

2023 1st Quarter



AIChE Fellows Newsletter

Fellows Breakfast—The next breakfast will be at the 2023 Spring (National) Meeting — Houston, TX.

Tuesday, March 14th—(6:45 AM—7:45 AM)

Coffee available at 6:30 AM

From the Fellows Council

This year our goal is to publish the following newsletters. "1st Quarter", "2nd Quarter", "3rd Quarter" and "4th Quarter". Your comments are solicited as to content you would like to see, or if you would like to provide content. Our Vision is to involve you in furthering the mission of AIChE by promoting an active Fellowship!

[Click the "In this Issue" links on the right](#) to jump to features on the following pages.

2023 Fellows Council Executive Committee:

Lori McDowell, Chair; Timothy Anderson, Chair-Elect;

Anthony Fregosi, Secretary; Annette Johnston, Immediate Past Chair;

John O'Connell, Past Secretary; Gina Gatto, AIChE Staff Liaison

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Special points of interest

Come to Breakfast!

Fellows Events

Houston , TX: March 14, 2023

Orlando, FL: November 6, 2023

Get Active with Students!

Seeking Fellow Volunteers:

Student Conferences

AIChE Student Conferences in 2023

Student Chapters

Get involved with a student

chapter at a university near you

Student Design Problem

A link to Serve as a "mentor" for the 2023 Student Design Problem will be provided when available.

Useful Links

Fellows Leadership

FC organization and leadership

Fellows Directory

Where to find an AIChE Fellow

Fellows By-Laws

Current Governance Document

Fellows Volunteer Service.

Register your interests & availability to volunteer AIChE service

AIChE Academy

Education & training for chemical engineers & their companies

AIChE Foundation

Doing a World of Good

AIChE Annual Report

Complete information about AIChE activities, organization, and people

Contact Us

Email the Fellows Council



From the Chair of the Fellows Council



"We are still planning for a Fellow Survey later this year. Please take the time to fill out and return the survey because we will use this information to develop new opportunities for Fellows."

In the meantime, please send me any ideas or suggestion to lmcdowell@mathesonogas.com."

Fellows Council Activities

The AIChE Fellows Council oversees the organized activities of the Fellows. The Fellows Council meets at a minimum of four times per year to discuss Fellow activities and policies.

Two meetings are face-to-face at the Spring (National) and Fall (Annual) AIChE meetings; virtual meetings are scheduled on the 4th Tuesday of the other months as needed.

Fellows interested in being considered for Fellows Council service should [contact us](#).

Hello Fellows,

I hope you have all had a great first quarter. Can you believe it is almost March already? The AIChE Spring meeting is almost here. This year the Spring meeting will be in Houston, so we should be able to have a lot of industry attendance, even if they only come for a day or two.

As I mentioned in the last Fellows Newsletter, one of our goals for 2023 is to get Fellows more involved. Fellows will continue to support the student design project, ChemE Car and other student competitions, and Student Chapters. If you are interested in participating in any of these areas, please contact the appropriate person, as outlined in other sections of this newsletter, or let me know. Fellows also did amazing work in supporting the AIChE Foundation with our donations and we want to continue this as well. Thank you for being so generous! Please check out the Langer Prize in this issue and how we can support that worthy Project. The Fellows Council is looking into what projects the Fellows want to support and how our donations to the Foundation will be used, so more on this in another Newsletter later this year.

What else can Fellows do? The ideas are endless, but one thing we will be looking at soon is a speakers corner. We will be asking you for presentations/areas of expertise where you might be willing to give a talk, either live or virtually, in the next few months and we hope to have this set up in 2023. There is also a need for Fellow volunteers to get involved with the Science History Institute, as shown in this newsletter.

If you plan to attend the Spring Meeting, please try to attend the Fellows Breakfast on Tuesday morning. This is a great chance to hear what is going on at AIChE and to network with old friends and new. Also, visit the Fellows Website on the AIChE site and see what is new. This is also a great source for info on nominating a new fellow, joining the fellows council and even seeing who other AIChE Fellows are.

I look forward to seeing some of you at the Spring meeting. Until next time, Happy Spring!

Lori McDowell
Fellows Council Chair, 2023

2023 AIChE Spring Meeting, Houston, TX

EMBRACING THE FUTURE OF CHEMICAL ENGINEERING

SPRING23 +19TH GCPS
A Joint AIChE and CCPS Meeting

March 12-16, 2023
Houston, TX

LEARN MORE!

[The 2023 AIChE Spring Meeting: —March 12 - 16 - Hilton of the Americas, George R. Brown Convention Center. Houston, TX](#)

The AIChE Spring Meeting and Global Congress on Process Safety is the year's key technical conference for practicing chemical and process safety engineers, covering the industry's critical needs more broadly and deeply than any other conference.



The 2021 New Fellows were celebrated with a video highlighting their contributions to the profession. Note: An ad is likely to play before the video. [Congratulations New Fellows](#)

Moment of Silence

Give our departed colleagues a moment of silence.

When was the last time you visited the AICHe Fellows site on the AICHe Web site?

Please click on the following link to access the below site:

[AICHe Fellow Site](#)

“How To” Nominate a AICHe member for Fellow

Fellows Membership. We developed a ["Video"](#) about how to nominate potentially worthy members for Fellow, which can be found on the Fellows page of the AICHe website. We are recruiting Fellows to assist with nominations, and to work with entities in AICHe that have not historically nominated many Fellows in the past.

FUNDING BIG IDEAS!

The Langer Prize For Innovation and Entrepreneurial Excellence (unrestricted grant of up to \$100K)

APPLY NOW
(Deadline February 28)

AIChE
The Global Home of Chemical Engineers

**DOING
A WORLD
OF GOOD**

The Langer Prize Celebrates the Extraordinary While Doing a World of Good

The AIChE Foundation is proud to fund the **Langer Prize for Innovation and Entrepreneurial Excellence**, a prestigious award honoring and recognizing early-career researchers who are making groundbreaking contributions that could positively impact our global society. Named in honor of Robert S. Langer, National Medal of Science recipient (2006) and Queen Elizabeth Prize for Engineering awardee (2015), whose pioneering spirit and influential work continue to inspire across multiple industries and sectors.

An award of up to \$100,000 is annually granted as seed funding to each selected Langer Fellow in support of an original approach or idea that will provide a valuable contribution to society. Early-career researchers, especially those working in chemical and biological engineering, are encouraged to submit their **blue-sky ideas that could lead to critical technical and commercial innovations** [by February 28, 2023](#).

María Eugenia Inda, Pew Postdoc at MIT and 2020 Langer Fellow, received \$75,000 to do extraordinary work that could provide early infection or ailment detection through a multi-diagnostic diaper. **"I am excited to join this fellowship, which will help me to achieve the extraordinary dreams that I have,"** said Eugenia, who, along with other Langer Fellows, has the opportunity to collaborate with other leading innovators and entrepreneurs through this fellowship.

"I am excited to join this fellowship, which will help me to achieve the extraordinary dreams that I have," - María Eugenia Inda

The Langer Prize is made possible by the generosity of donors who support the AIChE Foundation and see it as an investment in our field and future. We hope that you will join us in this effort to ensure that Bob's dedication to tackling high-risk and high-impact game-changing innovations continues through the selection and support of young innovators and entrepreneurs, in perpetuity.

Please consider giving to the [Langer Prize Endowment](#) today.

The AIChE Foundation was founded in 1990 as the philanthropic arm of AIChE. The Foundation provides support and funding for research, education, and outreach programs that advance the field and help solve some of the world's most pressing problems. The tremendous success of our [Doing a World of Good](#) campaign has encouraged innovation, diversity, and inclusion in the chemical engineering industry and has inspired the students and young chemical engineers who are the next generation of top STEM talent.

2023 Board of Directors

Billy B. Bardin, President — Billy B. Bardin, PE, is the Global Digitalization Director for Dow. He joined Union Carbide/Dow in 2000 and has held global leadership roles in research, development, and manufacturing.

Alan E. Nelson, President-Elect — Alan Nelson is the Senior Vice President (SVP) for Redwood Materials where he is responsible for leading the sustainable development of cathode active materials (CAM) for lithium-ion batteries.

Christine Grant, Past President — Christine Grant is a professor of Chemical and Biomolecular Engineering and the Inaugural Associate Dean of Faculty Advancement in the College of Engineering at North Carolina State University.

MaryKathryn Lee, Secretary — MaryKathryn (Kathy) Lee has been a researcher at ExxonMobil Corporate Strategic Research for 30 years. She has been an active AIChE member for more than 10 years and was recently elected Fellow.

Pete Lodal, Treasurer — Peter Lodal is a retired Technical Fellow of Eastman Chemical Company, having spent nearly 42 years with Eastman in various positions including process engineering, process safety and loss prevention.

Norma A. Alcantar, Director — Dr. Norma A. Alcantar is Professor and Associate Dean for Research in the Dept. of Chemical, Biological, and Materials Engineering at the Univ. of South Florida. She is a global pioneer in developing innovative, natural technologies for environmental, medical, and industrial applications, including improving access to clean drinking water, oil spill cleanup, and cancer tumor cell treatments.

James R. Beilstein, Director — Jim Beilstein is Vice President of Advanced Manufacturing at Owens Corning. In this role, he has responsibility for the technology of manufacturing operations, process innovation, capital engineering, and equipment purchasing.

David Dixon Director — David Dixon joined AIChE as a student and recently became an AIChE Fellow. He served for four years in the military, primarily overseas, and worked for Dow Corning in process development before earning his PhD in chemical engineering from UT Austin. He then began his academic career at South Dakota School of Mines and Technology.

Donna (Bryant) Dybeck, Director — Donna (Bryant) Dybeck is a Technology Transfer Process Engineer for Pfizer, focusing on biologic products. Prior to joining Pfizer she worked at Johnson Matthey-Pharmaceuticals and Syngenta in various Engineering and Production roles.

Lola Eniola-Adefeso, Director — Omolola (Lola) Eniola-Adefeso is the Associate Dean for Graduate and Professional Education in Engineering and the University Diversity and Social Transformation Professor of Chemical Engineering at the Univ. of Michigan. She received her BS in chemical engineering from the Univ. of Maryland, Baltimore County, and a PhD from the Univ. of Pennsylvania.

Julianne Holloway, Director — Julianne L. Holloway is currently an Assistant Professor in Chemical Engineering at Arizona State University, where she began in 2016. Julianne received her Ph.D. in Chemical Engineering at Drexel University in 2012.

Laura Matz, Director — Laura Matz is the Chief Science and Technology Officer for Merck, KGaA, Darmstadt, Germany, driving innovation and digitalization across the company's life sciences, healthcare, and electronics sectors. Serving as an executive vice-president, she is responsible for the corporate innovation teams including the digital office and new digital business models.

Anne O'Neal, Director — Anne O'Neal is Manager of Process Safety Culture and Competency at Chevron, and an AIChE Fellow. Her 40-year career includes senior positions in process safety, as well as health, environment and safety.

William Raiford, Director — Bill is Senior Director Technology - Titanium Technologies for The Chemours Company in Wilmington, DE. He is accountable for the R&D, product development and manufacturing technology organizations of the global titanium dioxide pigment business.

Elsa Reichmanis, Director — Elsa Reichmanis is Professor and Carl Robert Anderson Chair in Chemical Engineering in the Department of Chemical and Biomolecular Engineering of Lehigh University.

Daryl Roberts, Director — Daryl Roberts is Chief Operations and Engineering Officer at DuPont. He has 32 years of experience in chemical engineering in a number of leadership positions with companies including Arkema, Inc. and Eastman Kodak. He serves several industry organizations including AIChE, the American Chemistry Council, and the National Action Committee for Minorities in Engineering.

Notes from Fellows Council Meetings 2023 January

Note these are “excerpts” from the Fellows Council meeting minutes.

A FC zoom meeting was held on **January 23, 2023**. The following items were discussed:

- Welcome New members
- Presentation on Fellows Participation in Science History Institute (SHI)
- Business Meeting/Fellows Breakfast plan
- Proposed Program Schedule:
 - Spring Meeting – Tuesday Fellows Breakfast—(6:45 AM—7:45 AM) Coffee available at 6:30 AM
- Plans for 2023
 - Student Programs
 - Speakers Corner
 - Fellow Engagement
 - Fellows Survey

Save and [download](#) the new AIChE Fellow ribbon and add it to your email signature to show your pride in belonging to AIChE!



“Call for Fellow Volunteers”

This “Call for Fellow Volunteers” is the start of a list of activities that are available for you to participate as a Fellow. Many of these activities are Student/Student Chapter related.

“One of our aspirations is to connect Fellows with every AIChE Student Chapter”

1. Join the Fellows-Student Chapter Task Force—Contact Fernando Aguirre at FellowswithStudents@aiche.org
2. Support any one of the (9) Regional SC Events.
3. Participate, if needed, at the Annual Student Conference held at the AIChE Annual Meeting.
4. Support the Student Design Problem and/or a Societal (e.g. Circular Economy, Climate Change, Renewable Energy, Sustainability) Problem related to the Student Design Problem for next year.
5. Volunteer to lead the Societal Problem development activity with the support of an “Industrial Partner”.
6. Be a Student/Fellow Mentor.
7. Be a mentor to a Student Chapter near you or Virtually if you have knowledge a Student Chapter is seeking, but is not near you.
8. Evaluate submissions for the FOSSI applications.
9. Provide help in Chem-E-Car Competition[®], ChemE Cube[™], or ChemE Jeopardy.
10. Offer to join the Fellows Council!

Do you have topics you could present to Student Chapters?

Following up on an idea suggested at the 2022 Annual Meeting, we plan to create a database of topics that Fellows may have ready to present that could be offered to Student Chapters. To get started, we request all of you reading this newsletter to let us know whether you have topics you could present and whether you are willing to present in person or virtually.

Once we compile a meaningful list, we will publish the information in the Fellows website (and try to include links from student-focused sites) and request students to submit requests to an email address managed by the Fellows Council. We will coordinate and reach out to you with specific requests.

If you are interested and willing to participate in this idea, please complete the table below and send it to FellowswithStudents@aiche.org.

Topic(s) List all that you could present	
List the cities or area that you could present in person	
Would you present remotely via Zoom or other platform?	

(Continued on Pg. 8)

“Call for Fellow Volunteers” (Cont’d)

Fellow Support of Regional Student Conferences

The dates for the 2023 Student Regional Conferences are available at: [Student Conferences](#). Fernando Aguirre will work to match volunteer Fellows with Chapters needing help with Regional Conferences.

Fellow Support of Student Chapters

You may have read about the Fellows efforts in supporting Student Chapters in past newsletters. Anyone interested is ask to drop us a note at FellowswithStudents@aiche.org.

Over the past year, we have learned of Fellows currently interacting with 33 Student Chapters out of 172, mostly in the United States. If you are one of those Fellows supporting a Student Chapter, we would like to hear your experience so that we can share it with other Fellows, as this can provide ideas and expand the support we provide to Student Chapters in the US and beyond. Please use the email address provided above to share your experience.

Fellows Will Mentor AIChE Design Problem in 2023

The Fellows have worked with the Alliance to End Plastic Waste (AEPW) to develop the AIChE 2022-2023 Design Problem. Many thanks to Greg Yeo, who made all the connections, and worked on collecting the data and refining the problem. This problem addresses one of the most important problems in Chemical Engineering and the World: How to remove plastic waste from the environment. This year, the Fellows have offered to provide a little extra support for teams that may have lesser resources.

The design problem is a Pyoil design, using waste plastic as a feedstock. Also, details about an actual recycling center in Bali (an example of a feedstock provider) are also included in the problem. Students that submit a Pyoil design can submit a recycling center optimization. There are prizes for both the design and the recycle center optimization. Money for prizes was provided by AEPW, and AEPW will provide mentors for the forum site, where students can ask questions about the problem.

In addition to mentors from AEPW, several Fellows have also volunteered to answer questions. Student ask the questions in a TEAMS site, where all competitors can track conversations about the questions. The volunteers answering the questions will clarify data, direct students to find the data, and suggest what Knovel books or articles may be useful to reference in order to complete the design and the center optimization.

The addition of this forum is an IDEAL activity. It provides a resource for universities that may have lesser networks and resources than others. This year, all students wanting to compete for the Design Problem prize will have access to industry and academic experts in Plastic Waste, and perhaps will learn the great resources available to them as AIChE Student Members. The technical resources they find to solve the problem will continue to be useful to them as Young Professionals.

The problem was emailed to the Student Chapter Advisors. In order to see the problem, please contact the Student Chapter advisor at your local university. There are strict rules related to communication about the problem, because it is a competition. If you decide to help your local university, please remind them to look at the forum, and to use it. The Student Chapter Advisor will know how to access the forum. The competition ends in June 2023.

Fellows are to contact Annette Johnston (annette@aaiprojectconsulting.com) if they are interested in being a mentor for the design problem. Annette will send the names to Emily Miksiewicz . Whoever is leading the design problem will direct questions to the mentors when they come up.

(Continued on Pg. 9)

“Call for Fellow Volunteers” (Cont’d)

Science History Institute

Do We Know Our History...?

If you are interested in helping to prioritize what more AIChE and Science History Institute (SHI) can do together, please join a small group of Fellows to share your ideas. Contact Gayle Gibson (gibeck@comcast.net), Zenaida Gephardt (gephardtzo@rowan.edu), or John O’Connell (jpoc2x@aol.com).

The Fellows of AIChE have storied careers and have been or are part of groundbreaking research, innovations, commercial scale-up, educational development and solutions to many global challenges. These stories could be just the right inspiration for a future engineer, but only if the stories are captured and told.

“Those who cannot remember the past are condemned to repeat it.”

– George Santayana, philosopher

George E. Davis was an English consulting engineer who created the first “Handbook of Chemical Engineering” which took a different perspective on typical books of the late 19th century. Davis organized the handbook by the basic operations common in chemical industries of the day, like distillation, transporting liquids, evaporation and crystallization, and illustrated plant machinery that was available along with industrial examples.

Arthur Little, a renowned consultant, later used the term “unit operations” in a 1915 report to the president of MIT. Little worked with William Walker, MIT chemistry instructor, who was reforming the chemical engineering curriculum and helped by fostering collaboration with industry.

Imagine if we today could hear more of these stories about how our profession was crafted into what we now know as chemical engineering.

In 1982, AIChE worked with ACS and the University of Pennsylvania to establish the SHI to capture the history of chemical engineering and chemistry. SHI has some of the founding documents for AIChE, select chemical company archives, a wealth of artifacts, oral histories, documents and a museum. The mission of SHI today stretches beyond capturing history - it calls to “reveal how developments in these fields are embedded in our daily lives and to catalyze the reimagining of our scientific and technological future.”

AIChE is actively involved with SHI via three members on the SHI Board of Directors and two members on the Affiliate Council. The CEO and Executive Director of AIChE has directed these members to connect with AIChE’s Fellows to explore the many potential collaborations. SHI is currently working on several areas of emphasis that includes water, women in chemistry, science & activism, alternate drug delivery methods, science of color, and many more.

You may go to the following [link](#) to view additional information about SHI.