
THE ACTION & REACTION

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

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2016-2017 Kick-Off Meeting

BY DEFNE TAYRAK-KALAY

The kick-off meeting was successfully held on September 22, 2016 at Tri-City Brewing Company, Bay City. Members with varying experience levels had a chance to network while enjoying the wonderful music played by John Anderson and David Malinich, and the gourmet pizzas from Brooklyn Boyz. Mid-Michigan AIChE especially would like to thank John Anderson for his continuous support to the organization. Stacie Santhany, the section chair, introduced the executive committee members, chairs, and informed the members about the upcoming volunteering opportunities. Creative fun games prepared by the section chair are now tradition of the kick-off meetings.

This year, the attendees had to guess the greatest scientists and engineers in fictional media by the hints provided. One of the highlights of the evening was definitely the tour of the brewery given by Kevin Peil. Attendees had great time learning about the beer making process while enjoying their beers. The 2016-2017 seminar program was also announced to the members at the event. Check out the website for upcoming seminars and hope to see you all at the seminars!

(<http://www.aiche.org/community/sites/local-sections/mid-michigan/events>).



Many thanks to John Anderson and David Malinich for the fantastic two-hour long music fest.

Mid-Michigan AIChE at the 2016 Dow Great Lakes Bay STEM Festival

BY DEWEY YIN, K-12 EDUCATION OUTREACH CO-CHAIR

The 2016 Dow Great Lakes Bay STEM Festival took place on Friday and Saturday, September 23 and 24 at Delta College. According to the organizers, Mind Trekkers of Michigan Technological University and the Science Division at Delta College, a total of 3665 students from 37 middle schools attended the event through organized field trips, and there were over 120 hands-on activities and demonstrations provided by exhibitors. The total number of students participating at the Festival since its inception in 2013 has exceeded 13,000.

This year Mid-Michigan AIChE brought back a number of hands-on activities that demonstrated friction in packed granular systems, size segregation of particles, and density flotation separation of solids. With the generous help of Mr. Tim Geiger of Mattoon & Lee Equipment of Farmington MI, MMAIChE also introduced a new exhibit station that demonstrates the important chemical engineering concept of scaling up and troubleshooting a unit operation using the making of lemonade.

For this, we start with how to stir and dissolve sugar in a short beverage glass to make lemonade, then progress to a taller glass followed by a pitcher while comparing the time and effort required and discussing the efficiencies and economic profits gained. The students can try to stir the undissolved sugar (simulated using fine white sand) and actually feel the difference in fluid resistance on the spoon. After experimenting with the beverage glass- and pitcher-scale processes, we move up to illustrate a failed attempt to stir and suspend undissolved sugar in a larger un baffled tank using a motorized agitator. We guide the students in observing the defect in the flow, as evidenced by the formation of a deep vortex and accumulation of sugar at the vessel bottom, and demonstrate how to correct the problem by adding baffles.

Mid-Michigan AIChE recognizes the following individuals for volunteering at the Festival to make this event a success: Sherry Allen, Denise Anaya, Victor Atiemo-Obeng, Dave Camp, Ben Freireich,

Tim Geiger, Tom Gregory, Haseeb Moten, Stacie Santhany, Bala Sreedhar, Cheryl Wizda, and De-Wei Yin. If you are interested in helping with MMAIChE K-12 outreach activities in the future, please contact Alan Stottlemeyer (for contact information please see the newsletter masthead).



Haseeb Moten demonstrates how to stir and dissolve sugar in an agitated mixing tank to make lemonade.

Words from the Chair and Mark Your Calendars for Upcoming Young Professional (YP) Outreach

BY STACIE SANTHANY

Personal development is something that I get really excited about. One thing that drives me every day is continuous learning. The mission statement of MMAICHe is “To provide opportunities to continuously develop our members professionally while working with the community to improve the understanding of science and engineering and their impact on society.” We are really on track this year to hit it out of the park in continuous development of ourselves and our young community members! We have our regularly scheduled MMAICHe seminar series (next up Tracy Young from Dow Chemical on December 13). The regularly scheduled seminars help keep us “not so young professionals” to continue developing. One major goal of MMAICHe is to help develop young professionals and students in all things STEM. We have two YP outreach opportunities in the month of November. Chemical Engineering

students from Kettering University’s student chapter of AIChE visited Dow Chemical, Michigan Operations, on Friday November 11th for a tour of process sciences R&D, a pilot plant, and a manufacturing scale facility. We will have more details about that great event in our next newsletter. We will need some volunteers for November 29th, where we will host chemical engineers from University of Michigan’s student chapter of AIChE. We will serve them lunch, host another tour of Dow Chemical, Michigan Operations, and participate in an afternoon of speed networking (like speed dating, but speed mentoring/networking with experienced professionals like you). Imagine if you were 20 years old again and you could ask experienced engineers/chemists whatever questions were on your mind. If you would like to be a “speed networking mentor” for these young professionals for a couple hours on Tuesday November 29th, please contact



Alan Stottlemyer (YP Chair of MMAICHe) at 989-636-2673. I look forward to the future newsletter article that describes the success stories of these two YP outreach events in the New Year. Stay tuned...

Happy Thanksgiving to You ALL!

Applications for 2017 Summer Youth Program Scholarship

BY SHEILA GOMBAR-FETNER, SCHOLARSHIPS CHAIR

Engineering Exploration Scholarship

Mid-Michigan AIChE strives to promote the education of potential future engineers by sponsoring opportunities to explore careers and develop skills in engineering and science. The Summer Youth Program is a one-week program at the Michigan Technological University (MTU) campus, which gives high school students an opportunity to participate in laboratory, classroom and field experiences in a selected career area. More information about the program is located [here](#).

Who: Students in grades 9–11 in the Great Lakes Bay Region.

What: Full scholarship covering tuition, room, and board plus a \$100 travel allowance to explore science and engineering through hands-on laboratory, classroom, and field experiences.

Where: Summer Youth Program at Michigan Technological University in Houghton, MI.

When: One-week session during the summer of 2017.

Application Period: December 1, 2016 to January 6, 2017



Submit applications online at

www.aiche.org/community/sites/local-sections/mid-michigan/scholarships.

Questions?

Contact Sheila Gombar-Fetner at SAGombar-Fetner@dow.com

Scenes from the 2016-17 MMAIChE Fall Kick-Off



MMAIChE members and guests enjoying beer and pizza.



Kevin Peil explaining the beer-making process.



Stacie Santhany giving an overview of upcoming activities.



Defne Kayrak-Talay giving an overview of the 2016-2017 seminar program.

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Chair

Stacie Santhany slsanthany@dow.com

Chair-Elect

Ted Calverley emcalverley@dow.com

Past-Chair

Tom Gregory tdgregory@sbcglobal.net

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Directors

Laura Dietsche ljdietsche@dow.com

Shawn Feist sfeist@dow.com

Paul Kehl pjkehl2000@yahoo.com

Adviser

Tim Frank tcfrank@dow.com

Archivist & Continuing Education

Rich Helling rhelling@dow.com

Awards Committee

Michael Molnar michael.molnar@hscpoly.com

K-12 STEM Education Outreach

Alan Stottlemeyer alstottlemeyer@dow.com

Membership

Greg Theunick greg.theunick@hscpoly.com

Newsletter Editor

David Couling dcouling@dow.com

Bala Sreedhar bsreedhar@dow.com

Programming

Defne Kayrak-Talay dkayraktalay@dow.com

Publicity

Mike Durisin mdurisin@dow.com

Scholarships

Sheila Gombar-Fetner sagombar-fetner@dow.com

Webmaster

Kathleen Wu kwu1@dow.com

Young Professionals

Joshua Katzenstein jmkatzenstein@dow.com

Preview of the 2016–2017 Seminar Schedule

Event	Date, Time, and Venue	Speaker and Topic
October	October 11, 2016, 6–8 pm Grand Traverse Pie Co., Midland	Brian Walther TS&D Technology Leader, The Dow Chemical Company <i>"Keeping Our Food Supply Tasty Through Technology"</i>
December	December 13, 2016, 6–8 pm Grand Traverse Pie Co., Midland	Tracy Young Core R&D Program Director, The Dow Chemical Company <i>"Advancing a Water Circular Economy: Key to Sustainable Process Development"</i>
January	January 17, 2017, 11:30 am–1 pm Dow Chemical Michigan Operations 1790 Bldg Rm 272, Midland	Scott Tipler Overpressure Protection Expertise Area Leader, The Dow Chemical Company <i>"Recognizing and Mitigating Overpressure Scenarios"</i>
February	February 15, 2017, 6–8 pm Grand Traverse Pie Co., Midland	Kim Zimmer, P.E. Bay Region Traffic Safety & Operations Engineer, Michigan Dept. of Transportation <i>"Toward Zero Deaths™ safety campaign"</i>
March	March 21, 2017, 6–8 pm Grand Traverse Pie Co., Midland	Mark Bassett Chairman and Chief Executive Officer, Hemlock Semiconductor <i>"Polycrystalline Silicon Technology and Markets"</i>
April Joint seminar with Midland ACS	April 18, 2017, 6–8 pm Venue to be determined	Mary Logan Remedial Project Manager, U.S. Environmental Protection Agency <i>"Tittabawassee River Clean-up"</i>
April	April 25, 2017, 6–8 pm Grand Traverse Pie Co., Midland	Mark Worden Professor, Dept. of Chemical Engineering & Materials Science, Michigan State Univ. Topic to be announced
May Spring Banquet	May 23, 2017, 5:30–9 pm Great Hall Banquet & Convention Center, Midland	Gene Anderson <i>"Life Is Too Important To Be Taken Seriously"</i>