AIChE[®] Management Insight

Letter from 2019 Chair Joe Cramer

Fall Division Progress Report

Dear Division Colleagues,

Well, fall has arrived and for many of us that means we are looking hard at our January "To-Do" lists and wondering how so much manages to get crammed in to the last quarter of any year. I just reread my letter for the February Insights which covered a lot of the opportunities and challenges facing the Division in 2019. While not everything has worked exactly as we hoped I was pleased to note that we have made significant strides on many of our new and continuing initiatives and I also noted that new opportunities not previously foreseen arose.

I will not attempt to give in depth progress reports here (as many of these issues are described more fully later in the newsletter) but instead just note some of the chief accomplishments with an occasional 'atta-boy/girl' thrown in for good measure.

Here goes:

- We have now published two 'new' brief update style news vehicles called "ChExpress". The editor for these is Aditi Khadilkar and she is doing a great job.
- We continue to refine and grow our Awards Program. The selection criteria, review procedures, deadline dates and promotional efforts continue to evolve and grow under the leadership of George Newcomb with much assistance from many (including several past award recipients).
- We have now added a 'new' Young Leader Award which will be given for the first time at the 2020 Spring Meeting. Nemoy Rau (a past chair) led our efforts to develop the award and Harold Conner will oversee the initial selection process. We are also happy that our immediate Past Chair Fernando Aguirre, with the help of others on the Awards Committee. was able to get a commitment from the Chemours Company to be the initial sponsor (many thanks to Chemours for this investment in the future).
- We have obtained, as a result of Director, Harold Conner's efforts, a commitment from the Strata G Company to sponsor the Management Division Award for 2019

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Management Division Highlights:

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Letter from 2019 Chair Joe Cramer—Cont'd

- We have jumped at the chance to become one of the newest "Community Counts" divisions within AIChE which gives us many new opportunities for strengthening our cooperative efforts with AIChE staff.
- We are now matching the free AIChE membership for graduating YPs with free Division memberships for those who so ask. The number of takers have been gratifying and we reach out to each with a welcome letter and invitation to get involved.
- We have reinforced our free Division membership program for graduating YPs with development and implementation of a program of small awards for YPs involved in programming and more significant travel grants for YPs to attend and participate in our meetings. Shweta Karwa has ably led us in the development of this program.
- We put our money where our mouth is and committed to operate at a deficit budget of about \$10,000 for 2019 (and possibly for another year or two if the efforts show promise)
- We have continued to program actively and are well on the way to establishing the Management Award Recipient Session as a very important substantive technical session.

Remaining challenges include:

- Building a successful Spring Session around the Young Leader Award Recipient as we have for the Management Award Recipient at Annual.
- Continuing to attract new YP members to participate in the Division activities by maintaining existing opportunities while creating new ones. <u>https://www.aiche.org/community/sites/divisions/management/announcements/opportunity-young-professionals-yps-updated</u>
- Continuing to grow the concept of inclusion and diversity within the Division.
- Creating and adopting a new dynamic logo for the Division that clearly identifies the Division as a member of the AIChE Community and promote the heck out of it. This effort was led by our 2020 incoming Chair, Austin Lin.
- Maintaining the momentum of all our ongoing initiatives while keeping an open mind re needed changes and other opportunities
- Developing Management Division Webinars, created and presented by members of the division—see Raj Joshi's item on page 13.

OK, that's it for now. I hope to see many of you in Orlando at the 2019 Annual Meeting I continue to be very excited about the Division and all our new programs.

Sincerely,

Joe Cramer 2019 Management Division Chair

Management Insight

"Thermodynamics of Sleep Deprivation: What Late Night Diners & Career Development Have in Common"

The Paper Moon Diner in Baltimore sits on a street corner connecting the academia of a world class university with the quiet residential neighborhood of row-houses surrounding it. The restaurant's walls are painted red, blue, and bright green and with its collection of vintage toys, half assembled mannequins, dolls and action figures hot glued to counter-tops, it can feel like the explosive collision between a kitchen grill with a pop-culture yard sale. Paper Moon's frenetic scenery can feel pretty distracting at any time of day, but at 2 a.m., the time when my classmate and I were sitting there, staring into the dark abyss of our steaming coffee mugs while quietly devouring their (delicious) bread pudding, it was all blurred in the background. We were tired.

We were senior chemical engineering majors and had just finished dropping off our fifty page packets for our plant design projects in a crumbling wooden box outside the teaching assistant's office. The project had been one of our first experiences leading an organized team, working with different students with different backgrounds, interests, and capabilities towards the completion of what had been a semester long obstacle course of sleep-deprived mental gymnastics. The engineering problems we had solved for the project were tough, but coordinating our classmates to converge data analysis, technical writing, and slideshow creation had been far more difficult. We had made it, but we were wondering if we had accidentally skipped the textbook chapter on managing people with different work habits, behavioral traits, and personalities.

As chemical engineers, we spend the majority of our early days building the foundational elements of our craft: thermodynamics, mass transfer, chemical reactions. We do seemingly infinite problem sets, we derive equations of state. But once we get into the working world, we quickly learn that interesting correlations from an experiment are just weightless ideas until we bring them into reality through the combined efforts of the entire team of engineers, technicians, managers. The most fascinating variable of any chemical engineer's work is this: people. Fluid phase equilibria follow the laws of physics. The dynamics of people follow unwritten and far less familiar laws.

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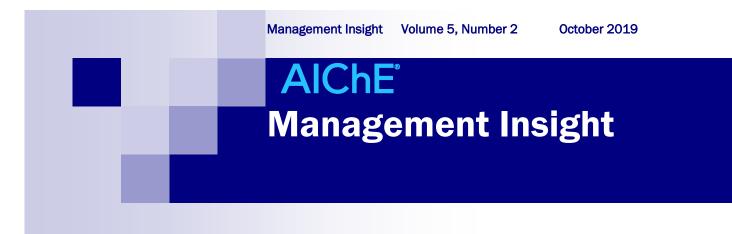
Thermodynamics of Sleep Deprivation - Continued

I am tremendously honored to have joined the leadership team of the AIChE Management Division. Our Division aspires to be that forum where we can explore those particular people dynamics together. From traditional enterprises to tech startups, from emerging engineers just starting to make a mark in their companies to world renowned practitioners, the Management Division looks to cultivate the leadership skills in all of us to make a positive difference to our industry and to the billions of users around the world impacted by our work.

You don't have to manage people to be a leader. Every day we communicate, influence, and collaborate with our peers. Within the Management Division, we hope to continue creating a place for us to practice and sharpen our craft, to solve that sometimes seemingly unsolvable challenge of rallying a group of talented people to do amazing things. Wherever you are in your career, whether you are pursuing that first promotion in your firm, or you're an accomplished Principal putting the finishing touches on your academic legacy, or you're an executive who has been finding yourself for years spending more time unraveling the complexities of human relationships more than the mysteries of molecular structure, we're so excited and grateful that you call the Management Division your home.

The coffee is hot, the bread pudding is sweet. Bring your ideas, we'll save you a seat.

Austin S. Lin <u>austinslin.aiche@gmail.com</u> Vice-Chair and Chair-Elect, AIChE Management Division



Looking for candidates for the Division Board

Every year we elect new officers and directors, with the nomination process driven by the Management Division Nominating Committee. Members of the Nominating Committee this year include myself as Chair, and two current directors: Quinta Warren and Brandon Harding.

We are looking for candidates for the following positions:

Vice Chair Secretary Treasurer Directors

The Vice Chair position automatically progresses to Chair in 2021 and then to Past Chair in 2022. The Secretary and Treasurer are elected for one year periods and can be reelected. Two new Directors are elected each year, with those elected this year expected to serve for the next three years (2021 to 2023). Our goal this year is to have at least two candidates for each position.

If you are interested in being a candidate for any of the positions listed or want to suggest someone else, please write to me at $\underline{fja@htri.net}$ or contact any member of the Nominating Committee.

Fernando J. Aguirre Chair, Nominating Committee

Management Division Awards

2019 Management Award

The Management Award will be presented to Dr. Cristina Thomas on November 5, 2019 at the National Meeting. The presentation session will include a talk by Dr. Thomas titled "My Management Journey, from Technology Developer to Innovation leader". Dr. Thomas is Senior Technical Leader at 3M and RPR R& D Global Process Owner reporting to the Vice President of R&D/CTO. She has over 27 years service with 3M starting as a Sr. Research Engineer after receiving a PhD in Chemical Engineering from the University of Massachusetts.

Key Senior Chemical Engineers will join her with relevant presentations regarding the Evolving Profession, Technology Advancements and Engineering and Science in National Labs. A general Q&A open to audience participation will follow. See the AIChE web site for more details about speakers and topics.

2020 Management Service Award

Would you consider nominating a division member that has demonstrated outstanding leadership and contributed to the division over an extended period? There is still time to nominate a deserving member for the 2020 Management Division Award. You can find details about the award in this <u>link</u>. The due date for nominations is November 30, 2019.

AIChE Institute Awards

The Management Division Awards Committee is assisting AIChE's Institute-level Award Committee with increasing nominations from industry, government or nonacademic chemical engineers for Institute Awards. Management Division members are encouraged to consider possible nominees for the Institute Awards listed below:

- Industry Leadership Award
- Industrial R&D Award
- · Industrial Progress Award
- Lawrence B. Evans Award in Chemical Engineering Practice
- Energy and Sustainability Award

Contact George Newcomb (<u>geonewcomb@gmail.com</u>), leader of the Management Division Awards Committee, to discuss possible interest or refer to the AIChE Awards web page for more information: <u>https://www.aiche.org/community/awards/institute-awards</u>. The nomination deadline for Institute Awards is February 15, 2020.

Breaking News regarding sponsorship for the Management Award

The Management Division has recognized an outstanding manager since we established the Management Award in 1984. For the last 35 years, we have recognized many outstanding managers and given them the opportunity to present on an important management topic at the AIChE Annual Meeting.

We are now happy to announce that thanks to the hard work of Awards Committee member Harold Conner we have gotten a commitment from Strata-G to sponsor 2019 Management Award. Harold reports that additional years of sponsorship are quite possible. We owe a debt of gratitude to Harold and commend Strata G-for its farsightedness in making this commitment. For more on Strata-G see <u>https://</u>extranet.stratag.org/wp-content/uploads/2019/02/Strata-G-Capabilities-Statement-April-2018.pdf .

2019 AIChE Annual Meeting Management Division Sessions

The following sessions are a combination of sessions originally created by the division, plus a number of sessions that the division believes are deserving of co-sponsorship.

Monday, November 11, 2019

8:00 to 10:30 am

<u>83 Managing in the High Tech World</u>—Primary Sponsored https://aiche.confex.com/aiche/2019/meetingapp.cgi/Session/41590</u>

Chairs: Okiemute Sankey, Wacker Chemie, Calvert City, KY a Fernando Aguirre, HTRI, Navarosa, TX

12:30 to 3:00 pm

130 Digital Twins (Invited Talks) - Co-Sponsored https://aiche.confex.com/aiche/2019/meetingapp.cgi/Session/41530

Chairs: Ignasi Palou-Rivera, RAPID Nima Yazdanpanah. U.S. Food and Drug Administration

<u>141 Exploring Ethical Dilemmas in the Workplace: Workshop</u> - Primary Sponsored <u>https://aiche.confex.com/aiche/2019/meetingapp.cgi/Session/41588</u>

Chairs: Joseph J. Cramer, Program Development, AIChE, New York City, NY Okiemute Sankey, Wacker Chemie, Calvert City, KY

3:30 to 6:00 pm

<u>212 How to Prepare Yourself for Management</u>Primary Sponsored https://aiche.confex.com/aiche/2019/meetingapp.cgi/Session/41589</u>

Chairs: Shweta Karwa, Shell, Houston, TX Kanwar D Singh, York Sustainable Enterprise Consultants, Toronto, ON, Canada.

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2019 AIChE Annual Meeting Management Division Sessions—Continued

Tuesday, November 12, 2019

<u>8:00 - 10:30 am</u>

<u>266 How We Teach: Ethics, Teamwork, Leadership, and Professional Skills</u>—Co-Sponsored <u>https://aiche.confex.com/aiche/2019/meetingapp.cgi/Session/41493</u>

Chairs: Christy Wheeler West, University of South Alabama Daniel D. Burkey, University of Connecticut

<u>300 Woman Chemical Engineers: Managing to Retain Them—Primary Sponsored</u> <u>https://aiche.confex.com/aiche/2019/meetingapp.cgi/Session/41612</u>

Chairs: Quinta Warren, Engineering Research Consulting, 311 Ferst Drive, Houston TX Donna Bryant, Syngenta, Baton Rouge, LA

<u>11:00—12:15</u>

Management Division Business Meeting Location to be announced

<u>12:30 - 3:00 pm</u>

<u>310 AIChE Management Award Recipient Presentation Session: Focusing on Technology and Inno-</u> vation Management—Primary Sponsored

https://aiche.confex.com/aiche/2019/meetingapp.cgi/Session/41485

Be part of a dynamic session on management in an ever changing environment. Come to hear specific examples on the critical role of technology, innovation, measurement science, partnerships and collaborations in advancing Science and Engineering today.

Chair: Joseph J. Cramer, Program Development, AIChE, New York City, **Co-Chair: George Newcomb,** Newcomb Associates, Earlieville, VA

2019 AIChE Annual Meeting Management Division Sessions—Continued

<u>Tuesday, November 12,2019 (Continued)</u> <u>3:30 - 6:00 pm</u>

<u>432 Workshop on Utilizing Leadership Advisory Boards (aka Master Minding)</u> - Primary Sponsored <u>https://aiche.confex.com/aiche/2019/meetingapp.cgi/Session/41320</u>

Chair: Teresa A. Jurgens-Kowal, Global NP Solutions, Houston, TX

<u>7:00—9:30 PM</u>

Dinner Meeting—Co-Sponsored with Environmental Division <u>Cuba Libre Restaurant & Rum Bar</u> <u>Santa Isabel Exclusive</u> \$65.00/person

<u>Wednesday, November 13, 2019</u> 8:00 to 10:30 am

<u>457 Effective Communication Skills for ChE</u>—Co-Sponsored

https://aiche.confex.com/aiche/2019/meetingapp.cgi/Session/41505

Chairs: Bernard J. Van Wie,, Gene and Linda Voiland School of Chemical Engineering and Bioengineering, Washington State University, Pullman, WA

Amanda Simson, Chemical Engineering, The Cooper Union for the Advancement of Science and Art, New York, NY

12:30 to 3:00 pm

<u>508 - Challenges and Best Practices in Technology Commercialization</u>—Co-Sponsored https://aiche.confex.com/aiche/2019/meetingapp.cgi/Session/41983.

Chairs: Ha Dinh, Honeywell UOP

Yilin Xu, Lamar University

https://aiche.confex.com/aiche/2019/meetingapp.cgi/Program/2576

YPs Speak/YPs Discuss

This section is dedicated to the exchange of ideas/thoughts/experiences/questions by young professionals. It is to encourage exchange of information amongst YPs and increase their interaction with Senior Division members. Reach out to us to contribute in any way.

Swati Saxena, PhD Technical Manager, ANSYS Inc. April 4, 2019

Thank you AIChE for giving me this opportunity to share my journey as a young manager in the field of engineering. My present employer ANSYS Inc., is a world leader in pervasive engineering simulations and its software solutions are widely used across academia, industry and the government. As a Technical Manager for Aerospace & Defense Industry, I work out of our Silicon Valley office located in San Jose, CA. It has been a great journey so far for me as a manager at ANSYS. Before becoming a manager, I worked as an engineer for a few years and would like to share my experience of the journey from working on projects to becoming a project manager and building and managing company's strategy for aerospace & defense customers.

Over the years, I have identified few professional traits that always pay well in the long run. They might lead you to a seemingly tougher path demanding you to make difficult choices, but it leads to the path of long term success. Working as an Engineer, fresh out of college, you are usually responsible for the work assigned by your management and you don't have to worry about how it is going to impact the final product of the company or the business implications of it. After few years of work experience, the responsibilities grow and might include working on multiple projects, managing projects and even managing people as a functional manager. As you climb the corporate ladder, you will be responsible for the entire division and sometimes manage millions of dollars of annual budget. There are a few qualities that will help you along the way. They do not require technical know-how but will make you stand out in every meeting or discussion:

Being punctual, Following-up, Being professional, Being open and coachable, Encouraging collaborative environment, Have empathy for your co-workers, Positive attitude,

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YPs Speak/YPs Discuss - Continued

Being prepared,

Honesty,

Offering help,

Asking for timely help (you cannot know everything or do everything on your own)

One of my mentors once gave me an advice - undertake a challenging problem or project and solve it! Be proactive and step-up to deliver critical projects in a timely manner. Go above and beyond - identify critical tasks and then outperform. This will build your credibility which goes a long way. You will build trust with your senior management and they will feel confident giving you more responsibility and high visibility projects.

There should also be a balance between your passion and your work. If you do not like what you do for work, you will not be able to give your best and it will show up. Time management is equally important. Prioritize the tasks at hand and plan your day accordingly. There will always be more meetings than you can attend or emails that you can reply in a given day. Always relate your work to where it would fit in the bigger picture and what is the associated business outcome.

As a young and relatively new manager, I make it a point to regularly connect with the senior management and network. Having a mentor with whom you can discuss about your career path, choices and options is important. He/she should be able to guide you during important decisions. Also, it is good to have a champion at your workplace. There is a difference between a mentor and a champion. A mentor is someone who can guide you through your career path. A champion is your advocate within the company.

Companies are continuously evolving these days and it is important to be up to date with its vision, roadmap and future strategy. The organizational structure and roles keep changing so it is very important to keep yourself relevant and on top of your company's priorities so that you are not taken by surprise. Get involved in activities and clubs outside of your work within the company. It gives you a chance to grow your network and interact with people whom you would not interact otherwise. Network outside your company - make a rule to meet with someone new over lunch or coffee on a regular basis. Step out of your comfort zone more often and take up challenges where there is more potential to grow. Grow your circle of influence by making it larger and larger through your work and leadership qualities.

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YPs Speak/YPs Discuss - Continued

Having a clear communication with senior management and your manager is very important. Make sure you have regular one-on-one meetings with your management and keep them up to date of your work and progress. Communicating in a timely manner saves lot of effort down the line and avoids any miscommunication and misunderstanding. Help your colleagues and coworkers grow as well. As a peoples' manager, it is very important to work towards the professional development of your team members and support them to grow and succeed. Employees leave managers more often then they leave the company. Trust your employees and have empathy towards them. Build a transparent relationship with them and be honest. Working with people of different personalities in an amicable manner becomes more and more critical as you keep growing in your career.

Training is a critical element of shaping one's personality and skillset. Both technical and soft skills are important to succeed. Companies usually have training programs customized for employees at different leadership stages and career paths. Make use of such programs to equip yourself with right skills and attitude to set up for success.

Finally, read good books! Couple of recommendations at my end - Start with Why: How Great Leaders Inspire Everyone to Take Action by Simon Sinek, Emotional Intelligence: Why It Can Matter More Than IQ by Daniel Goldman and The 7 Habits of Highly Effective People: Powerful Lessons in Personal Change by Stephen R. Covey.

The Chemours Company becomes sponsor of Young Leader Award

Last July we announced the creation of a new award to recognize a Young Leader age 40 or under that has made a substantial contribution to the success of their organization by advancing a scope, project, unit, plant, division, technology, or strategy in the practice of chemical engineering. The Chemours Company has committed to be the sponsor of this award for the first three years, for which we are grateful.

The following concepts identify the vision and drive for the creation of this new award:

- The AIChE Management Division wants to play a prime role in developing future engineering leaders.
- The Young Leader Award provides the recipient an opportunity to present on topics of special importance to younger engineers at the AIChE Spring Meeting.

The Management Division will present the first Young Leader Award at the 2020 AIChE Spring Meeting, honoring the recipient with a plaque, a US\$1,000 honorarium, and up to US\$1,000 in expense reimbursements to attend the Spring Meeting. You can find more details about the award in this <u>link</u>.

We thank The Chemours Company for their support of future chemical engineering leaders by sponsoring the Young Leader Award.

Sincerely,

Fernando J. Aguirre, Past Chair, Management Division

Invitation to Present a Webinar

These days team members are often geographically separated. This adds to the challenges of managing a project but at the same time makes it possible to leverage time differences to advance the project work at a faster pace. If you have experience in working with international teams, we would like to hear about it. Why not present a webinar on the topic? The Management Division will be happy to work with you to make it happen. Please contact Makarand (Raj) Joshi at joshiraj101@gmail.com.

2020 Spring AIChE Meeting—Preliminary Program

Call for Abstracts is now open. If you see any topics of interest to you, we suggest you submit an abstract. Please submit to: <u>https://aiche.confex.com/aiche/s20/cfp.cgi</u> These sessions would be ideal for submissions by YPs.

05000 What is Your Style of Problem Solving...Why Do I have Trouble Working with You... for You?

Chair, Jack Hipple, TRIZ and Engineering Training Services, Coolridge Dr, Tampa, FL

05001 Lessons Learned from the Industrial Practice of the Innovation Model for the Development of <u>New Products</u>

Chair, Sivakumar SV, Process Development, Shell Projects & Technology, Westhollow Technology Center, 3333 Hwy 6, Houston, TX

Co-chairs:

Babak Rafienia, AMAC Process Tower Internals Vincent Magnotta, 168 Shire Way, Syracuse NY

05002 Young Leader Award Recipient Presentation

Co-chairs:

Donna Bryant, Syngenta, Baton Rouge, LA **Harold Conner,** UCOR URS CH2M Oak Ridge LLC, Oak Ridge, TN **Joseph J. Cramer,** Program Development, AIChE, New York City, NY

05003 Turning an Idea into a Reality: Developing a Company

Chair, Daniel Kriozere, Lawrence Livermore National Laboratory, San Francisco, CA

Co-chairs:]

Quinta Nwanosike Warren, Engineering Research Consulting, 311 Ferst Drive, Houston, TX Babak Rafienia, AMAC Process Tower Internals

05A00 Licensing, Credentialing and Career Planning: AIChE's Role

Chair, Joseph J. Cramer, Program Development, AIChE, New York City, NY

Management Division Leadership for 2019

Officers			
Chair	Joseph J. Cramer AIChE		josec@aiche.org
Vice Chair	Austin S. Lin Google		AustinSLin.aiche@gmail.com
Secretary	Babak Rafienia AMACS Process Tower Internals		Brafienia@amacs.com
Treasurer	William S. Welker Nestléé USA		bill.welker@us.nestle.com
Past Chair	Fernando J. Aguirre HTRI		fja@htri.net
Directors			
2017 – 2019	Harold T. Conner, Jr. URS/CH2M Oak Ridge, LLC		hconnerjr@aol.com
2017—2019	Markus E. Scheller		scheller54@yahoo.com
2018—2020	Quinta Warren AAAS/Department of Energy		quinta.nwanosike.warren@gmail.com
2018—2020		on Harding	brandonaharding@g.mail.com
. 2019-2021		i Nouri	Mahdi.Nouri@Advisian.com
2019—2021	Advisian (Worley) Jack Dever MATRIC		Jack.dever@matricinnovates.com
Other Positions	1012 1 1		
Programming Chair		Donna Bryant, Syngenta	donna.bryant@syngenta.com
Awards Committee Chair		George W. Newcomb	geonewcomb@gmail.com
Webmaster		Fernando J. Aguirre, HTRI	fja@htri.net
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Management Insight		Joe Porcelli	jvpii@jvporcelli.com
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AIChE Staff Liaison		Darlene Schuster	darls@aiche.org
		Sean Liu	seanl@aiche.org

Please visit our website below for more information, membership renewals and current offerings. AIChE Management Division website, <u>http://www.aiche.org/community/sites/divisions/management</u>