

THE ACTION & REACTION

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

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Apply Now! 2021 Undergraduate Chemical Engineering Scholarship

BY TED CALVERLEY, SCHOLARSHIPS CHAIR

Mid-Michigan AIChE strives to promote the vision of the American Institute of Chemical Engineers (AIChE) by offering financial support to high school seniors who wish to study and ultimately become professionals in the field of chemical engineering. The scholarship will reward past academic performance as well as school and community involvement. It is not strictly based on financial need. It is intended for a student who has demonstrated a high proficiency in core academic courses and who has a high probability of success at obtaining a chemical engineering degree.

Who: High school seniors residing in the Great Lakes Bay region who plan to major in chemical engineering.

What: Renewable scholarship awarding \$2000 over the course of four years (\$500 per year) for the study of chemical engineering.

Where: A college or university with an undergraduate chemical engineering program accredited by the Engineering Accreditation Commission of ABET

Eligible programs are listed [here](#).

Application Period: Applications are currently being accepted until **Friday, March 26th**.

The application process and forms can be found at the following link: [2021 Undergraduate Scholarship Application](#)

Questions? Contact Ted Calverley at Tcalverley@charter.net or midmichiganaiiche@gmail.com

2021 MMAICChE Elections

BY MARK SULLIVAN, SECRETARY

Each year, the Mid-Michigan AIChE Section holds officer elections according to our approved bylaws which lay out a process including a nomination period, dissemination of ballots, and announcement of election results. While election results are typically announced at the Section's spring banquet, due to the continuing impact of the coronavirus we will be announcing the results at our virtual seminar to be held on May 24. In addition to this newsletter article, we will be communicating election-related notices, news, and ballots by email via our current Section account, mmaiche@mmaiche.org, as well as on the Section web site at <https://www.aiche.org/community/sites/local-sections/mid-michigan>.

Our currently-serving 2020-2021 Section officers are: Deboleena Chakraborty, Chair

Victor Sussman, Chair Elect/Vice Chair
Stacie Santhany, Past Chair
Mark Sullivan, Secretary
Eric Stangland, Treasurer
Laura Dietsche, Director
Shawn Feist, Director
Bruce Holden, Director

As current Chair Elect/Vice Chair, Victor Sussman will automatically succeed to Section Chair for 2021-2022, and current Chair Deboleena Chakraborty will automatically succeed to the position of Past Chair for 2021-2022. All other officer positions will be up for election, and nominations will be solicited from all local MMAICChE members. Suggestions from non-members will certainly be considered—self-nominations are welcome and encouraged! However, please be aware that any nominated candidates must be members of both AIChE and

MMAICChE in order to be placed on the election ballot.

The calendar for MMAICChE election events is as follows:

Call for Nominations: April 9
Nominations Close: 5:00 PM, May 3
Distribute Election Ballots: May 5
Election Ballots Due: 5:00 PM May 21
Announce Election Results: May 24 Virtual seminar

All newly-elected and succeeding officers will begin serving at the close of the 2020-2021 scheduled seminar series, and terms will expire at the close of the 2022 spring banquet. Please seriously consider nominating someone qualified for an officer position or consider serving yourself!

Call for Nominations – MMAICChE Section Awards for 2020-2021 Program Year

BY MICHAEL MOLNAR, AWARDS COMMITTEE CHAIR

Each year the Mid-Michigan AICChE Section recognizes distinguished members by presenting awards at the Annual Spring Banquet. We would like to recognize deserving members and affiliates so we request our membership to consider nominations for our four award categories. The award categories are:

Chemical Engineer of the Year - This award generally is given to a distinguished chemical engineer in the Mid-Michigan Section with about 20-30 years of professional experience following graduation. Publications, patents, company recognition of achievement, and other accomplishments in the field of chemical engineering are key criteria for consideration. The individual must be an active participant in AICChE at either the local or national level to be considered. This is normally an annual award.

Young Chemical Engineer of the Year - This award recognizes technical and professional expertise, and leadership that is superior for an early-career engineer. Service to AICChE is also a consideration for the award, but not an explicit requirement. It is generally given to a person with approximately 4-12 years of service following

graduation. This is normally an annual award.

Service to Society Award - This award recognizes long-time service to the profession through role modeling for other engineers and leadership of community activities that benefit area students and residents. Recipients usually have about 25-30 years of service following graduation.

Noland Poffenberger Award - This award is given to a high-level manager who has shown great support of the Mid-Michigan Section by encouraging employees within the recipient's organization to participate in professional organizations such as AICChE.

Anyone interested in nominating someone can do so by sending an e-mail letter to Michael Molnar, Awards Committee Chair, at michael.molnar@dow.com. Please copy Mark Sullivan, Section Secretary, at msullivan6@dow.com. The following information should be included:

- Identify the specific award category that you feel is most appropriate for the individual you are nominating.
- Include several paragraphs explaining why this individual is deserving of special

recognition.

- Include background information in support of the nomination, such as a listing of professional accomplishments and service to AICChE.
- Also include a phone number where you as the person making the submission can be contacted for more information.

The deadline for submitting nominations is Monday, April 19, 2021. The awardees will be announced during May 2021.

We certainly expect that there are many individuals in the area deserving of special recognition, so please consider nominating someone you know. The Awards Committee may decide not to give an award in a particular category if too few nominations are received. More information about the Mid-Michigan Section of AICChE is available at <http://www.mmaiche.org> and <http://www.aiche.org/community/sites/local-sections/mid-michigan>.

Sincerely,

Michael Molnar (Chair), Laura Dietsche, Shawn Feist, and Bruce Holden
Awards Committee Members

Words from the Chair

BY DEBOLEENA CHAKRABORTY

Of the many things 2020 has taught me, one is the value to networking and having the right kind of people around you to continue to learn and grow. MMAICChE is one of such organizations. This year we have introduced the MMAICChE Equity, Diversity and Inclusion (EDI) Committee to embrace the diversity our members bring to the table and provide equal opportunity for all. Please welcome Kimberly (Kim) Dinh as our newly appointed EDI chair. This year, the executive committee decided to add additional co-chair positions for K-12 STEM Educational Outreach, Young Professionals, and EDI committees to offer additional career and professional development opportunities for our members. If you have a desire to spark interest about Chemical Engineering in young minds, this is the opportunity to be our next K-12 STEM Education Outreach Chair. Our chapter is extensively involved in organizing interactive events at local schools, communities, and colleges.

Our seminar chairs Pranav Karanjkar and Victor Sussman continued organizing virtual seminar series on diversified topics virtually to keep our members and community engaged. We have had great participation. THANK YOU! We have two more upcoming seminars in April and May. Please stay tuned for those seminar announcements on Facebook and social media.

This year the committee decided to postpone the traditional annual spring banquet until we can safely meet in person again. But we are going to have a virtual meeting on May 24th where we will also introduce our new executive committee for the year 2021-2022. Speaking of which, it is that time of the year for MMAICChE Executive Committee elections! If you are interested in being a part of a vibrant and active executive committee, please reach out to me or any other committee members. It has been



an honor to be a part of this organization. Thank you for being a part of it.

Sincerely,
Deboleena Chakraborty

Volunteering Opportunities with MMAICChE!

PAT HEIDER, YOUNG PROFESSIONALS CHAIR

Mid-Michigan AICChE is looking to fill roles on its various committees. These opportunities are open to any enthusiastic chemical engineer in the Mid-Michigan area regardless of past experience volunteering with MMAICChE. This is an excellent chance to network with local chemical engineers and give back to the community. Examples of two committees seeking members are:

- **Young Professionals Committee:** Create events targeted to new chemical engineers and engage prospective chemical engineers from nearby universities. These have included tours of plants in the mid-Michigan area and speed networking events for undergraduate chemical engineers.

- **K-12 STEM Education Outreach Committee:** Organize STEM educational demonstrations and class activities for K-12

students and the general public. See an example with our award-winning surface tension classroom experiment.

Classroom Files: [STEM Outreach | AICChE](#). Award Writeup: [Looking Back on the Fall 2019 STEM Showcase | AICChE](#).

For any inquiry or information, please reach out to [mmaiche@mmaiche.org](mailto:mmmaiche@mmaiche.org) or any of the present committee members.

Equity, Diversity and Inclusion Committee

DEBOLEENA CHAKRABORTY, CHAIR; MARK SULLIVAN, SECRETARY; KIM DINH, EQUITY, DIVERSITY AND INCLUSION CHAIR

The Mid-Michigan AIChE Section has decided to increase and emphasize our efforts of promoting Equity, Diversity, and Inclusion (EDI) in all of our actions. As a step towards promoting EDI, the executive committee of MMAIChE has created the Equity, Diversity, and Inclusion committee, and Kim Dinh has volunteered to lead the committee in efforts to promote EDI within our activities and communities.

The EDI committee will begin formulating a path forward for promoting EDI activities and efforts; please reach out to Kim (kdinh@dow.com) if you have any questions or if you would like to be involved. We are currently looking for committee members and welcome all involvement.

MMAIChE believes in the values espoused by the EDI statement sanctioned by AIChE in March 2020, provided below:

“AIChE Equity, Diversity and Inclusion Statement

Approved March 2020

AIChE believes that all who wish to be a part of the chemical engineering community should have equal opportunity to pursue and achieve success. We work toward a better future for all —through our technical expertise; through how we inspire, engage, retain, and advance future talent; and through how we treat each other within and beyond the profession. Solutions

to 21st century problems require innovation and creativity, which are accelerated through diverse teams and by ensuring that spaces are inclusive.

AIChE is committed to promoting a fair, just, and equitable profession and society. Groups that have faced discrimination continue to encounter challenges when entering into or participating in engineering and science professions. We encourage inclusion and intentional representation of people from diverse backgrounds and experiences because it is ethical and honorable, and it enhances the innovation and creativity necessary to find solutions to current and future challenges. We aim to eliminate disparities in treatment, racism, and any form of discrimination from our profession — recognizing that specialized strategies will be required for distinct groups, and that long-standing narratives will need to be combated. As members of our AIChE Community, we have an obligation to support and celebrate our advancement along an IDEAL path.

I (Inclusion) D (Diversity) E (Equity) A (Anti-Racism) L (Learning)

We believe efforts to support and promote inclusion must narrow gaps and address root causes and manifestations of inequities.

We hold forth a vision for a diverse profession in which discrimination and conscious bias are unwelcome and unacceptable and

where unconscious bias is recognized and eliminated.

AIChE will initiate and support proactive efforts to combat the influences of racism and bias as a key part of our equity, diversity and inclusion initiatives.

We are committed to anti-racism and to understanding, addressing and mitigating the effects of racism within and beyond our profession through sharing of identified best practices.

We believe that moving from understanding to action requires an openness and commitment to learning; through education we will build allyship.

To reach this IDEAL, AIChE is committed to creating, nurturing and expanding an inclusive, respectful and welcoming environment where people of all backgrounds and identities are valued and respected and can achieve their full potential, regardless of:

(i) race, ethnicity, or national origin; (ii) religious or spiritual practice, or absence thereof; (iii) sex, gender identity and expression, or sexual orientation; (iv) family or relationship structure; (v) any type of disability or perceived disability, past or present; (vi) age; (vii) any ascribed status or visible or invisible difference.

Through intersectionality and the awareness of shared difficulties, we can transcend our differences and achieve a better future for all

New MMAIChE Committee Chair in Profile

KIM DINH, EQUITY, DIVERSITY AND INCLUSION CHAIR

Kim joined Chemical Science, Core R&D, at Dow in the fall of 2020. Kim grew up in Midland and returned after completing a B.S. in Chemical Engineering at UW-Madison and a Ph.D. at MIT with Prof. Yuriy Román. Her Ph.D. work involved identifying the reaction mechanism and active site for the partial oxidation of methane to methanol over copper-exchanged zeolites. As an undergraduate, she interned three times at Dow Corning in a variety of roles and was a member of the varsity women's golf team. At MIT, Kim also completed consulting internships with Saint-Gobain, Merck, and Cabot Corp through MIT's

Practice School Program and was a member of the Chemical Engineering Department's Graduate Student Advisory Board which focused on improving the graduate student experience. At Dow, she is working on new catalyst development, testing and characterization to support the Hydrocarbons and Surfactants businesses. In her free time, Kim likes to stay active – playing golf, ultimate frisbee and other sports, along with cooking and baking. As the new chair for Equity, Diversity, and Inclusion with MMAIChE, Kim is excited to work on creating a more inclusive organization and developing initiatives to bring greater diversity to chemical engineering.



Donating to Support a Future Engineer through Mid-Michigan AIChE is Easy!

The Mid-Michigan Section of AIChE is involved in STEM educational outreach. We provide classroom demonstrations and support aspiring engineers through scholarships for summer camps and chemical engineering degrees. Your donation will be used to help Mid-Michigan AIChE sustain the scholarship fund that sends high school students to the Michigan Technological University Summer Youth Program or to an accredited university or college for a degree in chemical engineering.



You can choose to donate using a PayPal account or with a Debit or Credit card.

The PayPal link is:

https://www.paypal.com/donate/?cmd=_donations&business=eestangland%40character.net&item_name=Scholarships+donations+to+Mid-Michigan+AIChE¤cy_code=USD

OR scan the QR Code on your smartphone – it takes seconds!

Donations are tax-deductible and our secretary can provide you with a receipt. We sincerely thank you for financially supporting aspiring chemical engineers.



Scenes from the 2021 Seminar Series

The screenshot shows a Cisco Webex meeting interface. The main window displays a presentation titled "Solvent-Targeted Recovery and Precipitation (STRAP) of multilayer plastic packaging" by CUWP. The presentation includes a diagram of a multilayer film composed of common plastics (Polyethylene (PE), Ethylene vinyl alcohol (EVOH), and Polyethylene terephthalate (PET)) and a process flow for STRAP: 1. Dissolve in PE selective solvent, 2. Filter dissolved PE, 3. Precipitate and filter dissolved PE, and 4. Recover PE. A list of solvents (water, acetone, DMSO, toluene) is shown. The right sidebar shows a list of participants, including George Huber, who is speaking.

George Huber, *Chemical Upcycling of Waste Plastics*

The screenshot shows a Cisco Webex meeting interface. The main window displays a presentation titled "HUMAN PERCEPTION" by Dow. The presentation includes a diagram showing various visual elements (position, length, angle, area, color intensity, color hue) and a red arrow indicating the range of human perception from "more accurate" to "less accurate". The right sidebar shows a list of participants, including Mark Jones, who is speaking.

Mark Jones, *Effective Communication of Scientific Data!* Slides available on <https://www.mjphd.net/Presentations.html>

The screenshot shows a Cisco Webex meeting interface. The main window displays a presentation titled "Chemical Security: Chemicals of Concern" by SAREDA NATIONAL LABORATORIES. The presentation includes a diagram showing a central figure surrounded by various chemical hazards (Illicit Drug Production, Explosives and Precursors, Theft for Resale, Chemical Weapons and Precursors) and a red arrow indicating the range of chemical security from "more accurate" to "less accurate". The right sidebar shows a list of participants, including Mary Beth Mulcahy, who is speaking.

Mary Beth Mulcahy, *Chemical Security: Protecting Chemicals from People*

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Upcoming Seminar Schedule

Event	Date, Time, and Venue	Speaker and Topic
April 2021	April 13, 2021 (Tuesday) 12.00 pm – 1.00 pm Virtual	Deborah Grubbe President, AIChE <i>"Ethical Practice – A Perennial Business Challenge"</i>
May 2021	May 24, 2021 (Monday) 12.00 pm – 1.00 pm Virtual	Reza Panah Associate Research Scientist, Dow <i>"High Throughput Modeling: A Novel Approach for Process Optimization"</i> 2021 – 2022 MMAIChE Executive Committee Announcement

Email announcements will provide event login details.