
THE ACTION & REACTION

Newsletter of the Mid-Michigan Section of the American Institute of Chemical Engineers

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MMAIChE 2016/2017: Fondly Looking Back

BY STACIE SANTHANY, NOW PAST CHAIR

The 2016/2017 year of MMAIChE has been a year of learning, outreach, and just plain old fun! I hope that you had a chance to participate in many of the activities our local section has had to offer this year. We had some outstanding outreach with our participation in the Dow Great Lakes Bay STEM Festival. Delta College, Mind Trekkers of MTU and the Science Division at Delta College hosted a total of 3665 students from 37 middle schools. MMAIChE had a booth there as part of over 120 hands-on activities and demonstrations teaching science and engineering to kids. We are already signed up to participate again this fall, so stay tuned for our call for volunteers and let us know if you have experimental ideas.

The Young Professional outreach we hosted in Dow MiOps, with the students from Kettering and Univ. of Michigan, was really well received. We hope to expand upon the outreach again this fall, so please volunteer. It will make you smile to see the interest in the student's faces and the impact we are making. We also had our first fundraiser at Buffalo Wild wings, where we raised ~\$170 for continued STEM outreach and scholarships. Thanks to all of you that brought your friends, families, and colleagues to for a night of food, drinks, and fun.

I'd be remiss if I didn't mention the great seminar series this year. Thanks to our speakers...

- Brian Walther (TS&D Technology Leader, The Dow Chemical Company, "Keeping Our Food Supply Tasty Through Technology")
- Tracy Young (Core R&D Program Director, The Dow Chemical Company, "Advancing a Water Circular Economy: Key to Sustainable Process Development")

- Scott Tipler (Overpressure Protection Expertise Area Leader, The Dow Chemical Company, "Recognizing and Mitigating Overpressure Scenarios")
- Kim Zimmer, P.E. (Bay Region Traffic Safety & Operations Engineer, Michigan Dept. of Transportation, "Toward Zero Deaths™ safety campaign")
- Mark Worden (Professor, Dept. of Chemical Engineering & Materials Science, Michigan State Univ., "Nanostructured Biomimetic Interfaces for Sensing and Catalytic Applications")

This year's spring banquet was full of networking, giving to young and promising talent, awards presentations to those that were so well deserved, and ended with laughter and fun! These are all pillars of the MMAIChE local section. The conversations at the banquet flowed easily amongst the attendees, with conversations about science/engineering, family, and what comes next (from our 'wisest' members). It was enjoyable to network with such a great crowd. We were also joined by our esteemed scholarship winners, Reagan Schallau (Freeland High School, winner of the Michigan Tech University Summer Youth Program Scholarship) and Matthew Gordon (Midland High School, winner of the MMAIChE college scholarship). As a member of the scholarship awards committee and reviewer of the applicants, I can say with certainty that the students we have following in our footsteps will bring engineering to the next level.

Big thanks to all of the people that submitted nominations for the Chemical Engineer of the Year, the Young Chemical Engineer of the Year, and the Service to Society awards. The MMAIChE chapter also has a



Gene Anderson at the AIChE Banquet

year of great award winners on the record. Congratulations to Ron Leng, Alan Stottlmyer, and Marc Snyder! I am lucky to have been influenced by you, to have been your team member... mentee... colleagues... mentor... inspiration... friend... etc. Please check out the rest of this newsletter for a full description of all these terrific award winners! The spring banquet's keynote was one of learning, laughter, and magic. Big thanks from MMAIChE to Gene Anderson who talked about "Life is Too Important to Be Taken Seriously." He has taught and enthused so many people across the world, and we were fortunate enough to get a dose of it. He made us think, and he made us laugh. Lesson of life... smile and laugh every day!

I am thankful to have been able to participate with this amazing group of engineers this year. I look forward to another year with MMAIChE, because I already see the next year's planning in the works! Thanks to the executive committee and all the chairs for gearing up for another year of greatness in MMAIChE!

Sincerely,
Stacie Santhany

Please join us for the MMAIChE Fall Kickoff Meeting at Oscar's (140 E. Main St, Midland) at 5 pm on September 19!

MMAIChE Section Award Recipients Honored At Spring Banquet

BY MIKE MOLNAR, AWARDS COMMITTEE CHAIR

Each year the Mid-Michigan AIChE Section recognizes distinguished members by presenting awards at the Annual Spring Banquet. This year MMAIChE recognized three extremely qualified honorees.

Chemical Engineer of the Year – Ron Leng



Ron Leng was awarded this year's Chemical Engineer of the Year for career accomplishment and contributions to the American Institute of Chemical Engineers.

Ron Leng is a Research Fellow for The Dow Chemical Company within the Process Chemistry and Development Department. He graduated from Michigan Technological University in 1981 with a B.S. degree in Chemical Engineering. He has worked for Dow for over 30 years in a variety of roles in both Research and Development and in Manufacturing. His experience spans large scale continuous Chlor-Alkali production to small scale specialty film manufacturing. He has extensive experience in the development and scale up of new processes for a wide variety of Dow businesses with primary focus in the Agricultural Chemicals arena. Additionally, he has experience in developing and implementing supply strategies involving both internal and external manufacturing.

Ron has been recognized with numerous internal Dow awards, as well as external awards including the Presidential (U.S. EPA) Green Chemistry Award, The Michigan Green Chemistry Award, and an

R&D Magazine 100 Award for new product development. He has mentored across Core R&D, deeply within Process Sciences as well as within the businesses. His nominators noted that "he routinely provided feedback on technical approaches, coached on leadership and scientific method concepts, as well as provided key opportunities for personnel to grow. He will spend significant time questioning a technical approach to ensure that the personnel are looking at the big picture of their work, better defining the key problem that they are truly trying to solve, and then helping them to better outline an approach with a set of experiments that will answer the hypotheses that were formed.

Ron has contributed to AIChE by helping to organize symposia on process development within AIChE's Process Development Division. He helped to organize meetings held in San Antonio (2010), Chicago (2013), and Philadelphia (2014). He has also contributed presentations at conferences and a highly-regarded article published in *Chemical Engineering Progress (CEP)*, AIChE's flagship publication: "From Bench to Plant: Scale Up Chemical Processes Directly," which appeared in the November, 2004 issue of CEP. He received the 2013 AIChE Process Development Practice Award as well as two Green Chemistry Awards in 2009 and 2012. He was the co-chair of the AIChE Process Development Symposium in 2014 and supported the planning committee in 2015. Moreover, he became engaged in the Scientific Update symposium and is a regular nominator for personnel to receive invitations to present. As part of this engagement, Ron has become a strong supporter for personnel to give external presentations, often helping to identify potential topics when they are unable to present their own work due to intellectual property and trade secret considerations.

Young Chemical Engineer of the Year – Alan Stottlemeyer



Alan Stottlemeyer started his career at The Dow Chemical Company after completing his PhD in Chemical Engineering for University of Delaware in 2010, which was predated by his obtaining a B.S. Chemical Engineering Degree from University of Florida in 2005.

In his seven years at Dow, he has made significant contributions while working in three different groups or business areas: after starting in Reaction Engineering of Core R&D, he moved to Dow Batteries/Dow Energy Materials, then joined Process Sciences, and recently returned to Reaction Engineering. During this time, he has influenced several major programs as a technical expert, a leader, and as a collaborator who enables others to be more successful. Noted accomplishments include: development of the next generation lithium ion battery cathode materials, development of a new fluorination technology from lab work to contract manufacture, and leadership of an expansive laboratory reactor experimental program within The Dow Chemical Company. He has been a facilitator of Dow's Reaction engineering short course both internally and with external universities. He is a recognized inventor with three patent applications in his career to date. Alan is also a certified Six Sigma Black Belt.

Concurrently, Alan has been consistently active in the professional community and the civic community as a leader and active contributor. He has been actively involved in the American Institute of Chemical Engineers, serving the Mid-Michigan Local

Section's K-12 STEM Education Outreach Committee and recently a facilitating a speed networking event with University of Michigan and Kettering University chemical engineering students. He is also an active member in the Midland Noon Rotary Club.

Service to Society Award – Marc Snyder



Marc spent thirty-one years at The Dow Chemical Company, from 1970 to 2001,

working in engineering jobs (Field Engineer, Service Engineer, and Project Engineer) in Dow Industrial Service, Dowell, Inc., and Dow Nuclear Service, and also within business roles (Business Analyst, Planning Advisor, and Project Manager) within Corporate Insurance, Emulsion Polymers, Global Product Department, Global Liquid Separations, and Global Process Controllers. He has BS in Chemical Engineering from Trine University and a MBA from Central Michigan University.

Marc has served with distinction for nine years on the Board of the Chippewa Nature Center (2006-2015), including time as the board president. The Chippewa Nature Center is an important resource for our region that provides opportunities for children and adults to learn about science, nature, history and the interactions of these three elements. A fellow member of the board described his service as “exemplary”

and being a “very worthy candidate for this nomination.” He brought practical skills and perspectives of business management to the board.

In addition to his work with the Chippewa Nature Center, Marc was a member of Advisory Board Michigan Region 7 Agency on Aging for 8 years (2007 – 2015), and a member of the Board of Directors for Whitefish Point Bird Observatory (WPBO) for 8 eight years (2002 – 2010). He has also been on the Midland County Planning Commission for 9 years and a member of the Chemistry and Chemical Engineering Advisory Board for Trine University for 15 years.

Congratulations to all this year's award recipients!

Honoring the MMAIChE Scholarship Recipients

BY SHEILA GOMBAR-FETNER, SCHOLARSHIP CHAIR

Chemical Engineering College Scholarship Awarded to Matthew Gordon



Matthew Gordon, a graduating senior at Midland High School, received the 2017 AIChE College Scholarship. The Mid-Michigan AIChE Chemical Engineering Scholarship is a \$2000 scholarship awarded over 4 years to a graduating high school senior from the Great Lakes Bay region and neighboring counties who plans to study chemical engineering at an accredited university or college. The scholarship rewards academic performance, as well as school and community involvement. It is intended for a student who has a high probability of obtaining a chemical engineering degree and becoming a practicing engineer.

Matthew is a National Merit Finalist who plans to attend the University of Oklahoma

in the fall. He will be studying chemical engineering with a focus on pharmaceuticals, so he can find ways to improve new drugs and their production and make them more accessible to the public. During his high school years, Matthew was president of the National Honor Society, while actively participating in the marching, symphonic, and jazz Band programs. Matthew was a member of the Key Club, his church Discipleship Group, and several other school clubs. Matthew also volunteered his time serving the Midland community, including work for Midland County Youth Action Council.

MTU Summer Scholarship Awarded to Raegan Schalau



The Section awarded the 2017 Engineering Exploration Scholarship for the Michigan Tech Summer Youth Program to Raegan

Schalau of Freeland High School. Raegan is an ascending junior who has decided to attend the Medical Physiology program as she is interested in a career in biochemical engineering focused on clinical studies of new devices and treatments. Raegan was her class Student Council President and captain of her travel soccer team. She tutors younger students in algebra, and participates in Students Leading Students, church youth group and the high school soccer team.

The MMAIChE Engineering Exploration Scholarship is open to students in grades 9-11. This scholarship provides an opportunity for a student from the Great Lakes Bay region and neighboring counties to explore science and engineering careers through hands-on laboratory, classroom, and field experiences at the Michigan Technological University Engineering Explorations Summer Youth Program at the MTU campus in Houghton, MI. The scholarship includes tuition, room, and board, along with a travel allotment for a one-week exploration during the summer. In providing this scholarship, the Section seeks to help young people learn about engineering careers.

Words from the Chair

BY TED CALVERLEY

This issue kicks off a new year for the Mid-Michigan AIChE and with each new season, we have new people filling key roles for the local chapter. On the experienced side of personnel changes, Jay Rose from Dow Performance Silicones, has agreed to take the role of Chair Elect for 2017-2018 and will take over the role of Chair next season. Ron Leng, from Dow Chemical, has agreed to take on the role of program chair from Defne Kayrak-Talay who has moved out of the mid-Michigan area. We also have new faces from among the younger engineers in mid-Michigan. Leena Chakraborty, from Dow Chemical has agreed to serve as chair of K-12 outreach, an area of increasing emphasis in recent years. Yi Fan, also from Dow Chemical, has agreed to take over the role of publicity chair from Mike Durisin who has served in that role for 7 years. When you have the chance, please thank Jay, Ron, Leena and Yi for committing to keep the MMAICHe healthy.

While most of the MMAICHe's executive committee and program chairs are busy thinking about the upcoming season, this is also a good time to thank Stacie Santhany for her service as Chair during the 2016-2017 season. Her energy and relentlessly positive attitude made this past season busy, which is good for you our members and fun

for those of us involved in the organization. Please make a point of thanking Stacie for her time, energy and skill in driving the MMAICHe this past season.

By way of introduction, I grew up in Lindsay, Ontario and obtained a Bachelor's degree in Chemical Engineering from the University of Waterloo. After completing a PhD in Chemical Engineering at McMaster University, I joined The Dow Chemical Company in Fort Saskatchewan (near Edmonton) where I worked for 6 years. In 1996, I moved to Midland to join the Reaction Engineering discipline of Dow's Core R&D, where I stayed for 13 years. I'm currently a Fellow in the Inorganic Materials and Heterogeneous Catalysis group of Dow's Core R&D.

Engagement of local chemical engineers and the community on topics related to science and engineering is our primary mission. In the spirit of that mission, a strong seminar series and vigorous community outreach programs are our highest priorities. Look for a mix of hard-core technical seminars and topics related to societal issues that are influenced by technology when we roll out our initial plans for seminars at the September kickoff meeting. Of course maintaining and potentially improving our financial status is critical in that it



enables our programs, while not being an end in itself for the MMAICHe.

Finally, remember that you, the members, are what really makes an entity like the MMAICHe work. Please reach out to me or any of our Executive Council members or Program Chairs if you have ideas you'd like to see us try or if you wish to get involved. I hope to see you at the September kickoff!

Sincerely,
Ted Calverley

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