



Welcome (back) to a new year!

Hope you all had an amazing summer and are excited to be back for the 2022-23 school year...and another round of TeamMSE newsletters! The goal of our bi-weekly communication is to keep you up to date on the latest MSE news, research, student/faculty awards and events.

If you have information you'd like to share with the community, please email Kristen Freshley at krisfres@umich.edu. Any and all suggestions/comments regarding TeamMSE are welcome, too! Happy first day of classes and here's to a successful year!

A Welcome Back Message from the Chair



MSE students, staff, and faculty,

Welcome back to campus for the academic year 2022-23!

I hope you all had a fun and relaxing summer and are eager to jump in and engage in learning experiences on campus.

The last two and a half years of the pandemic have been challenging and I thank each and every one of you – MSE faculty, staff and students – for working together to safely perform our mission to educate our students who aspire to be the leaders and best in materials science and engineering careers.

As we return to in-person learning on campus this Fall, I encourage you to safely engage in the classrooms, research labs, seminars and social events hosted by MSE, GSC and MMS, and to make the most of the wide-ranging learning opportunities as they present themselves both inside and outside of the classroom.

Finally, I will be completing my two terms – total of eight and a half years – as department chair on December 31. It has been an honor to serve in this role and I thank you all for your support. In January 2023, MSE will welcome one of our alums, Prof. Elizabeth Holm, as the new department chair.

Best wishes for your best learning experience yet on our magnificent, ever-busy Ann Arbor campus!

Amit Misha

Special Announcement:
MSE alum Liz Holm will be next MSE Chair



MSE is excited to announce that MSE alum [Professor Elizabeth Holm](#), Carnegie Mellon University, will become the next chair of the department, effective January 1.

Prior to joining CMU in 2012, Liz spent 20 years as a computational materials scientist at Sandia National Laboratories, Albuquerque, working on computer simulations of microstructure evolution, microcircuit aging and reliability, and the processing and welding of advanced materials.

She earned her dual Ph.D. (1992) in Materials Science and Engineering and Scientific Computing and her BSE (1987) in Materials Science and Engineering here at Michigan Engineering, and an S.M in Ceramics from MIT (1989).

"By her combination of deep technical strength, outstanding leadership skills and strong commitment to DEI, Professor Holm will be able to guide our department through the always evolving field of materials science and engineering," commented MSE Professor Alan Taub, who led the chair search committee.

We look forward to welcoming Liz in January!

Upcoming Events

You're invited!

MSE Welcome Back Picnic

Thursday, Sept. 1
5:00-8:00 p.m.

Gallup Park (Maas Pavilion)

Festivities will include:

- catered dinner
- games
- MSE swag



We have a record crowd signed up for our annual Welcome Back Picnic this Thursday at Gallup Park. The forecast looks great, so we look forward to seeing everyone there for this fun evening!

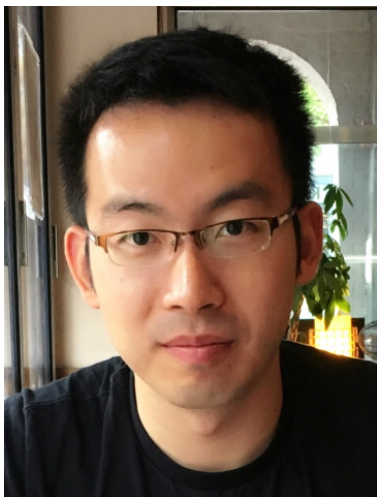
Seminar speakers for September 2 & 9

Our 2022-23 MSE 890 Seminar Speaker series will kick off this **Friday, Sept. 2 at 10:30 a.m.** with U-M CHE's **Albert Liu**, who will present "*Colloidal Electronics*" in 1670 Beyster.

Zoom link:

<https://umich.zoom.us/j/98899169074>

Passcode: mse890



On **Friday, Sept. 9**, **Lane Martin**, MSE chair at UC-Berkeley, will present "*Ferroic Complex Oxides for Next-Generation Devices*" at 10:30 a.m. in 1670 Beyster.

Zoom link:

<https://umich.zoom.us/j/98899169074>

Passcode: mse890



Coffee & Conversation resumes Sept. 2

Back this year by popular demand, the department will again host "Coffee & Conversation" social sessions each week starting a half-hour before the Friday seminar for graduate students, faculty and staff. Our first **Coffee and Conversation** will be this **Friday, Sept. 2, 10:00-10:30 in Tishman Hall**, right outside the seminar room, 1670 Beyster. Hope you can join us!!



MSE Undergraduate Open House Sept. 15



Thursday, Sept. 15

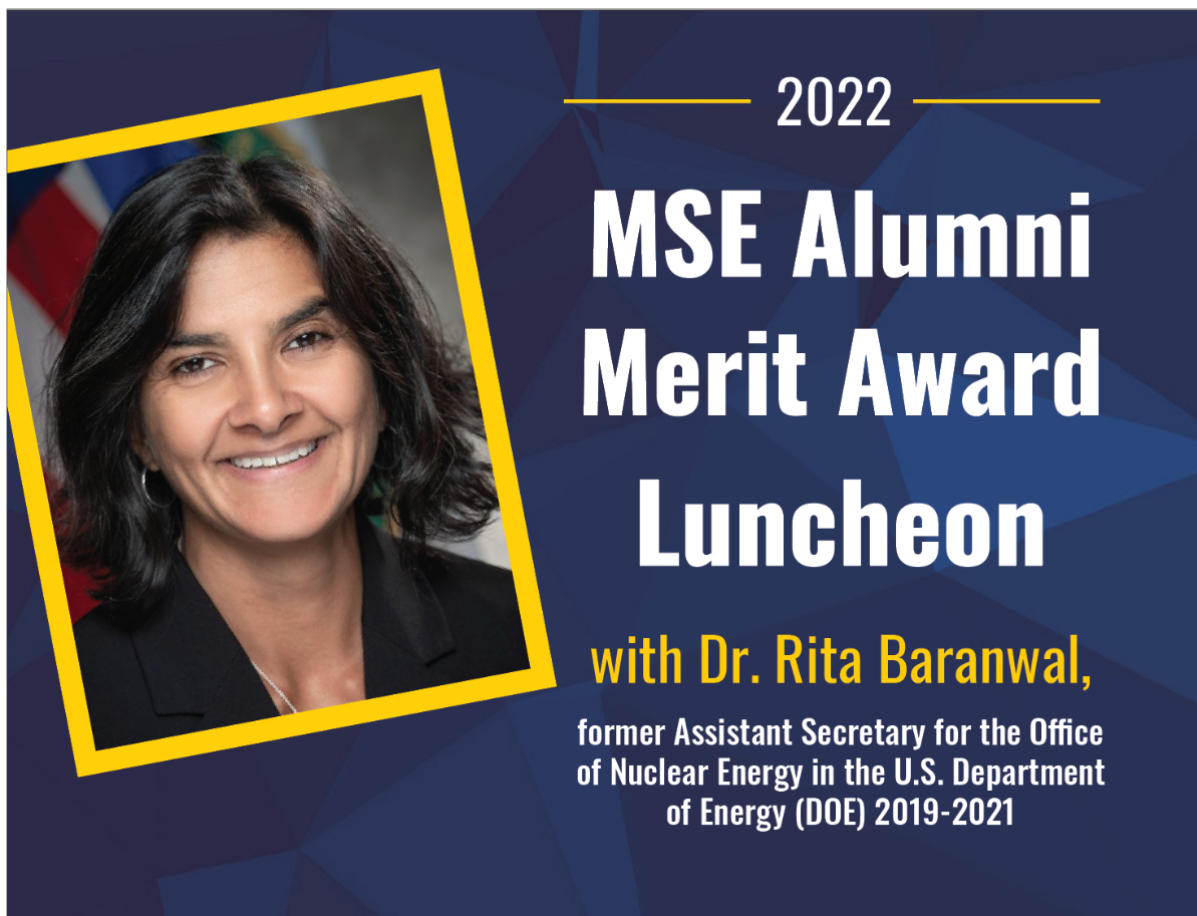
5-7:00 p.m.

Borg Warner Gallery, G.G. Brown

MSE is hosting an Open House for all undeclared undergraduates who are considering majoring in MSE. The event will include a presentation by Associate Professor John Heron and materials demos. Spread the word to

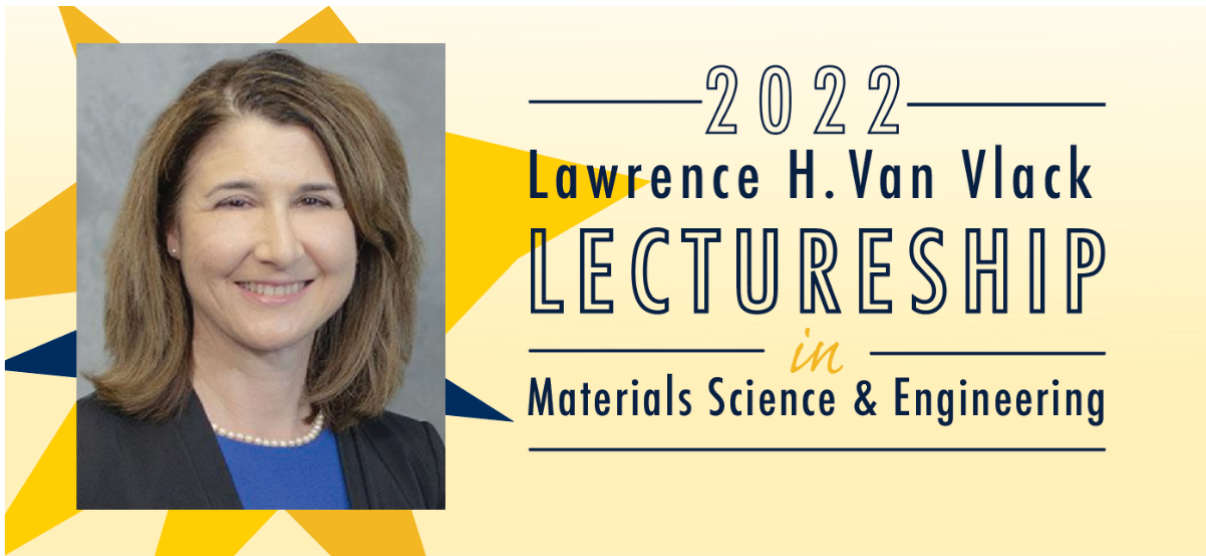
anyone you know who's interested in learning more about MSE!

Annual Alumni Merit Award Luncheon Sept. 23



Join us **Friday, Sept. 23** (Homecoming Weekend) for our annual Alumni Merit Award luncheon with MSE alum **Dr. Rita Baranwal**, former Assistant Secretary for the Office of Nuclear Energy in the U.S. Department of Energy (DOE) 2019-2021, now Senior VP of Digital & Innovation at Westinghouse. It's an event you won't want to miss! Please [register here](#) by **Thursday, September 15**.

Computational expert Susan Sinnott headlines 2022 Van Vlack Lectureship Oct. 6 & 7



This fall's Van Vlack Lectureship will feature materials computational expert **Susan Sinnott**, MSE chair at Pennsylvania State University. Sinnott will present a public lecture on Thursday, Oct. 6 and a technical lecture on Oct. 7. Look for more details coming soon!



Taub installed as Robert H. Lurie Professor of Engineering June 7



Professor Alan Taub was installed as the Robert H. Lurie Professor of Engineering in a ceremony officiated by CoE Dean Alec Gallimore on June 7 in Chesebrough Auditorium. Special speakers included former Ph.D. advisee Dr. Caleb Reese (PHD '20), Associate Professor Ashwin Shahani, and ME Research Professor Miki Baru. Before being presented with his professorship medal and chair, Taub gave a lecture entitled "Contributions of a Materials Researcher Towards Sustainable Mobility." [Click here](#) to watch a video of the ceremony and lecture, and [here](#) to see photos of the event. Congratulations again, Alan!

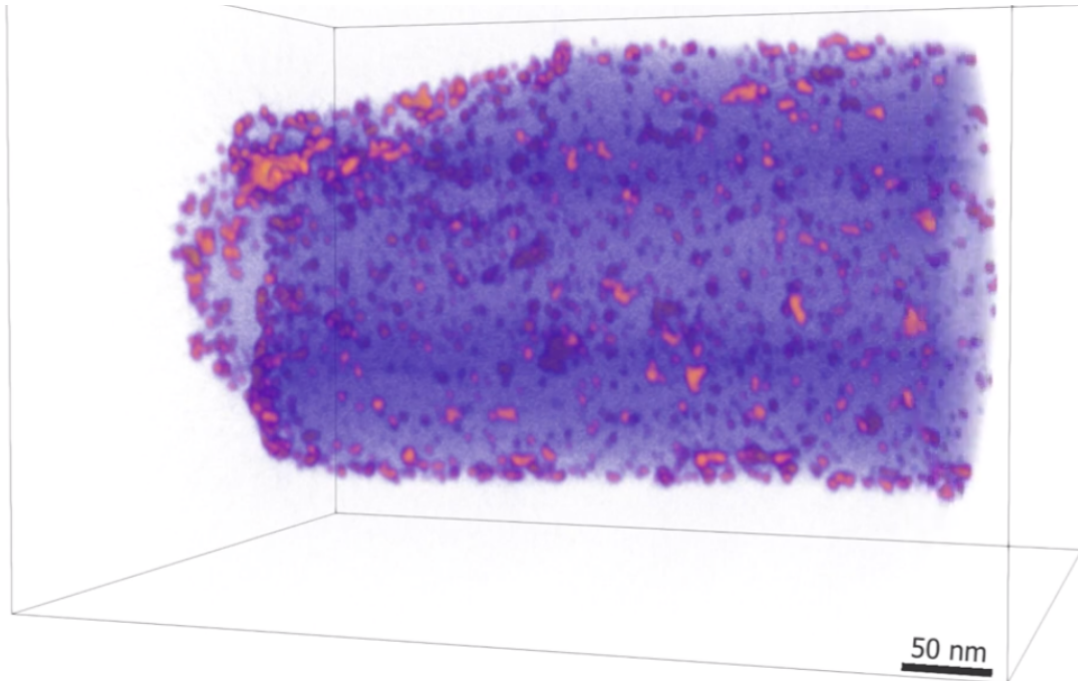
MSE bid adieu to Joanna Millunchick June 21



On June 21, MSE faculty, staff and students gathered to wish Joanna Millunchick well before she left to become dean of the Luddy School of Informatics, Computing and Engineering at Indiana University in Bloomington. Farewell presentations included remarks by faculty emeritus Wayne Jones and a video of messages from several former students. "I take each of you with me in my heart," she told attendees. Click [here](#) to view photos from the event.

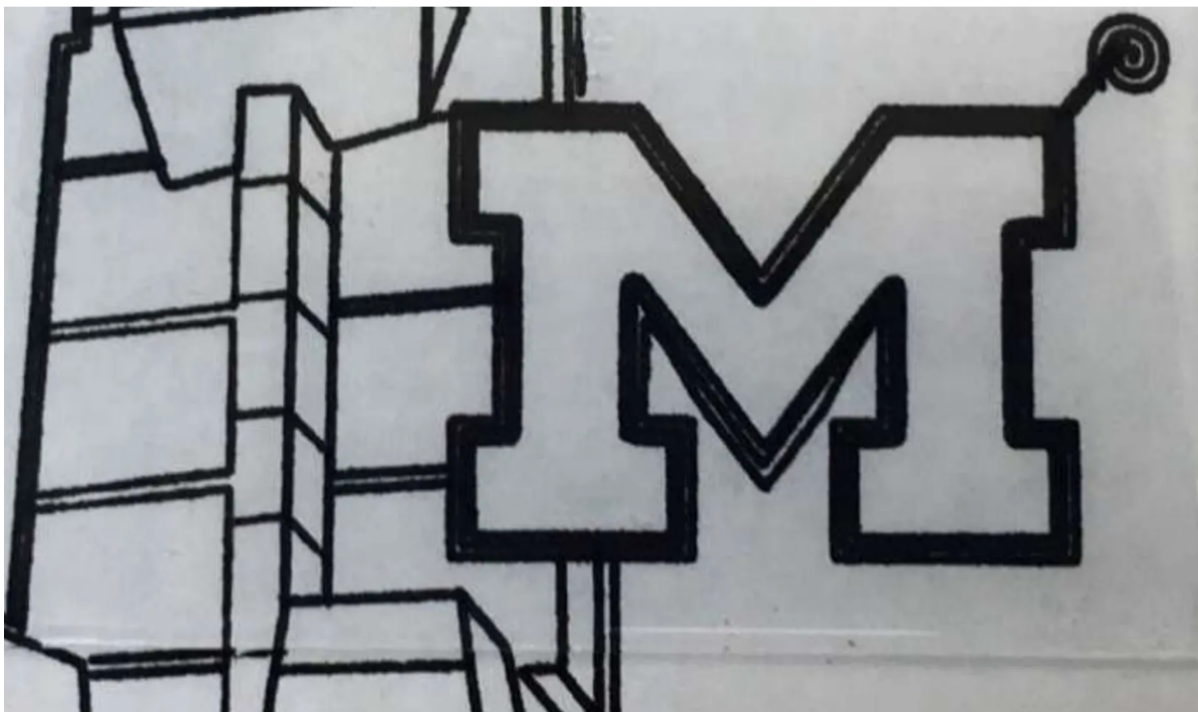
Research highlights

From the Hovden Lab: Visualizing nanomaterial structures in real time



Thanks to a new beta version of tomviz, an open-source 3D data visualization tool, scientists now have an unprecedented level of access to the world of nanoscale materials. The software, developed by a U-M team led by **Robert Hovden** and assisted by **Nick Kotov**, connects directly to an electron microscope and enables researchers to see and manipulate 3D visualizations of nanomaterials in real time. [Read more](#).

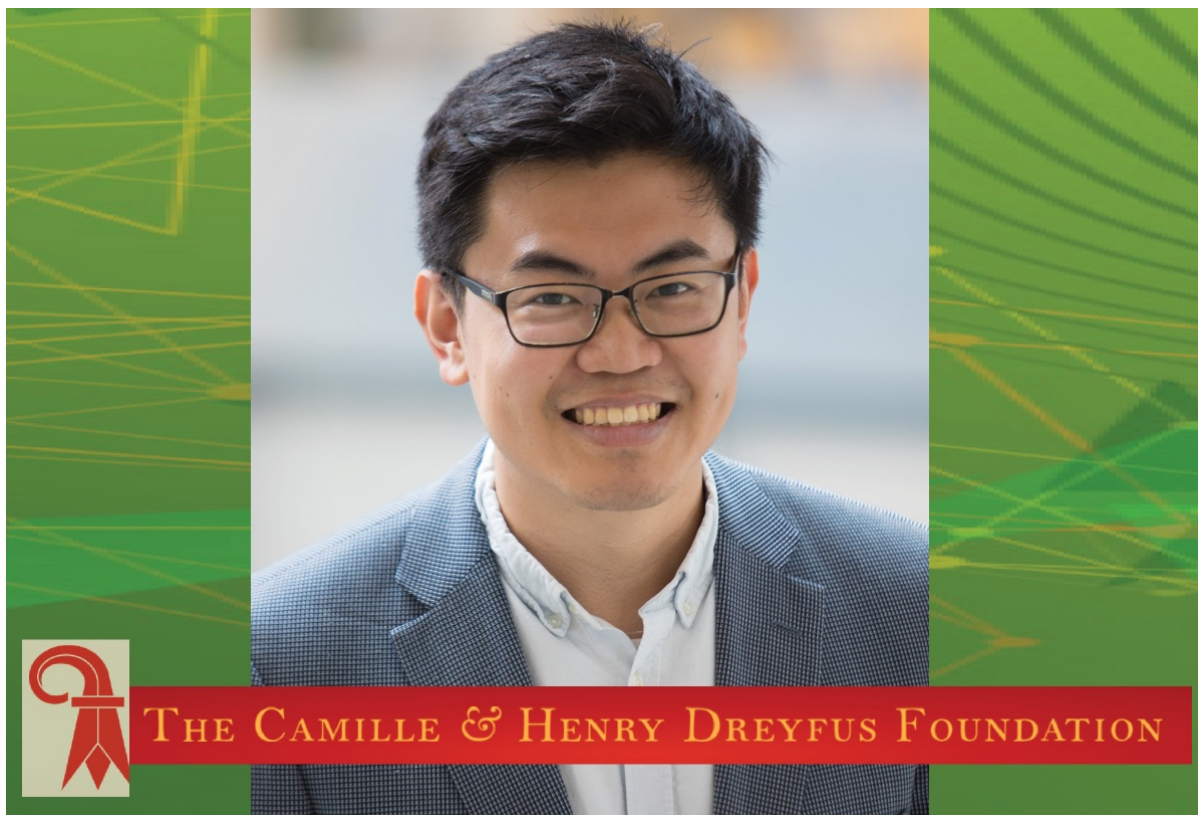
From the Tuteja/Mehta Labs: New game-changing durable coating kills the COVID virus and other germs in minutes



A new tough, clear coating developed by a team led by **Anish Tuteja** and **Geeta Mehta** uses natural oils to kill viruses and bacteria. [Read more.](#)

Faculty News

Sun receives prestigious Dreyfus Award



Assistant Professor Wenhao Sun recently received a grant from the Camille and Henry Dreyfus Foundation for [Machine-Learning Classification of Materials Synthesizability](#). [Read more](#).

Shahani earns two professional society awards



This summer **Associate Professor Ashwin Shahani** received two exciting professional society awards: the 2022 ASM Bradley Stoughton Award for Young Teachers and the 2023 TMS Frontiers of Materials Award. [Read more.](#)

Student News

Paul Chao receives CoE award



As the 2022-23 recipient of the J. Robert Beyster Computational Innovation Graduate Fellowship, Paul Chao (Shahani Group) will get full tuition paid, healthcare benefits and a stipend for two semesters. [Read more.](#)

Students attend international conference

In July an MSE contingent, including two undergraduates, attended the 23rd International Solid State Ionics Meeting (SSI-23) in Boston. [Read more.](#)



Conference attendees from left to right: Assistant Professor Yiyang Li, Riley Hargrave (ME undergrad), Jennifer Rupp (professor at TU Munich and a conference organizer), Jinhong Min (MSE Ph.D. student), Lindsay Gubow (MSE '22), Jingxian Li (MSE Ph.D. student), and Laszlo Cline '23.

Campus health updates

COVID-19

Testing

- Testing for asymptomatic COVID-19 will remain available through the Community Sampling and Tracking Program (CSTP) for U-M students interested in testing.
- Everyone is encouraged to have antigen tests on hand for immediate testing should you develop symptoms. These are available through many government resources, at local pharmacies, and at CSTP sites.

Masking

- Masking for most indoor spaces on campus, including instructional spaces, is not required.
- Masks will remain required in patient care areas (e.g. Michigan Medicine) and at U-M COVID-19 testing sites.

- Please respect the decisions of others in our community who choose to wear a mask based on their own individual risk assessment.
- U-M will continue to monitor COVID-19 activity and may revise masking requirements as indicated.

Monkeypox (MPV)

On Aug. 4, the U.S. Department of Health and Human Services declared MPV a public health emergency. MPV is a painful and potentially serious viral illness that can be transmitted through direct, often skin-to-skin, contact with an infected person's body fluids or MPV lesions. MPV is part of the same family of viruses as the virus that causes smallpox.

- Students who have a suspicious rash or sores and/or believe they were exposed to MPV should contact University Health Service (UHS) immediately at 734-764-8320.
- For answers to common questions about MPV, UHS has compiled a [Monkeypox FAQ](#)

Influenza

Influenza is an infectious disease that can disrupt daily routines. Many of the same tools and practices used to protect against COVID-19 are effective, such as:

- Getting vaccinated against influenza when available.
- Wearing a mask if you are worried about catching the disease from others around you.
- Staying home when you are sick.
- Details about flu vaccine clinics on campus will be announced soon.

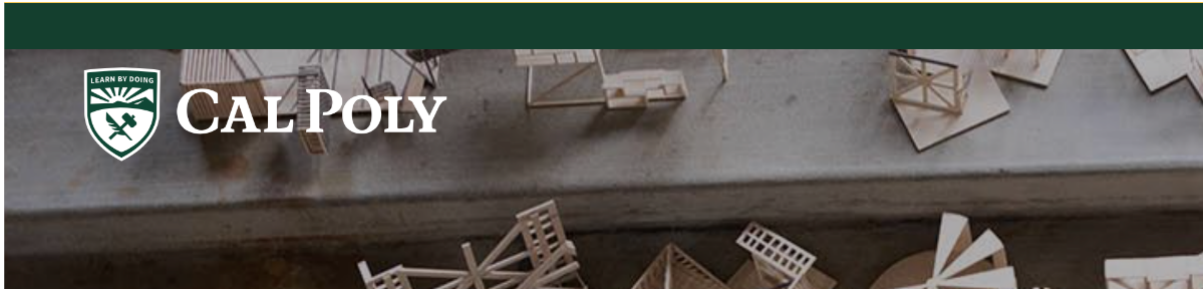
Mental Health Resources

Supporting your mental health and well-being is critical. There are several resources available to help you. Please don't be afraid or ashamed to take advantage of the many resources that can help:

- [Syllabus Mental Health Statement](#)
- [U-M's Counseling and Psychological Services \(CAPS\)](#)
- [Michigan Engineering C.A.R.E. Center](#)

Job opportunities

Cal Poly looking for assistant professor



The Materials Engineering Department at Cal Poly is running a search this year for a new assistant professor in the broad area of metallurgy with particular interest in corrosion or additive manufacturing. Ideal start time would be September 2023. Ideal candidate should have a strong interest in teaching, but also a desire to develop an applied research program with undergraduate and master's students. For more information, [click here](#).

U-M Robotics looking for student soft robotics hardware developer and tester



Job Title: Soft Robotics Hardware Developer and Tester

Start Date: Fall Semester 2022.

Job Summary: The project will involve working with the EMBiR and ROAHM Research Labs, under Professor Moore's and Professor Vasudevan's direction, to develop a soft robotic gripper. The soft robotic gripper will be composed of HASEL actuators and the student will work on designing and testing individual

actuators and exploring different gripper designs.

Key Qualifications:

- Experience with MATLAB
- Experience with 3D printing and fabrication
- Experience with experimental design, data collection and analysis

Additional Qualifications:

- Strong background in mechanical, electrical or material science engineering
- Experience with LabVIEW is preferred

Description and Responsibilities:

In this role, the student will work alongside members of the lab to design and test HASEL actuators for a soft robotic gripper. You should have excellent communication skills as well as a strong independent work ethic. We are primarily looking to characterize the effects of different parameters on force and displacement output of the actuators. The eventually goal is to incorporate the soft robotic gripper into other robotic systems, such as a bipedal Digit robot, to act as a lightweight gripper to enable manipulation.

Education or Experience: Undergraduate or Master's student (ME, ECE, Robotics, Material Science etc.)

Application: If you are interested in the position, please email [Zachary Brei](mailto:breizach@umich.edu) (breizach@umich.edu) and CC Professor Talia Moore (taliam@umich.edu) your CV and transcript by **September 9**.



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