



Management Division Highlights

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Reach Your Summit

I think it's called "coffee cake" because a single slice is more voluminous than the coffee mug that's cowering beside it.

I'm writing these words from a corner booth inside an iconic and very old school Silicon Valley chain of diners called Hobee's. The coffee cake is as legendary here as it is large, but Hobee's is also known for making legends of another sort.

Across its many tabletops throughout the restaurant's many locations, countless startup ideas and business plans have been pitched, jotted down on napkins, paged through on laptop screens. Some, like PayPal and Netflix, you've heard of. A vast majority of others you have never heard of either because they failed too early in their creation or they ceased to exist before they could truly take flight.

So what bridges the gap between a great idea touching billions of users and a great idea that languishes in ambiguity and obscurity? Execution. Knowing which actions to take, which team members to hire, which timelines to deliver. All of these are in the domain of that jargony, corp-speak sounding word: Management.

As a term, the word "management" is so ubiquitous, used in some ways very seriously while in others, quite derisively, that the actual essence of the word can be quite diluted. But for the purpose of your AIChE Management Division, we think of management as a pathway to build and launch long-lasting careers, providing the right tools for individuals to prepare for that launch, and to create an environment where every single person feels supported, encouraged, and uplifted. Together, we want to work so you can reach your summit.

Letter from Incoming Chair (Continued)

The term as Chair begins and ends in what feels like a New York minute (or a Silicon Valley millisecond). So in the short time we have together, I am working with the help of an incredibly talented Management Division Board to launch these themes for you, our members:

(1) Management Career Development

Managing careers has two sides--managing the teams that you lead (you don't need the word "manager" on your business card to be an excellent leader) and managing your own career growth in your company and industry. Different managers at different stages of their careers need different things. Our goal is to quantifiably understand what those needs are and provide valuable means for you to grow yourself and to grow others.

Whether you're an aspiring manager who just got promoted to take over a new division, or a principal scientist transitioning over to management for the first time, we've got your back.

(2) Management Practices

We can't get from strategy and ideas to real life results without high quality execution. So what's out there? What's just rehashed from the past vs. what's truly innovative and adaptive to how businesses work in the modern era?

We're here to put some of the newest thought in front of you as well as keep shiny and polished some oldies but goodies. We'll train you on the tools where you need them and give you case study examples of how to apply them. And when you succeed we want to be there to celebrate alongside you, to raise a glass, to offer a high-five, for when you've delivered some massive results to your business.

(3) Diversity, Equity, and Inclusion in Leadership

It sounds like some marketing brochure, but for successful companies, creating an environment where their employees really want to be is every manager's core challenge. It's no use in hiring the best and brightest if your workplace isn't one where they think they can thrive. On a global landscape, chemical engineering professionals look very different today than we did even a couple of decades ago.

We're more present, we're more engaged, we fight for what we believe in, even if that sometimes means leaving the safe confines of a company that chooses to do otherwise. We're here to provide some awareness, hands-on training, and best practices on how to lead diverse, equitable, and inclusive workplaces to big wins in the industry.

- **Diversity** means just that--our varied personal and professional backgrounds directly contribute to the growing trajectory of our profession
- **Equity** means fairness - there are those engineers out there who are just as technically capable as our top performing engineers but haven't had the same level of access to opportunities as the rest of us

- **Inclusion** means that chemical engineers feel like they belong where they are, that their voices are welcomed and heard, and their contributions are embraced. When we disagree, we disagree respectfully; when we win, we celebrate loudly, together.

// We can't execute without you

I'm looking forward to this whirlwind year ahead of us. As I type these words into my screen, we're already halfway through February so the clock is definitely ticking away.

If you want to step up, if your mad skills approach the scale of your ambitions, I want to personally hear from you at austinslin.aiche@gmail.com

Let us know which of our themes you want to pitch in on and we'll save you a seat.

See you at the top.

Austin S. Lin

Chair (2020) AIChE Management Division

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San Francisco, California, USA

Changes in Division Leadership

The election of division officers and directors in late 2019 resulted in a new Chair, Vice Chair and Secretary as well as two new Directors.

Austin S. Lin moved from Vice Chair to Chair, while Joe Cramer has become our Immediate Past

Chair. Cristina Thomas was elected Vice Chair, and Babak Rafienia continues as Secretary, and Bill Welker continues as Treasurer.

Gayle Gibson and Aditi Khadilkar were elected as Directors.

Our new CTOC Representative is JoAnn Lighty.

Remarks by Past Chair Cramer

Just about a year ago I penned an opening "Chair's Letter" for the first Insight issue of 2019. In it I noted numerous s new initiatives that had well launched by my predecessors as the Management Division Chair and by the other Division leaders. I specifically mentioned our efforts to increase the involvement of younger professionals, our continued efforts to offer strong programming at meetings and the ongoing efforts to increase our recognition, at all levels, for those individuals that were making outstanding contributions to management in chemical engineering. A major point of my letter was to recognize the many challenges and opportunities that were presented to the Division for 2019 Now, it's a year later.....and I really don't where the time went....and I find myself writing a Past Chair note for the first issue in 2020.

So, let me start by thanking my 2019 Vice Chair, Austin Lin, and Past Chair, Fernando Aguirre, who were both outstanding in support of the Division and myself personally throughout the year. Austin made a great start on the creation of a new Value Proposition for the Division and also led our efforts to develop a new logo that I hope will grow in significance as time goes by. Fernando was a true stalwart of information and advice for both me and the entire leadership. His efforts culminated in a year-end election that produced several outstanding new additions to the Board. (I hope I can do as well in 2020 as this is now my job). We were all ably supported by the other officers, directors, and committee and activity leaders, many of whom return for 2020.

Perhaps, my letter in early 2019 conveyed some of the trepidations that I felt as the incoming Management Chair for 2019. It had been nearly 30 years since I last chaired an AIChE Division (Environmental in 1991) and really the challenges seemed a bit daunting. Chairing a Division in 2019 was quite different than chairing one in 1991. The demographics of an AIChE Division are far different now. We all recognize that there are fewer routine, joiners' today and that leaders must work much harder to establish a firm case for division membership. Nevertheless, what helped me travel through the year was all those wonderful opportunities that I touched on back in February of 2019. Of course, we didn't bring in all these opportunities. For example we had great difficulty in investing some of our coffers in the development of future, 'young managers'. So although we had said we would operate at a deficit in the end we pretty much broke even financially. On the other hand we did establish a new Young Leader Award and selected the first recipient, Dr. Rui Cruz, Dow who will speak at the Spring Meeting in Houston. We also continued to strengthen the Management Award and to integrate more smoothly with our annual meeting programming. Indeed the entire Awards Program, led by George Newcomb, has continued to grow in both prestige and impact. Indeed it is one of our most effective tools for recruiting new blood for our leadership team.

I must also mention that our newsletters, both the established Insights and the new ChExpress continue to serve an important communication mechanism for our membership. For this we are indebted to the leadership of Joe Porcelli and Aditi Khadilkar.

I could continue in this vein for a lot longer but I promised the editors that I would be as brief as possible and leave all the hard stuff for Austin Lin and the 2020 Board. So I'll end this note by saying that I look forward to serving as the 2020 Past Chair (emulating Fernando as best I can) and continuing as a Co-Programming Chair with Cristina Thomas of 3M who is also the 2020 Vice Chair. Indeed, Cristina along with Gayle Gibson, an incoming director and the 2018 Management Award recipient, are great testament to the impact of our Awards program and George Newcomb's leadership.

Hope to see you all in Houston.
Joe Cramer
Past Chair of MGMT Division

2020 Management Award Call for Nominations

The Management Division recognizes an outstanding individual who has made a substantial contribution to the management of engineers involved in the field of Chemical Engineering or to management techniques and procedures utilized in this field.

Recent recipients of this prestigious award have included:

2019 - Dr. Cristina Thomas, Senior Technical Leader and R&D Global Process Owner

2018 - Gayle Gibson, Director, Dupont Engineering (retired), Dupont Company

2017 - Dr. Robert L. Zeller III, Director of Technology, Occidental Chemical Corporation

2016 - Mr. Kenneth Rueter, President and Project Manager of URS | CH2M Oak Ridge LLC (UCOR), an AECOM company

March 31st is the deadline to submit nominations for the 2019 Management Award presented by the AIChE Management Division. The recipient will receive the award and make a presentation on management and leadership at the November 2020 National Meeting in San Francisco.

Sponsors of nominees are invited to submit their Application Forms for this award on or before March 31, 2020. The Award process and criteria with Applications are available on the [AIChE Management Division Awards section](#) of the AIChE website.

2020 AIChE Institute Awards

Nominations are due by February 15.

(As this newsletter is being issued after this deadline, it is time to consider possible nominees for the 2021 Awards.)

Management Division members are encouraged to nominate candidates for AIChE Institute Awards that honor eminent chemical engineers for accomplishments in industrial practice, The Management Division Awards Committee is assisting in promoting these awards. The awards are to be presented in November at the AIChE Annual Meeting in San Francisco.

Details can be found by clicking [here](#)

2020 Management Division Service Award

The Management Division created a Service Award in 2017 to recognize outstanding service to the division. The 2020 recipient of this award is Frank van Lier, who has been contributing to the division for at least the last 20 years.



Frank has contributed in many ways to the division. In addition to serving as Vice Chair, Chair, and Past Chair in the early 2000s, he provided leadership in coordinating and presenting a session on Management Careers at the Annual Student Conference on behalf of the division. He did this for about 13 consecutive years. He served as Director from 2008 to 2013, CTOC representative to the division from 2014 to 2016, and Secretary from 2014 to 2017. He has also contributed significantly to division programming, including chairing and presenting at many sessions.

Frank will be honored at the upcoming 2020 AIChE Spring Meeting to be held in Houston, Texas, USA. Please join us at the Management Division Dinner, scheduled on Tuesday, March 31, 2020 at 7:00 pm, where he will be presented the 2020 Management Division Award.

AIChE Spring 2020 Meeting in Houston — Management Division Technical Programming

The following sessions are originally created by the division. There is also a list of co-sponsored sessions that should be of interest. They appear on the next page.

For complete information on specific timing, room assignment and presentations just follow this link: [Spring 2020 Program](#)

[What Is Your Style of Problem Solving... Why Do I Have Trouble Working with You... for You?](#)

On Monday morning, March 30 there will be a three-part session presented by the Management Division, starting at 9:30 am. This session will include an interactive workshop and case study showing the importance of personal relationships and psychological measurement tools that accurately assess how managers and engineers solve problem and the implications of these differences in effective teams and problem solving.

[Young Leader Award Recipient Presentation](#)

On Monday afternoon starting at 1:30 pm, the recipient of the Management Divisions first Young Leader Award will present on a subject of particular interest to younger chemical engineers. The remainder of this session will include other speakers presenting on subjects related to the Award Recipient's presentation.

[Turning an Idea into a Reality: Developing a Company](#)

On Tuesday morning, March 31 at 8 am there will be a 90 minute session—From developing your own company to growing your own company, there are many obstacles. This session will talk about all aspects of creating and establishing your own company, from idea creation, client acquisition, and scaling.

[Lessons Learned from the Industrial Practice of the Open Innovation Model for the Development of New Products](#)

At 10:15 am there will be a 90 minute presentation on Open Innovation, a technology management practice in which external resources are used to supplement a company's internal R&D and commercialization effort, wherein distributed knowledge from external entities is mapped with internal business processes and R&D groups. This session will examine learnings, challenges and opportunities from both industry and its external partners pursuing open innovation.

[Licensing, Credentialing and Career Planning: AIChE's Role](#)

On Tuesday afternoon starting at 1:15 pm, there will be a session that will attempt to explain the steps to licensing, what licensing means and to look at credentialing and how both compare. It is especially recommended for those considering either licensing or credentialing or both.

AIChE Spring 2020 Meeting in Houston — Management Division Co-Programming

MONDAY, March 30

8:00— 9:15 a

[2020 AIChE Spring Meeting and 16th GCPS AGILE Award Keynote Address](#)

AGILE Award winner Sharon Beshouri, President Shell Global Solutions (US) Inc. will deliver the 2019 Spring & 15th GCPS Keynote Address. “Beyond the Horizon: The Factors and Forces Affecting the Global Petrochemical Industry”

9:30—10:30 am

[Reflecting on Your Career](#)

This session will highlight Chemical Engineers at different stages of their career. The discussion and questions will cover the thought process and decisions made throughout ones career path and how ones role(s) have changed.

12:00—1:30 pm

[2020 AIChE Spring Meeting & 16th GCPS Monday Luncheon](#)

This is a ticketed event, available for purchase and included in bundle registration while supplies last.

5:00—7:00 pm

[Spring Meeting & GCPS Poster Session](#)

TUESDAY, March 31

11:45 am—1:30 pm

[2020 AIChE Spring Meeting & 16th GCPS Tuesday Luncheon](#)

This is a ticketed event, available for purchase and included in bundle registration while supplies last. Thomas F. Hash Endowed Chair in Sustainable Development & Professor of Materials Science, Clemson University and Mark Johnson, former director of the Advanced Manufacturing Office in the U.S. Department of Energy’s Office of Energy Efficiency and Renewable Energy will present the keynote.

WEDNESDAY, April 1

11:45 am—1:30 pm

[2020 AIChE Spring Meeting & 16th GCPS Wednesday Luncheon](#)

When Disasters Happen: A Collaborative Approach Towards the Community’s Recovery Process will be presented by Thomas Munoz, Emergency Manager and Homeland Security Director with Texas City. This is also a ticketed event.

Management Division—Social and Business Events in Houston

There are two events on Tuesday directly involving the Management Division. The first is the business meeting of the division, which is open to all members and non-members. The dinner at the Spring is organized by our division [Management] and it is jointly held with the Environmental Division and the Chemical Engineering and the Law Forum. This is a ticketed event, open to all.

Management Division Meeting

**Tuesday, March 31
12 Noon—1:15 pm**

Management & Environmental Divisions, and Chemical Engineering and the Law Forum Group Dinner

**Tuesday, March 31
7:00 pm—9:00 pm**

AIChE Annual 2020 Meeting in San Francisco— Management Division Sessions

The upcoming Annual Meeting will feature the six more exciting sessions by the Management Division. The call for abstracts will be open on Jan 10th, 2020. Sessions around industry-academia collaborations, tools for successful technical project leadership, women retention, leadership in academia and in the era of industry digitization are in the planning.

Take this opportunity to get involved, shaping those session currently planned or The Call for Abstracts Closes on April 12!

Sessions currently planned

Management Division (05)

future ones

05000 AIChE Management Award Recipient Presentation Session

05000 Tools and Strategies for Successful Technical Project Leadership

05000 Leading and Managing Industry-Academic Partnerships and Collaborations

05000 Leading and Managing Academia: A Perspective from Department Heads

05000 Leading and Managing Engineers During Execution of Grants: A Perspective from Academic PIs

05000 Chemical Engineers Leading in the Era of Industry Digitization

[Call for Abstracts Now Open](#)

Young Professionals' Discuss

Youth: A weapon to tackle climate change

Climate change is one of the greatest threats facing humanity. A [report of the IPCC about global warming](#) shows how no country is immune to the effects of climate change, with problems already being witnessed world-wide. The whole issue of the climate crisis seems to be overwhelming, and as a community there is still some skepticism and we are slow to act. In addition, there is a great lack of awareness on this issue in many strata of society.

We, the youth, would have to face consequences of a deteriorated planet for quite sometime. Hence, we should take it upon us to be a crucial part of humanity's response to the climate crisis. Climate change must be treated with a high level of youth participation and urgency. Managing this crisis should be considered a challenge and opportunity.

Today, tremendous enthusiasm has developed among young professionals (YPs) to take climate change seriously. YPs form organizations, hold demonstrations and even use social networks to generate greater environmental awareness. This, along with technological breakthroughs that they may drive would be important for a peaceful and sustainable future for all.

Chemical engineering has many competencies in mitigating climate change. The low carbon growth trend causes large companies to implement emission reduction programs. This can mean optimizing processes, changing raw materials, or migrating to cleaner and less carbon-intensive technologies. For all these challenges, chemical engineers are instrumental and help to identify, design, implement, and operate solutions.

Currently, the excessive use of fossil fuels, coal, natural gas, and the burning and loss of forests, are the main reasons for global climate changes. The emission of Greenhouse Gases (GHG) increases the temperature of our planet. Experts in the field consider that if the increase in the global temperature of 1.5°C would cause irreversible damage, an increase of 2°C would unleash catastrophic effects. GHG emissions from industry have been higher than the levels recorded in 1880 (industrial revolution). It is estimated that, in case the Earth's temperature continues to rise, by the year 2100 the planet will warm up between 1.8 °C and 4 °C.

According to Drew Shindell, a researcher at the Goddard Institute for Special Studies at NASA (National Aeronautics and Space Administration), fourteen actions that could decrease 0.5 ° C by 2050 are:

1. Recovery and capture of methane released by coal mines.
2. Recovery and use of emissions during the obtaining of crude oil and natural gas.
3. Reduction of leaks in gas pipelines.
4. Separation and treatment of biodegradable resources through recycling and compost, as well as capture and use of gas emitted in landfills.
5. Modernization of wastewater treatment plants with recovery of emitted gases.
6. Control of methane emissions from cattle, through anaerobic digestion of cow and pig manure.
7. Intermittent aeration of rice fields continuously under water.
8. Filters for the exhaust pipes of diesel vehicles.
9. Introduce kitchens with efficient biomass burning, for cooking and heating in developing countries.
10. Replacement of traditional kilns for brick making, with more efficient ovens (Hoffman ovens).
11. Replace coal burning ovens with modern ovens.

12. Elimination of circulation of highly polluting vehicles.
13. Prohibition of open burning of agricultural waste.
14. Use of modern fuels (biogas).

Chemical engineers can collaborate in any of these actions to contribute to the mitigation of climate change, even when they are working to optimize other specific processes within a chemical plant, many times the problem that they are trying to solve is linked to climate change. Having the big picture will allow one to focus and find comprehensive solutions.

YPs, who constitute a large part of the world's population, have greater responsibilities in long-term sustainability efforts. Fortunately, we have a special talent and thirst for invention, innovation and activism that will really improve the quality of life, with dramatically better results for human well-being, economic growth and health. Innovative technology, the sense of proactive social and environmental responsibility of YPs, is a real part of the solution to climate change. The opportunity to have an economically green world is here today, and we have to seize it. *Not one more grade, not one less species!*

If you have ideas to contribute on this front, please reach out to us and perhaps we may be able to implement some of them as an Institute of Chemical Engineers.

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AIChE Management Division YP Grant applications Open

The Management Division is glad to extend its program to help division member YPs (35 or younger) attend the 2020 AIChE Annual Meeting.

Requirements to apply for the grants include:

- Present a paper at the conference and share a slide about the Management Division in your presentation
- Attend Management Division events: Board meeting, two sessions (come and interact with some of the Board members to confirm attendance), and Division dinner

Grant recipients receive registration: i) 50% of the early registration fee (these amounts differ for professionals, students and unemployed members. Maximum of US\$350.), ii) travel subsidy of US\$200 subsidy and iii) ticket to the Management Division dinner.

To apply for this grant, submit the following to cuthomas@mmm.com with "AIChE Management Division YP grant application" in the email subject, no later than August 15th, 2020

- i) An essay describing proposed usage of the grant to grow professionally and strengthen your management skills (maximum of 250 words)
- ii) Your CV, with an emphasis on AIChE involvement
- iii) The category under which you would register, in order to determine the grant amount (since 50% of the registration will be offered)

Dr. Rui Cruz to Receive First Young Leader Award

This award recognizes an outstanding leader—age 40 or younger, who has made a significant contribution to the success of their organization by advancing some segment of their company which has made an impact to the practice or field of chemical engineering. The award will be presented to Dr. Cruz at the 2020 AIChE Spring Meeting in Houston on Monday, March 30.

Dr Cruz is the Global R&D Director of Industrial Solutions for Dow, Inc., responsible for driving the strategy of a \$4B revenue business. He enables his leaders and executes on project deliverables via a stage-gate process and focuses on developing his people to maximize their potential. Dr. Cruz has been a champion of diversity and inclusion through his recruiting efforts. He has led process improvement and product development initiatives that have let to \$500 million technology innovation for Dow, Inc.

[The Young Leader Award](#) is sponsored by The Chemours Company.



Management Division Leadership for 2020

Officers

Chair	Austin S. Lin Google	AustinSLin@gmail.com
Vice Chair	Cristina Thomas 3M	cuthomas@mmm.com
Secretary	Babak Rafienia AMACS Process Tower Internals	Brafienia@amacs.com
Treasurer	William S. Welker Nestlé USA	bill.welker@us.nestlé.com
Past Chair	Joseph J. Cramer AIChE	josec@aiche.org

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2019—2021	Mahdi Nouri Advisian L(Worley Group)	Mahdi.Nouri@Advisian.com
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