

# AIChE Sustainable Engineering Forum Division Newsletter



## Newsletter Highlights

**Letter from the Chair:  
Dr. Eric Tan**

**2024 SEF Leadership**

**2024 SEF  
Awardees**

**Volunteers needed for  
2025 Annual Meeting**

**SEF contact Info**

Dear SEF Colleagues,

Welcome to this edition of the Sustainable Engineering Forum (SEF) newsletter.

I am Eric Tan, the current SEF Chair. I would like to extend my gratitude to the SEF leadership team for their hard work and dedication: Dr. Ida Chen (Vice-Chair and Programming Chair), Dr. Kirti Yenki (Secretary), Dr. Helen Lou (Treasurer), Dr. Ignasi Palou-Rivera (Awards Committee), Dr. Yinlun Huang (Awards Committee), and Dr. Alex Orlov (Education).

As we approach the end of another remarkable year, I feel a strong sense of pride and gratitude for our community's unwavering commitment and impressive achievements. Our collective efforts continue to promote the principles of sustainable engineering, fostering innovations that support both environmental stewardship and economic prosperity.

SEF serves as a technical platform open to all disciplines, with a focus on promoting technical and professional development centered on sustainability principles and practices. This year has seen notable progress, highlighted by the Annual AIChE Meeting in San Diego. Over 300 abstracts were submitted for the SEF's 61 sessions, organized into three programming areas: Sustainability Science and Engineering (23A), Sustainable Biorefineries (23B), and Sustainable Energy (23C).

Some of the popular topics included design for a circular economy, machine learning and analytics for sustainability, novel energy storage and system integration, innovative approaches to CO<sub>2</sub> utilization, and strategies for fuel and energy decarbonization. Our members are leading the way in creating a sustainable future, and these achievements showcase our technical expertise and our commitment to a vision where engineering solutions align with the needs of our planet and its inhabitants.

This year, we also hosted two webinars. Professor Shudipto Dishari from the University of Nebraska-Lincoln delivered SEF's very first webinar, titled "Unlocking the Power of Natural Materials to Achieve Sustainability in Energy and Beyond." Looking ahead, we plan to host at least four webinars in 2025.

Our focus remains steadfast on promoting technical and professional development with a commitment to sustainability principles and practices. We also aim to foster an inclusive and collaborative environment that empowers our members to innovate and excel. We will enhance our support for early-career professionals, expand our outreach efforts, and promote the integration of sustainability principles across all aspects of engineering education and practice.

As we continue this journey together, I encourage each of you to stay engaged, share your insights, and actively participate in our forums, webinars, and events. Our strength lies in our collective expertise and passion; through your active involvement, we can continue to make a meaningful impact. I am honored to serve as your chair and look forward to another year of progress and achievement.

Warm regards,

Eric Tan

Chair, AIChE Sustainable Engineering Forum

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# 2024 SEF LEADERSHIP

**Chair:** Dr. Eric Tan

**Vice-Chair:** Dr. Ida Chen

**Past Chair:** Dr. Mark Wright

**Secretary:** Dr. Kirti Yenkie

**Treasurer:** Dr. Helen Lou

**International Advisory:** Dr. Heriberto Cebezas

**Technical Advisory:** Dr. Michael Gonzalez, Dr. Eric Tan

**CTOC Liaison:** Dr. Fengqi You

**Awards:** Dr. Ignasi Palou-Rivera, Dr. Yinlun Huan, Dr. Fengqi You, Dr. Helen Lou, Dr. Ida Chen

**Web Master:** Dr. Christian Lastoskie

**Education:** Dr. Alex Orlov, Dr. Jennifer Dunn

**Webinar Committee:** Dr. Ray Smith

**Newsletter Committee:** Dr. Alex Orlov

[AIChE Sustainable Engineering Forum Leadership Webpage](#)

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## 2024 SEF AWARDS WINNERS

### Sustainable Engineering Forum Research Award

Christos Maravelias is the Chair of the Department of Chemical and Biological Engineering and the Anderson Family Professor in Energy and the Environment at Princeton University. His research focuses on process and energy systems engineering, particularly optimization methods for production and supply chain planning, as well as process and energy systems synthesis with an emphasis on renewable energy. He has also authored a monograph on chemical production scheduling.

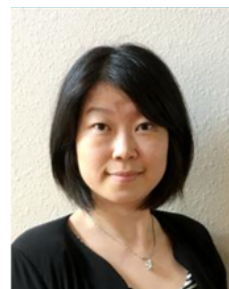


Christos earned his Diploma in Chemical Engineering from the National Technical University of Athens in 1996 and an MSc in Operational Research from the London School of Economics. After military service, he completed his PhD at Carnegie Mellon University under Professor Ignacio Grossmann. In 2004, he joined the University of Wisconsin-Madison faculty.

He has received accolades like the Olaf A. Hougen Fellowship, an NSF CAREER award, and the CAST division's W. David Smith Jr. Award. His research spans production planning, process synthesis, optimization under uncertainty, and computational tools for designing chemical and biological catalysts.

### Sustainable Engineering Forum Practice Award

Ida (Xue) Chen is a Global R&D Fellow at Dow Chemical Company, specializing in sustainability, energy transition, and human health. She leads the development of amine technologies and Dow Life Sciences innovations, commercializing over 20 products across industries like electronics, agriculture, and pharmaceuticals. Ida spearheaded the development of "UCAM™-F," a catalyst enabling large-scale ethyleneamines production for markets like carbon capture.



Ida holds master's degrees in Pharmaceutical Engineering and Statistics and a Ph.D. in Chemical Engineering from the University of Michigan. With 25 peer-reviewed papers, 25 granted U.S. patents, and multiple prestigious awards, she is a leader in chemical innovation and sustainability.

Ida actively contributes to professional societies, serving in leadership roles within AIChE, ACS, and SPE. She has chaired international conferences, championed diversity in technical programming, and mentored over 50 junior researchers globally. A STEM ambassador, she advocates for sustainability education and policy and was recently invited to the National Academy of Engineering's FOE symposium.

# VOLUNTEERS ON “SESSION CHAIRS” FOR 2025 ANNUAL MEETING

- 2025 AIChE Annual Meeting
  - Nov 2-Nov 6
  - Boston, MA
  - Contact: Ida (Xue) Chen ([Chen2c7ab2@dow.com](mailto:Chen2c7ab2@dow.com))

Call on Volunteers to become “Session Chairs” for 2025 Annual Meeting!

Excellent volunteering and professional opportunity!

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## SEF CONTACT INFO

- [Sustainable Engineering Forum \(SEF\) website](#)
- [Sustainable Engineering Forum \(SEF\) LinkedIn page](#)
- Sustainable Engineering Forum (SEF) LinkedIn QR code

