

ASEE Chemical Engineering Division Newsletter

Editors: Lorena Grundy, University of Pennsylvania and Monika Crowl, University of Connecticut

A Message from the Chair:



Janie Brennan
Washington University
in St. Louis

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Happy fall to all of my colleagues! I know that here in Missouri, the weather is finally hinting at being chillier, and the semester is quickly ramping up. Because I know we're all busy, I'll try to keep this message short.

First, thanks to everyone who made ASEE 2024 in Portland such a huge success. Particular thanks go out to Sarah Wilson, our program chair, who not only dealt with NEMO and planning all of our paper sessions, but also put together a really wonderful banquet. Thank you also to our Awards Committee for coordinating judging of the awards, and Reg Rogers, our outgoing Chair, who kept everything working smoothly.

Speaking of which, I'd also like to recognize the fantastic work presented by our division authors. This newsletter issue will highlight our 2024 award winners, so I hope you will read all about their findings and accomplishments. Also, please consider nominating your peers for this year's awards! More information can be found on our division website (ched.asee.org).

Next, even though it probably feels like we were just in Portland, it's already time to submit abstracts for next year's conference in Montreal! Abstract submission also closes earlier than usual – October 1 – so don't miss the deadline. See the Call for Papers for more details, and please consider what you can contribute to our community's shared knowledge.

Finally, I hope you will join me and Taryn Bayles for our book club on *Teaching with AI* this fall and spring semester. Learning how to adapt our classrooms to a world with ChatGPT seems like a critical part of the next few years for all of us. You are always welcome to join our sessions, even if you haven't read the text – what's important is that we all learn and share with each other.

Enjoy the rest of this newsletter put together so well by Lorena and Monika. Feel free to email me at jbrennan@wustl.edu if you have any suggestions for the division, or if you simply want to get more involved with ChED. I am looking forward to seeing many of you in San Diego for the AIChE Annual Meeting!

ChEers,

Janie Brennan

2024 ASEE Chemical Engineering Division Award Recipients

William H. Corcoran Award

Sponsored by DAC Worldwide

This award is presented to the author of the most outstanding article published in Chemical Engineering Education.

“Case-Based Learning in Material & Energy Balances to Help Students Practice the Transferability of Chemical Engineering Problem Solving”

Paper: <https://doi.org/10.18260/2-1-370.660-132189%20>



Christopher Chen
Lecturer in the Discipline of
Chemical Engineering
Columbia University



Scott Banta
Professor and Chair of
Chemical Engineering
Columbia University

Ray W. Fahien Award

Sponsored by Chemical Engineering Education

This award is given in honor of Ray Fahien, who was editor of Chemical Engineering Education from 1967-1995, and who was effectively the founding father of the journal, establishing it as a premier publication vehicle in the field of chemical engineering education. This award is given to an educator who has shown evidence of vision and contribution to chemical engineering education within their first 10 years as faculty.



Betul Bilgin
Clinical Associate Professor of Chemical
Engineering
University of Illinois at Chicago

2024 ASEE Chemical Engineering Division Award Recipients

Donald Woods Lectureship Award for Lifetime Achievement in Chemical Engineering Pedagogy



Bernard Van Wie
Professor of Chemical and
Bioengineering
Washington State University

Professor Bernie Van Wie has his PhD from the University of Oklahoma and joined the faculty at Washington State University in 1983. Over 32 years he has developed innovative teaching methods to include Desktop Learning Modules for experiential, interactive learning in lecture classrooms so students better grasp difficult concepts.

He has been active in ASEE since 2004, and has served on the Chemical Engineering Executive Committee, 2013–present, first as Awards co-Chair and since as chair or co-chair of the Fundraising Committee. Van Wie has been propagating use of Desktop Modules among some 70 professors at around 50 U.S. and international institutions.

He's mentored 10 PhD students who are now professors, co-authored 29 peer-refereed education publications, 79 publish-to-present papers most of them at ASEE conferences, 174 papers overall, and worked in leading teams in 21 education-related grants amounting to nearly \$8 million. He re-initiated an ASEE faculty prayer breakfast ongoing for the past 6 years.

2024 ASEE Chemical Engineering Division Award Recipients

Joseph J. Martin Award

Recognizes the most outstanding Chemical Engineering Division paper presented at the ASEE Annual Conference

“Teaching Fugacity through Comics and Assessing the Impact on Student Confidence and Understanding” (ASEE 2023)

Paper: <https://peer.asee.org/44418>



Luke Landherr

College of Engineering Distinguished Teaching Professor
Chair for Undergraduate Studies, Chemical Engineering
Northeastern University

Best Poster Award

Recognizes the most outstanding Chemical Engineering Division poster presented at the ASEE Annual Conference

“A Laboratory Platform for Learning Chemical Engineering” (ASEE 2023)

Paper: <https://peer.asee.org/42897>



Benjamin Phillips
Ph.D. Candidate,
Mechanical
Engineering
Baylor University



Anne Spence
Clinical Professor,
Mechanical
Engineering
Baylor University



Alexandre Yokochi
Professor,
Mechanical
Engineering
Baylor University

2024 ASEE Chemical Engineering Division Award Recipients

2024 ASEE ChED Award Recipients

To be formally recognized at the 2025 conference banquet



Row 1: Emily Crum, Kristin Bennett, Stuart Adler
Row 2: David Bergsman, Nicole Minkoff, Alexis Prybutok

Joseph J. Martin Award

“To Record or Not to Record? Collaborating through Conflict” (ASEE 2024)

Paper: <https://peer.asee.org/48159>

Best Poster Award

“Reducing Environmental Impact in Higher Education: Curriculum Design for the Sustainable-Unit Operations Laboratory” (ASEE 2024)

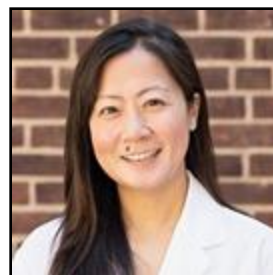
Paper: <https://peer.asee.org/46832>



Hariharan Sivanandam



Chijuan Hu



Ariel Chan

Inspired to nominate a colleague for an award? Check out the details for nominations on the next page!

Nominations for Division Awards

Email completed packet to awards co-chair Ashlee Ford Versypt (ashleefv@buffalo.edu) and for the most complete version of each award description, criteria, and nomination materials please see: <http://ched.asee.org/awards/>

Awards with a nomination deadline of January 15:

The Thomas and Donna Edgar CACHE Award for Excellence in Chemical Engineering Education

This award, sponsored by the CACHE Corporation, is presented for significant contributions in the development of computer aids for chemical engineering education.

Ray W. Fahien Award

This award is given in honor of Ray Fahien, who was editor of Chemical Engineering Education from 1967-1995, and who was effectively the founding father of the journal, establishing it as a premier publication vehicle in the field of chemical engineering education. The award is given annually to an educator who has shown evidence of vision and contribution to chemical engineering education. Educators who have been faculty members for not more than ten years as of July 1st in the year of the award are eligible.

The Donald R. Woods Lectureship Award for Lifetime Achievement in Chemical Engineering Pedagogy

This award is presented to a distinguished engineering educator to recognize and to encourage outstanding achievement. This award will normally be given for lifetime achievement, recognizing a sustained career of contributions to pedagogical practice, scholarship, and mentoring that not only caused innovative and substantial changes, but also inspired other educators to new behaviors that benefit students in Chemical Engineering. The recipient will be obligated to present a lecture at the ASEE Annual Meeting.

Non-nominated awards include:

- Joseph J. Martin Best Paper Award in the ASEE Chemical Engineering Division
- Best Poster Award
- William H. Corcoran Award for the best paper in Chemical Engineering Education

These awards are selected based on accepted papers in Chemical Engineering Education journal and the ASEE Annual Meeting.

Call for Papers

2025 ASEE Annual Meeting June 22 - 25, Montreal, Quebec, Canada

The Chemical Engineering Division (ChED) of ASEE invites papers for the 2025 Annual Conference and Exposition in Montreal, Quebec, Canada (June 22 – 25, 2025). While all topics of Chemical Engineering education will be considered, papers on the following general topics are strongly encouraged:

- | | |
|---|--|
| • Diversity, Equity, Inclusion, and Justice initiatives in ChE programs | • Teaching the three pillars of sustainability: social, environmental, and economic |
| • Supporting students (e.g., mental health, belonging, advising, etc.) | • Professional skills (e.g. critical thinking, creativity, communication, collaboration, etc.) |
| • Technological advancements (e.g., AI usage, computer simulations, programming, etc.) | • Incorporating safety and regulatory compliance into ChE curricula |
| • Entrepreneurship and innovation | • Connecting conceptual silos and interdisciplinary education |
| • Contemporary perspectives in ChE education | • Assessment and evaluation methods |
| • Non-traditional learning experiences (e.g. experiential, inquiry-base, immersive, etc.) | • Bring-your-own-experiment/demos (hands-on, online, and virtual) |
| • Industry-Academia Alignment | • Works-in-progress for discussion or feedback |

In addition, suggestions/proposals for panel discussions, workshops, and cross divisional sessions are welcome. We will consider all ideas submitted for workshop proposals and select the most appropriate to be presented during the Sunday workshop sessions.

Deadlines: (Abstract submissions are **open**)

Abstract Submission Closes: **Tuesday, October 1, 2024**

Notification on Acceptance/Rejection of Abstracts: **Monday, December 2, 2024**

See author guidelines on next page

Call for Papers

2025 ASEE Annual Meeting June 22 - 25, Montreal, Quebec, Canada

Author Guidelines:

Please note that both abstract and draft paper reviews are **double blind**, so do not include personal or institutional identification.

Abstracts: Submitted abstracts should be approximately one page or less in length, with a suggestion of 250-500 words (See **Appendix B** of the Author Kit for details).

Paper Submissions: Full paper submissions should be approximately 10-20 pages in length, inclusive of figures and other graphical elements (See **Appendix B** of the Author Kit for details).

Please limit Work-in-Progress papers to 3-5 pages (see below).

ASEE Author Kit: Please make sure to follow the abstract and paper submission guidelines, available at [2024 Author's Kit](#):

IRB Inclusion for Consideration for Best Paper (if applicable): To ensure ethical considerations and high quality, only papers which discuss IRB (if applicable) will be considered in the evaluation for the Best Paper of the ChE Division (which is then submitted for the Best PIC 1 Paper). IRB inclusion can include (but is not limited to): IRB oversight entity and approval number or a statement of exemption determination.

In addition to full oral presentations, ChED has the following session types:

Work-in-Progress Papers: Papers describing ongoing work ("work-in-progress") are welcome in all sessions, including the poster session. **Please title your WiP Papers in the format of "Work-in-Progress: Title of your project" in addition to indicating it is WiP in the abstract submission portal.** This will help us easily identify these submissions. The Works-in-Progress oral sessions will include shorter presentations with time allotted to meet and exchange ideas with session attendees.

Poster Presentations: Poster papers can be in any topic related to chemical engineering education including the list above, including works-in-progress. **If you would like to submit a paper to the poster session directly, please clearly designate this request at the end of your abstract.** Please note that poster papers also go through ASEE's double-blind review process.

Moderated Open Mic Session: A meeting open to the general audience for free exchange of ideas on current challenges and opportunities in chemical engineering education. Topics are requested from conference attendees.

Resource Lightning Roundtable: This session is designed for those wanting to share a teaching strategy, a technological tool they are using in the classroom, or short research finding. It is an opportunity to discuss ideas in a small group and share resources without the need of a full paper. There will be multiple 10-minute rounds of idea sharing. This abstract submission is run outside of the ASEE NEMO system and will be shared via email to the ChE division in **February 2025**.

Conference paper submission is a two-step process, detailed in the diagram on the next page:

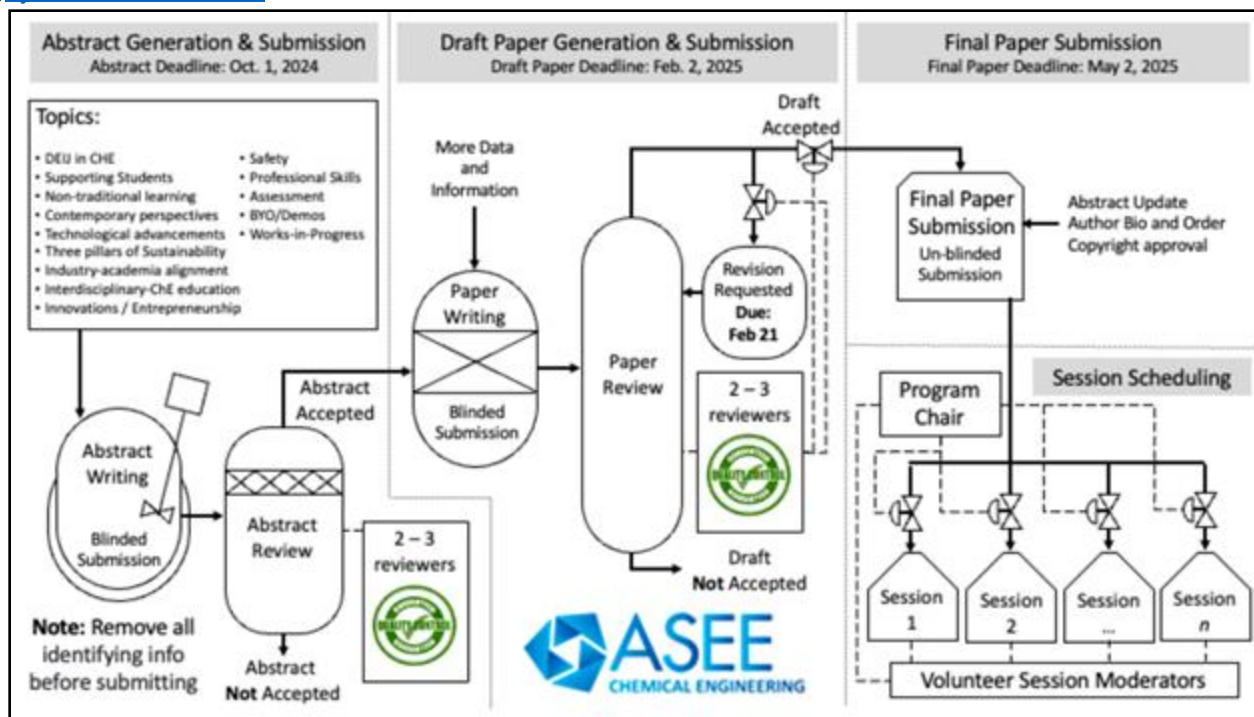
1. Abstract submission, review, and acceptance, followed by
2. Paper submission, review, and acceptance.

Call for Papers

2025 ASEE Annual Meeting June 22 - 25, Montreal, Quebec, Canada

As stated above, since reviews are double-blind, please do not include the names of authors or institutions anywhere in the abstract or draft paper. At the end of your abstract, please state if you would particularly like your paper to be in a regular session or a poster session. Abstracts will be reviewed, and if accepted, authors are then invited to complete full papers for further review. In general, the ChE Division is a “publish-to-present” division: to present at the conference, you must have your paper accepted for publication and have at least one author participate in the peer review.

For questions regarding paper submission and review, and also suggestions for panels, workshops, or other non-traditional sessions or interdivisional sessions, please contact the 2025 ASEE ChED Program Chair, Chris Barr, cjbarr@umich.edu



Special Note: Travel Requirements

The 2025 ASEE Conference is being held in Montreal, Quebec, Canada. As such, non-Canadian ASEE members will have special travel requirements to travel to Canada and to return to the USA. For American ASEE members, a passport should be sufficient. Additionally, some people may not be allowed to enter Canada (deemed “inadmissible”) due to security, criminal, or medical reasons under Canada’s immigration law. Please check that you are able to travel to Canada through the link below:

- [Government of Canada: Business visitors - Attend conferences, events and meetings in Canada](#)
 - [Government of Canada: “Find out if you’re inadmissible”](#)
- [United States Customs and Border Protection: Western Hemisphere Travel Initiative](#)
- [United States Department of State - U.S. Passports](#)



Community Announcements

- **AIChE Education Division Course Survey: Transport Phenomena and Applications**

The survey topic for the AIChE Education Division this fall is transport phenomena and applications, including equilibrium-based separations. This survey has already been sent directly to the relevant faculty at the institutions in the list below – thank you to the chairs who responded to our initial survey this spring. If you are at another institution, please have faculty complete this survey for each required course in your department with content in momentum transfer, heat transfer, mass transfer, rate-based separations, and/or equilibrium-based separations.

The survey is at https://utulsa.az1.qualtrics.com/jfe/form/SV_eepP7leogMZrkxw and will close temporarily for analysis on **Sept. 30**.

A fillable version of the survey is available at

<https://docs.google.com/document/d/1R6lz7JuKH5Msc3JnEi6a85VPsbidOlwz/edit?usp=sharing&oid=105411965590760233894&rtpof=true&sd=true> for you to view before starting the Qualtrics version or to email in your response. Thank you for your contributions to this survey over courses in transport phenomena and applications.

Committee members: Janie Brennan, Heather Chenette, Matthew Cooper, Kevin D. Dahm, Jacqueline Gartner, Luke Landherr, David L. Silverstein, Stephen W. Thiel, and Troy Vogel
Dr. Laura P. Ford, Committee Chair

Emails have been sent directly to relevant faculty at these institutions:

Auburn University
Brigham Young University
Bucknell University
California Baptist University
Christian Brothers University
Colorado School of Mines
Florida Institute of Technology
Iowa State University
New Jersey Institute of Technology
New Mexico State University
North Carolina State University (continued on next page)

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Community Announcements

Penn State
Rensselaer Polytechnic Institute
South Dakota School of Mines & Technology
The Cooper Union
Tulane University
University of Alabama
University of Arkansas
University of Delaware
University of Florida
University of Kansas
University of Maryland
University of Massachusetts Amherst
University of Miami
University of New Hampshire
University of South Carolina
University of South Florida
University of Toledo
University of Utah
University of Wisconsin - Madison
Wayne State University
West Virginia University
Youngstown State University

- **Searching for Local Host for 2025 ASEE Conference in Montreal**

The ChED Executive committee is looking for someone who would be willing to be the "local host" for the 2025 ASEE Annual Conference in Montreal.

The local host for the ChED division mostly scouts out locations and caterers for our division's awards banquet. Local hosts don't need to sign contracts or anything else; that will be arranged by the ChED program chair, ChED secretary/treasurer, and staff at ASEE. Ideally, local hosts are, well, local to the conference (Montreal) but that isn't required, just really helpful.

If you or someone you know is from one of the universities in or near Montreal (or an alumni from one of those universities) and are willing to help, please reach out to Chris Barr, cjbarr@umich.edu.

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Community Announcements

- **Faculty Perceptions of Undergraduate Research in Chemical Engineering**

Christy Wheeler West (University of South Alabama) and Joseph Holles (New Mexico State University) request your participation in a study investigating chemical engineering faculty perspectives on benefits and barriers to engaging in mentorship of undergraduate research. Responses from faculty who are active in mentorship and those who are not are invited, and distribution of the survey to faculty who may not receive this newsletter is much appreciated.

[Survey: Faculty Perceptions of Undergraduate Research in Chemical Engineering](#)

- **Book Club: Teaching with AI**

As a ChED community activity (and a way to help us all keep up with modern pedagogy), ChED Chair Janie Brennan and Chair-Elect Taryn Bayles will be hosting a book club this fall on the first 6 chapters of *Teaching with AI* by Bowen and Watson (2024). The book club will meet approximately every 2 weeks during the fall semester on **Friday afternoons at 4:30 eastern** (3:30 central, 2:30 mountain, 1:30 pacific):

- September 20 - Chapter 2: A New Era of Work
- October 4 - Chapter 3: AI Literacy
- October 18 - Chapter 4: Reimagining Creativity
- November 15 - Chapter 5: AI-Assisted Faculty
- December 6 - Chapter 6: Cheating and Detection

Note that each chapter is only ~20 pages. Meetings will be over Zoom. We will send out a link (and the week's discussion questions) a few days in advance of the first meeting to those who indicate interest in joining. **To participate (at any level):** <https://forms.gle/BzdQpfkTP12uK2o78>

We understand these times won't work for everyone. Even if you can't make every (or any) meetings, you are still welcome to join our mailing list to receive access to the Google Doc notes we'll be taking.

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Community Announcements

- **Chemical Engineering Tenure Track Faculty Position, Trinity University, San Antonio, Texas**

The Engineering Science Department of Trinity University invites applications for a tenure-track Assistant Professor of Chemical Engineering position starting August 2025.

Candidates must have earned BS and PhD degrees in chemical engineering or closely related field. Other qualifications include a genuine interest in undergraduate education and the ability and desire to develop and maintain a research program in the candidate's specialty area that falls within chemical engineering or closely related field.

The mission of the Engineering Science Department at Trinity University is to provide students with a broad-based undergraduate engineering education by offering a design-oriented, multi-disciplinary engineering science curriculum in the context of the University's traditions of the liberal arts and sciences. Please visit <http://www.engr.trinity.edu/> to find more information about the Engineering Science Department.

Trinity University is an independent, coeducational liberal arts and sciences university with selected pre-professional and professional programs. Our 2400 students are served by 220 faculty. The attractive, modern campus overlooks downtown San Antonio, a unique city rich in heritage and ethnic diversity with a population of more than one million.

Trinity's principal focus is on undergraduate education featuring intertwined, mutually reinforcing intellectual experiences for students and faculty across the University. Priorities include development of critical and creative thinking skills and excellence in written and spoken communication.

Application instructions and more information about the position are provided at [Employment Opportunities \(myworkdayjobs.com\)](#).

Well-qualified applications will be considered until the position is filled.

Questions may be directed to Dr. Peter Kelly-Zion, at engineering-hr@trinity.edu.

Please send future announcements to ChED.ASEE.newsletter@gmail.com by the end of the first week of each month to be included in that month's newsletter.

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