*

Aura Cristina Ramirez Ramirez, *Universidad Nacional de Colombia*

Francesca Rivas Cuestas, *Universidad de Ingeniería y Tecnología*

Mitchell Rogers, *University of California, Los Angeles*

Eduardo Saldivar, *New Mexico State University*

Halle Shannon, *University of Kentucky*

Cassandra Smith, *University of Maryland*

Remmi Smith, *University of Tulsa*

Elissa Snoke, *University of Missouri, Columbia*

Lucas Sullivan, *University of Illinois at Urbana-Champaign*

Pham Thuy Vu Ton, *New Jersey Institute of Technology*

Ashley Tyson, *Virginia Commonwealth University*

Clint Williams, *University of Kentucky, Paducah*

Sean Wirt, *University of Delaware*

Cindy Wong, *Oregon State University*

Outstanding Student Chapter Advisor Award

Recognizes an individual's outstanding service and leadership in guiding the activities of an AIChE Student Chapter in accordance with AIChE principles.

H. Scott Fogler, *University of Michigan*

AWARDS CEREMONY

Outstanding Student Chapter Awards

Presented annually to those Student Chapters that show an exceptional level of participation, enthusiasm, program quality, professionalism and involvement in the university and community.

AHMEDABAD UNIVERSITY

Dr. Snigdha Khuntia, *Advisor*

Dhanesh Wadekar & Darshan Soni, *Presidents*

BRIGHAM YOUNG UNIVERSITY

Dr. David Lignell, *Advisor*

Colton Van Wagoner, Stuart Baird, & Tanner Polley, *Presidents*

CAIRO UNIVERSITY

Ahmed Refaat, *Advisor*

Ahmed Tawfik, *President*

CENTRO UNIVERSITÁRIO SENAI CIMATEC

Ewerton Emmanuel da Silva Calixto, *Advisor*

Leonardo Santos Barbosa, *President*

GEORGIA INSTITUTE OF TECHNOLOGY

Dr. Victor Breedveld, *Advisor*

Elsa Samantaray, *President*

HONG KONG UNIVERSITY OF SCIENCE AND TECHNOLOGY

Zhengtang Luo, *Advisor*

Ayman Hoque, *President*

ILLINOIS INSTITUTE OF TECHNOLOGY

Donald Chmielewski, *Advisor*

Sitoshna Jatty & Nicolas Navar, *Presidents*

INSTITUT TEKNOLOGI BANDUNG

Dwiwahju Sasongko, *Advisor*

Kreszen Livianus Gatalie & Ivant Septiawarman, *Presidents*

INSTITUT TEKNOLOGI SEPULUH NOPEMBER

Fadlilatul Taufany, Ph.D, *Advisor*

Muhammad Hazairin & Nadhila Fajrina Putri, *Presidents*

MISSISSIPPI STATE UNIVERSITY

Julie Jessop, *Advisor*

Victoria McCaffrey & Austin Breland, *Presidents*

MISSOURI UNIVERSITY OF SCIENCE AND TECHNOLOGY

Dr. Christi Patton-Luks, *Advisor*

Brent Johnston, *President*

MIT - WORLD PEACE UNIVERSITY, PUNE

Datta Dandge, *Advisor*

S. Dhiraj & Ayush Mishra, *Presidents*

NEW JERSEY INSTITUTE OF TECHNOLOGY

Roman Voronov, *Advisor*

Mahum Ahmed & Kourtney Gans, *Presidents*

NORTH CAROLINA STATE UNIVERSITY

Dr. Kim Roberts & Adam Helsel, PE, *Advisors*

Lucas Wylie, *President*

PURDUE UNIVERSITY

Sangtae Kim & Michael Harris, *Advisors*

Sanjana Patil & Chandani Patel, *Presidents*

SUEZ UNIVERSITY

Dr. Rehab El-Maghraby, *Advisor*

Hazem Abdelazim Mohamed, *President*

TEXAS A&M UNIVERSITY

Katherine Toback, *Advisor*

Nicholas Sims, *President*

TEXAS TECH UNIVERSITY

Carla Lacerda, *Advisor*

Yogi Paturu, *President*

THE PENNSYLVANIA STATE UNIVERSITY

Wayne Curtis, *Advisor*

Bailyn Bench, *President*

THE UNIVERSITY OF IOWA

David W. Murhammer, *Advisor*

Michael Leyden & Ojas Pradhan, *Presidents*

TIANJIN UNIVERSITY

Jinlong Gong, *Advisor*

Zhipeng Xiong, *President*

UNIVERSIDAD DE INGENIERÍA Y TECNOLOGÍA

Francisco Tarazona Vásquez, *Advisor*

Leilis Clemente Figueroa & Arturo Arias Aguilar, *Presidents*

UNIVERSIDAD NACIONAL DE COLOMBIA SEDE MEDELLIN

Alejandro Molina Ochoa, *Advisor*

Mario Fernando Franco Varon &
Aura Margarita Alvis Sanchez, *Presidents*

AWARDS CEREMONY

UNIVERSIDAD NACIONAL DE COLOMBIA, SEDE BOGOTÁ

Álvaro Orjuela Londoño, *Advisor*
Julián Federico Sánchez Caldas &
Laura Andrea Acosta Figueredo, *Presidents*

UNIVERSIDADE FEDERAL DO CEARÁ

Célio Loureiro Cavalcante Júnior, *Advisor*
Ana Luisa Marques Galdino, Livia Torquato da Silva, &
Maria Luiza Madeiro Barros Leal, *Presidents*

UNIVERSITI TEKNOLOGI PETRONAS

Dr. Muhammad Rashid bin Shamsuddin, *Advisor*
Wan Muhammad Harraz bin Wan Mohd Ghazni, *President*

UNIVERSITY OF DELAWARE

Dr. Joshua Enszer, *Advisor*
Trent Simonetti, *President*

UNIVERSITY OF FLORIDA

Sindia Rivera-Jiménez, *Advisor*
Gabriella Segovia, *President*

UNIVERSITY OF KENTUCKY

J. Zach Hilt, *Advisor*
Dylan Shoulders, *President*

UNIVERSITY OF KENTUCKY, PADUCAH

Derek Englert, *Advisor*
Joseph Middleman, *President*

UNIVERSITY OF MICHIGAN-ANN ARBOR

Dr. H Scott Fogler, *Advisor*
Alex White, *President*

VELLORE INSTITUTE OF TECHNOLOGY

Monash Purushothaman, *Advisor*
Shreya Arora, *President*

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

Dr. Y.A. Liu & Dr. Gary Whiting, *Advisors*
Tony Rogers, *President*



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- Ask career-related questions
- Suggest or get suggestions on improving your student chapter
- Help other students by answering their questions
- Chat about the student conferences and other undergraduate student events
- Update your member profile information to reflect your best
- Volunteer and give back to the ChemE community through AICHE Engage Volunteer Central



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AWARDS CEREMONY

International Student Chapter Leadership Development Travel Grant Award

Sponsored by the AIChE Foundation

The purpose of this award is to facilitate the participation and leadership development of international student chapter members at the Annual Student Conference and to strengthen AIChE's relationship with these future global leaders. Up to eight travel grants will be awarded to International Student Chapter leaders for the Annual Student Conference.

Zineb El Amrani Joutey, *Universitat Politècnica de Catalunya*

Lakshmi Mohan, *VIT University*

Karan Saxena, *NIT Rourkela*

Aya Shahin, *An-Najah National University*

Ahmed Samy Tawfiq, *Cairo University*

Rohit Chaudhari, *MIT - World Peace University, Pune*

Darshan Soni, *Ahmedabad University*

Johan Sebastián Quintero Rueda, *Universidad Nacional de Colombia, sede Bogotá*



**AIChE® would like to thank
the chemical engineering
students and faculty at
University of South Florida**

**for their contributions to the 2019
AIChE Annual Student Conference.**

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C'mon Everybody. Get Together!

2019-20 AChE® Student Conferences and Programs



NOVEMBER

Su	Mo	Tu	We	Th	Fr	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

Save the Date

2019 Annual Student Conference

aiche.org/asc

November 8-11, 2019 • Orlando, FL

Four days of career information, social events and competitions. Over 1,500 chemical engineering students from around the globe will be in attendance.

Includes registration to:

2019 AChE® Annual Meeting

aiche.org/annual

November 10-15, 2019 • Orlando, FL

Learn from Industry leaders and meet thousands of chemical engineering professionals.

2020 Regional Student Conferences

North Central: University of Akron

Northeast: Northeastern University

Mid America: University of Nebraska, Lincoln

Southern: Auburn University

Mid Atlantic: Virginia Tech

Pacific Northwest: Washington State university

Western: University of California, Davis

Southwest: Lamar University

Colombia: Universidad Industrial de Santander

Rocky Mountain: New Mexico Tech

India: NIT Rourkela

2020 Annual Student Conference

November 13-16, 2020 • San Francisco, CA

For current dates and details, visit: aiche.org/conferences/student



CHEM-E-CAR COMPETITION

Chem-E-Car Competition Finalists



Sunday, November 10, 2019 | 12:30 PM – 3:30 PM

Sponsored by Chevron

First Place Prize funded by the H. Scott Fogler Endowment

These teams have designed and built vehicles powered solely by chemical reactions.

Auburn University
California State Polytechnic University, Pomona
California State University Long Beach
Centro Universitário SENAI CIMATEC
China University of Petroleum-Beijing
City College of New York
Cornell University
Hong Kong University of Science and Technology
Iowa State University
Korea Advanced Institute of Science and Technology
Kansas State University
King Fahd University of Petroleum and Minerals
Lamar University
Lodz University of Science & Technology
Louisiana State University
McGill University
Michigan State University
Missouri University of Science and Technology
MIT World Peace University
Nanjing Tech University
National Taiwan University
National Technical University of Athens

Northeastern University
Northwest University
Oregon State University
Rutgers University
Stony Brook University
Team Universidad Nacional de Colombia, Sede Bogotá
Texas A&M at Qatar
Texas Tech University
The Ohio State University
Trine University
University of California, Los Angeles
University of Colorado
University of Florida
University of Illinois at Chicago
University of Michigan
University of New Mexico
University of North Alabama
University of Pittsburgh
University of Puerto Rico at Mayagüez
University of Toledo
Virginia Polytechnic Institute and State University

THE 2019 GLOBAL UNDERGRADUATE STUDENT VIDEO COMPETITION

2019 COMPETITION TOPIC: Ice Cream, Engineered Perfection

Sharpen your focus on the world of chemical engineering.
Compete with students from around the globe.

Don't miss the announcement:

2019 competition winners and the 2020 competition theme will be announced at the AIChE Annual Student Conference Welcome Keynote.

WE CAN'T WAIT TO SEE YOUR VIDEOS!

For more information go to aiche.org/students.







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The Safety and Chemical Engineering Education (SAChE) Certificate Program

The **SAChE Certificate Program** makes it easy to build a process safety knowledge-base while you're still an undergraduate. Successful completion of the program earns you a valuable credential that can give you an edge in today's competitive job market.

Access to the modules is free for all undergraduate students with an AIChE® student membership.

You can earn certificates in any or all of these areas:

-  Basics of Laboratory Safety
-  Process Safety 101
-  Chemical Process Safety
-  Process Safety Lessons Taught from Chemical Reactivity Hazards Experience
-  Dust Explosion Control
-  Risk Assessment
-  Inherently Safer Design
-  Nitrogen's Role in Safety
-  Runaway Reactions

For information on the SAChE Program, please contact
Jing Chen at sache@aiche.org.

AIChE® VOLUNTEER + MEETING ATTENDEE CONDUCT GUIDELINES

AIChE's volunteers are the core of the Institute and make all of its programs, conferences and educational efforts possible. These offerings provide excellent opportunities for AIChE members and meeting attendees to gain greater technical expertise, grow their networks, and enhance their careers. AIChE events provide engineers, scientists, and students a platform to present, discuss, publish and exhibit their discoveries and technical advances.

At all times, volunteers and meeting attendees should act in accordance with AIChE's Code of Ethics, upholding and advancing the integrity, honor and dignity of the chemical engineering profession. AIChE's Board of Directors has developed these guidelines to foster a positive environment of trust, respect, open communications, and ethical behavior. These guidelines apply to meetings, conferences, workshops, courses and other events organized by AIChE or any of its entities and also to volunteers who conduct other business and affairs on behalf of AIChE.

SPECIFICALLY:

1. Volunteers and meeting attendees should understand and support AIChE's Code of Ethics.
2. Volunteers and meeting attendees should contribute to a collegial, inclusive, positive and respectful environment for fellow volunteers and attendees, and other stakeholders, including AIChE staff.
3. Volunteers and meeting attendees should avoid making inappropriate statements or taking inappropriate action based on race, gender, age, religion, ethnicity, nationality, sexual orientation, gender expression, gender identity, marital status, political affiliation, presence of disabilities, or educational background. We should show consistent respect for colleagues, regardless of discipline, employment status, and organizations for which they work, whether industry, academia, or government.
4. Disruptive, harassing or other inappropriate statements or behavior toward other volunteers, members, another stakeholders, including AIChE staff, is unacceptable.
5. Volunteers and meeting attendees should obey all applicable laws and regulations of the relevant governmental authorities while volunteering or attending meetings. Volunteers and meeting attendees taking part in any AIChE event, including the Chem-E-Car Competition®, should also comply with all applicable safety guidelines.

Any violations of the foregoing should be reported to the President or the Executive Director of the Institute.



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- Advanced Functional Materials
- Molecular Bioengineering
- Sustainable Energy Engineering
- Engineering Education

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2019 ASC CODE OF ETHICS

Members of the American Institute of Chemical Engineers shall uphold and advance the integrity, honor and dignity of the engineering profession by:

- Being honest and impartial and serving with fidelity their employers, their clients, and the public;
- Striving to increase the competence and prestige of the engineering profession;
- Using their knowledge and skill for the enhancement of human welfare.

TO ACHIEVE THESE GOALS, MEMBERS SHALL:

- Hold paramount the safety, health and welfare of the public and protect the environment in performance of their professional duties.
- Formally advise their employers or clients (and consider further disclosure, if warranted) if they perceive that a consequence of their duties will adversely affect the present or future health or safety of their colleagues or the public.
 - Accept responsibility for their actions, seek and heed critical review of their work and offer objective criticism of the work of others.
 - Issue statements or present information only in an objective and truthful manner.
 - Act in professional matters for each employer or client as faithful agents or trustees, avoiding conflicts of interest and never breaching confidentiality.
 - Treat fairly and respectfully all colleagues and co-workers, recognizing their unique contributions and capabilities.
 - Perform professional services only in areas of their competence.
 - Build their professional reputations on the merits of their services.
 - Continue their professional development throughout their careers, and provide opportunities for the professional development of those under their supervision.
 - Never tolerate harassment.
 - Conduct themselves in a fair, honorable and respectful manner.

SEXUAL HARASSMENT TRAINING

Mandatory sexual harassment training for all Board members, Operating Council Chairs and full-time AIChE Staff members is required by AIChE. The training program is coordinated by AIChE's Human Resources Department. For more information on this topic, please contact humanresources@aiche.org.

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Help Educate the Next Generation of Chemical Engineers in Process Safety

The AIChE® Undergraduate Process Safety Learning Initiative

A global initiative that is defining how the next generation of chemical engineers are prepared to enter the workforce. A core priority of our **'Doing a World of Good' campaign**, the program incorporates process safety training into the chemical engineering curricula at universities throughout the world in order to ensure that every chemical engineering graduate has a working knowledge of process safety.

Lead the way at aiche.org/saferworld

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