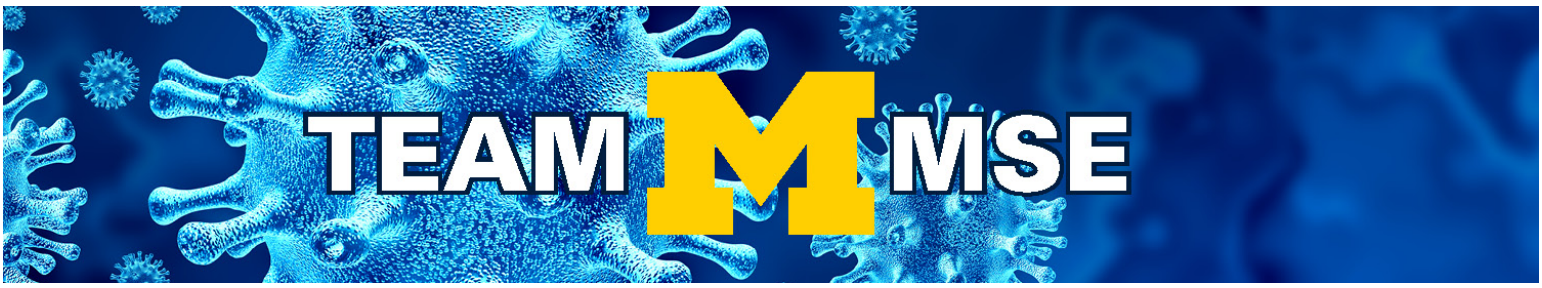


Our grand graduation issue!

Yes, technically, graduation is over, but we're not ready to stop celebrating our amazing Class of 2021-derful graduates! If you missed our graduation ceremony on Saturday or just want to relive the memories, in this issue we have a scaled-down version of events: two video segments and a presentation of all the graduates. It may be a truncated version, but there's LOTS to read and watch, so settle in and enjoy (again)! CONGRATULATIONS again, graduates, on all you've accomplished.
A link to the entire ceremony will be coming soon.

Questions, comments or ideas for TeamMSE? Contact Kristen at krisfres@umich.edu.

We'd love to hear from you!

Vaccine clinics at the Big House every day this week

There are walk-in clinics being held at the Michigan Stadium today through Sunday, **May 4-9**. No registration is necessary. The Pfizer vaccine will be administered, which means you will need a second shot in three weeks. Individuals must be over the age of 16 and present a Michigan Medicine medical record number at the door.

Before you leave campus...

Students preparing to leave Ann Arbor at the end of the term are encouraged to follow **safe travel guidance and get tested** prior to their departure, unless

they are fully vaccinated (two weeks past their final dose).

If you're graduating, your computing services will too

If you're graduating this spring, you will no longer be able to use some services as an alum. **Click here** for a summary of the U-M computing services you keep and lose as an alum, as well as how to save or transfer any files you wish to keep for the computing services that will end.

Click here for U-M's COVID-19 Dashboard

Nocona Sanders defense: Monday, May 17

Nocona Sanders (Kioupakis group), will present "First-Principles Calculations on the Electronic and Optical Properties of Polar Functional Materials" on **Monday, May 17 at 11:00 a.m.** Zoom link: umich.zoom.us/j/96866962405, passcode 268150

Good luck, Nocona!

This summer, RELATE invites you to participate in an intensive communication training workshop from 4:00-5:30 pm on Thursdays (June 3rd - July 22nd), hosted virtually on Zoom. The workshop is designed for STEM graduate students, postdocs, and researchers who want to be able to discuss their work with any audience. **Applications are due on May 14 by 5 p.m.**; please visit **learntorelate.org/workshop-application** or contact us at **RELATE.coordinators@umich.edu** for more information and to access the application.

Macromolecular Summer Seminar Series

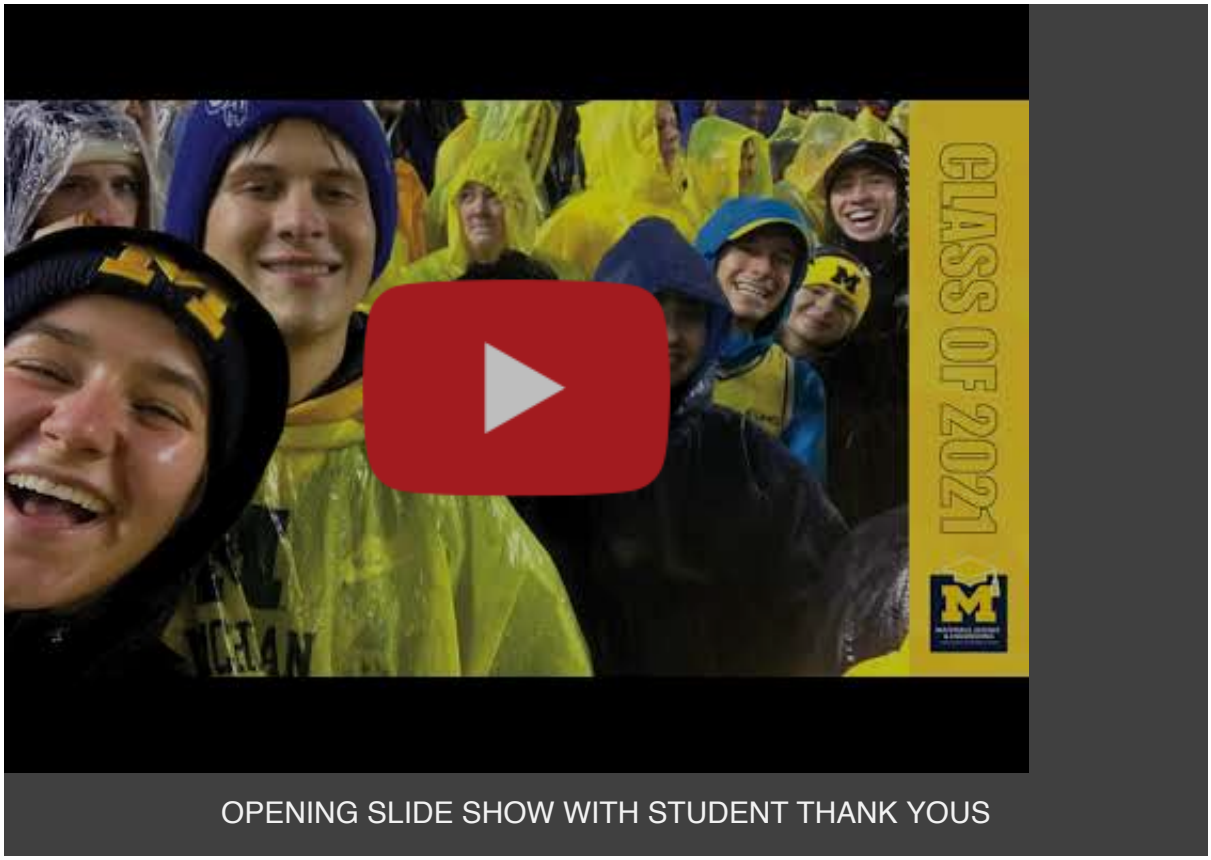
The American Chemical Society-affiliated POLY PMSE graduate student chapters are hosting a special **Macromolecular Summer Seminar Series** featuring 36 expert speakers from universities across the country, including 5 speakers from U-M: **Dr. Richard Laine, Dr. Jinsang Kim, Dr. Abdon Pena-Francesch, Dr. Anne McNeil, and Dr. Joerg Lahann**.

The series starts May 6 at 10:10 AM EDT / 9:10 AM CDT for opening remarks, followed by talks from Prof. Kevin Edgar of Virginia Tech and Dr. Darryl Boyd of Science Made Simple LLC.

The symposium will meet weekly throughout the summer from 10:15 – 11:45 AM EDT.

Registration is required. Please register by **Thursday, May 7** at 9:00 am EDT.

If you have any questions, please contact **Muru Zhou** (muru@umich.edu) or the event organizer, **Sofia Goodrich** (sl.goodrich@ufl.edu).



OPENING SLIDE SHOW WITH STUDENT THANK YOUS

ALUMNI, FACULTY AND STAFF CONGRATULATORY MESSAGES

A special message from the MSE Staff:

MSE staff members from left to right starting at the top: Ellen Kampf, Sahar Farjami, Shelley Fellers, Cassandra Franklin-Smith, Amy Holihan, Todd Richardson, Ellen Hou, Chris Cristian, Kathy Kuhn, Tina Longenbarger, Ying Qi, Keith McIntryre, Renee Hilgendorf, Patti Vogel and Kevin Worth.

James P. Lettieri Award:
Aidan Charmley & Leah Marks

The James P. Lettieri Award recognizes an exemplary student who has attained high academic achievement within the Materials Science & Engineering Department. Congratulations, Aidan and Leah!

The Brian Worth Prize:
Alex Zimmerman

The Brian Worth Prize was created in memory of Brian Worth (BSE '89 and PHD '94) to celebrate his life and studies at the University of Michigan, which he loved so much. The prize is awarded to an MSE undergraduate student who has demonstrated academic excellence, significant involvement in research and the Michigan Materials Society, and participated in a broad range of university life. Congratulations, Alex!

Apha Sigma Mu Distinguished Member:
Kenneth Peterson

The Alpha Sigma Mu Distinguished Member Award recognizes an undergraduate who has achieved academic excellence and made significant contributions to Alpha Sigma Mu. Congratulations, Ken!

The Anvil Award:
Kate Moo

Founded by MMS during the 1995-96 school year, the **Anvil Award** recognizes exemplary MSE undergraduates who have committed their service to the shaping of the MSE Department and community. The Anvil was established in celebration of 100 years of materials science and engineering education and development at the University of Michigan. Congratulations, Kate!

MMS Distinguished Member Award:
Cameron Cafmeyer

The MMS Distinguished Member Award recognizes an undergraduate who has excelled both academically and in their involvement with the Michigan

Materials Society.

The following individuals earned their bachelor of science in Materials Science and Engineering during the Winter 2021 term:

Nicholas Arceci

Favorite memory: Winning the Great Lakes Regional Championship with the Michigan Quidditch Team

Favorite material: Tungsten

Yana Beeker

Plans for next year: Working for a small start up called Loop Software and Testing

Shane Boran

Plans for next year: Attending UCF for Civil Engineering MS focused on Structural & Geotechnical Engineering.
Favorite material: Alumninum, for its broad usefulness in various applications/ability to be recycled

---

Cameron Cafmeyer

Plans for next year: MSE SUGS
Favorite memories: Football Saturdays, countless hours in the MSE Lounge doing homework, and eating too much Panda Express at Pierpont.

Aidan Charmley

Plans for next year: MSE SUGS
Favorite material: Steel, because of its long history and widespread use, along with the continued advancement and research on the same material basis.

Kaylynn Crawford

Favorite material: Iron because the first phase diagram I studied was the iron-carbon phase diagram and it made me want to study materials.

Jacob Dean

Favorite material: Cellulose for its versatility, abundance, and sustainability

Charlie Donahue

Plans for next year: General Motors Powertrain in Bedford, Ind.

Favorite memories: Going to games with my friends, all the great restaurants, the hours spent in Van Vlack lab, the hours I should have been studying but spent laughing with friends.

Ashton Doyle

Plans for next year: Mechanical engineer for Corteva Agriscience

Favorite memories: I will never forget staying up past midnight many

nights in a row in the Bugli with my friends trying to finish thermo & kinetics homework

---

Elizabeth Eachus

Plans for next year: MSE SUGS

Jackson Eilers

Favorite memories: The 2020 TMS Conference and that Kinetics homework where our entire class was in one room working together.
Favorite material: Superglue. Using only the physical properties of one material to stick two other materials together is pure MSE to me.

Daniel Evans

Plans for next year: Entering Ph.D. program in MSE at UC-Berkeley
Favorite material: Shape memory

alloys because they are fun to watch

Grace Fedele

Plans for next year: Working full time as a product developer making hand tools
Favorite material: Nickel because it is very useful for making alloys.

Katie Ferguson

Plans for next year: Working full time for GlobalFoundries, a semiconductor manufacturer located in upstate New York.

Wesley Fermanich

Plans for next year: Completing a master's in Energy Systems Engineering at U-M
Favorite material: Silicon; it's

abundant in the Earth and critical to the solar energy industry.

Thomas Gabrielson

Most memorable moment: The last day of MSE 365 that was in person, we had all been hearing about COVID and were like "when is the next lecture going to be"--- I always had the inkling it was going to be more than a brief hiatus and it was really surreal. The day the world got turned upside down.

Angelica Rose Galvan

Plans for next year: Pursuing a Ph.D. in Bioengineering at the University of Maryland
Favorite memory: Facilitating the MSE DEI: Tea Time Tangents

Julia Healy

Plans for next year: Manufacturing engineer at the P&G Auburn site

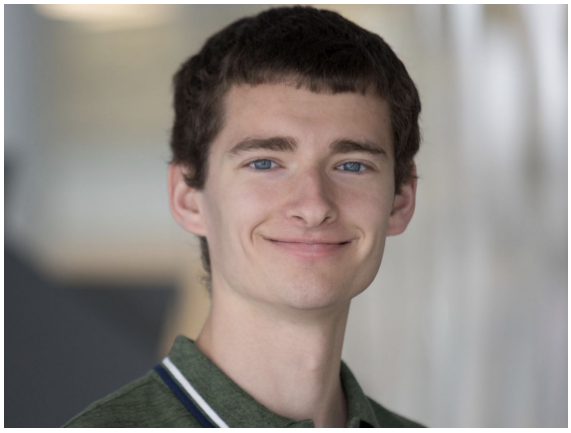
Favorite memories: Going to the Bugli with my MSE friends to study long hours for our exams
Favorite material: Concrete

Mary Hoopes

Plans for next year: Pursuing a master's at Johns Hopkins in their biomedical engineering and medical innovation and design program.
Favorite memory: I'll always remember the groupme memes that always brought us together after trainwreck exams.

Nathan Jarski

Favorite memories: One of my favorite MSE-related memories was "baking cookies" in MSE 360 where we were creating sample molds. We referred to it as "baking cookies" because of the 'ding' sound that the machine's timer made when the mounted sample was finished.



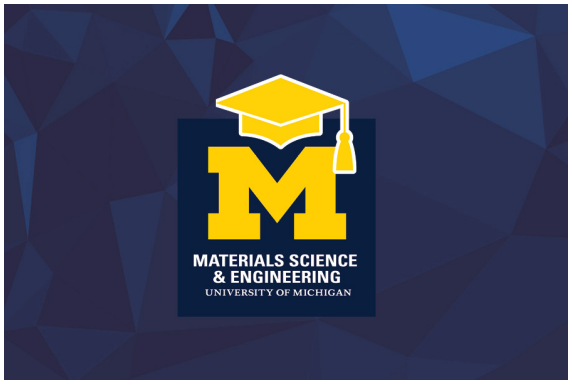
Usman Khan

Plans for next year: MSE SUGS
Favorite memory: Interpreting my first stress-strain curve

Favorite material: Grade 2 Austempered Ductile Iron for its exceptional physical properties

---

Viktoriya Kovalchuk



Timothy Leonard

Tianle Liu

Plans for next year: Pursuing a Ph.D. at SJTU in China

Favorite memory: Going to Joyworks to cast Al alloy specimens for MSE 360.

Marissa Lobbia

Plans for next year: Attending grad school to study environmental engineering

Favorite memory: When my band played at the Blind Pig downtown; meeting my friends.

Favorite material: Aerogels, because they're 99% empty space

Leah Marks

Plans for next year: Doing research at U-M and applying for a Ph.D. (and getting more sleep).

Favorite memories: Convening in packed office hours are definitely memorable now that everything is online. Our openness to helping each other was really special.

Allison Marozza

Plans for next year: SUGS - Biomedical engineering

Favorite memory: Lab experience and my senior capstone project

Favorite material: Polymers. They are used quite frequently in biomaterials and just have many uses in our daily lives.

Kori Maxie

Plans for next year: Footwear Material Developer in the Jordan brand at Nike, Inc.
Favorite memories: How close-knit the MSE community is. The family-feel of MSE made the large university seem a lot smaller and served as a major support system during my time here.

Connor Michaelson

Plans for next year: Completing master's degree.
Favorite material: Pykrete

Karen Ni

Plans for next year: MSE SUGS
Favorite memory: The memes
Favorite material: Nickel titanium because it has a good memory! haha, get it? :')

Claire O'Donnel

Plans for next year: Starting full-time job at Northrop Grumman in California
Favorite memories: Making really

great friends through my MSE classes!

Jacob Pietryga

Plans for next year: Pursuing a Ph.D.
Favorite memory: Working on reports for MSE 360 in Duderstadt
Favorite material: Hyperbranched Cobalt Phosphide Nanoparticles; it's a really cool star shape that makes for interesting 3D renders!

Michelle Pikulinski

Plans for next year: Planning on entering industry as an R&D engineer
Favorite memories: Lab classes with Tim Chambers gave me countless indispensable skills that turned me from a student into an engineer.

Amanda Rosenkrantz

Plans for next year: Attending

George Washington University to pursue a master's in engineering management focusing in emergency, risk, and crisis management.
Favorite memories: The amazing friendships in MSE. I would not be graduating without them.

Deesha Shah

Favorite memory: I will always remember the moment when I realized that I knew everyone in my classes, and how cool it is to have found that kind of community in a major.

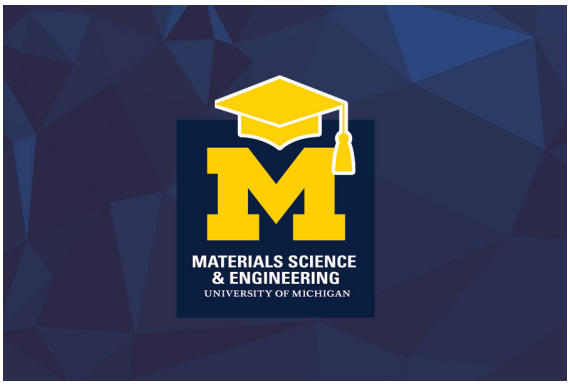
Alex Shaw

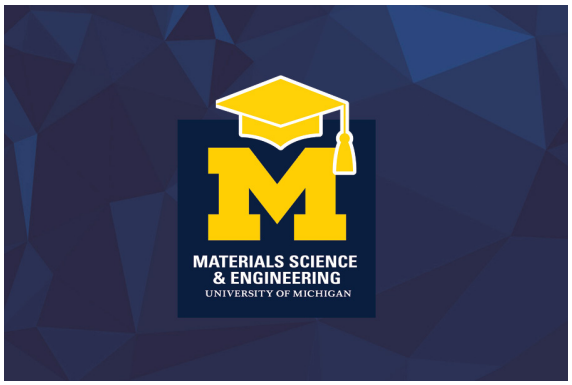
Luke Sloan

Plans for next year: Graduate school at UIUC
Favorite memories: Spending free time outside of class with friends

Favorite marterial: Silicon. It's amazing how we are able to process a metal such that it can achieve all the amazing things we have done with computers.

Ross Smith





Owen Talmadge

Dhruv Tatke

Plans for next year: SUGS - Energy Systems Engineering
Favorite memory: Staying up till 4 a.m. every night freshman year in JavaBlue
Favorite material: NASICON because I've been staring at it for three years.

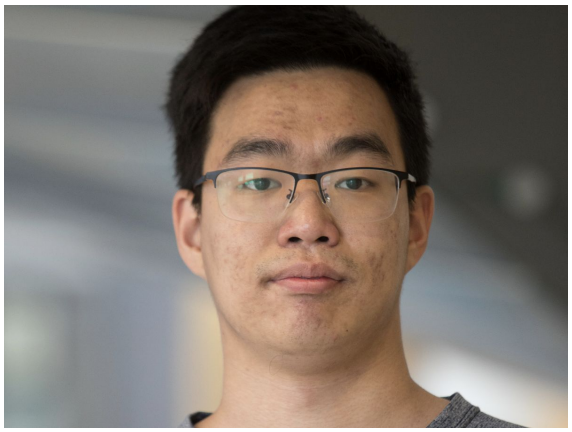
Johnny Wesley

Plans for next year: Master's in biomedical engineering at U-M

Richelle Wilson

Plans for next year: MSE SUGS

Favorite memories: My girl friends from the MSE department. These girls have been my study buddies and my truest friends. I will always cherish our time spent together.



Shuo Zhang

Plans for next year: Graduate study at U-M

Favorite memory: When we used foam modeling method to have our own aluminum particle

Favorite material: Protain because it has so many different appllications waiting for people to explore.

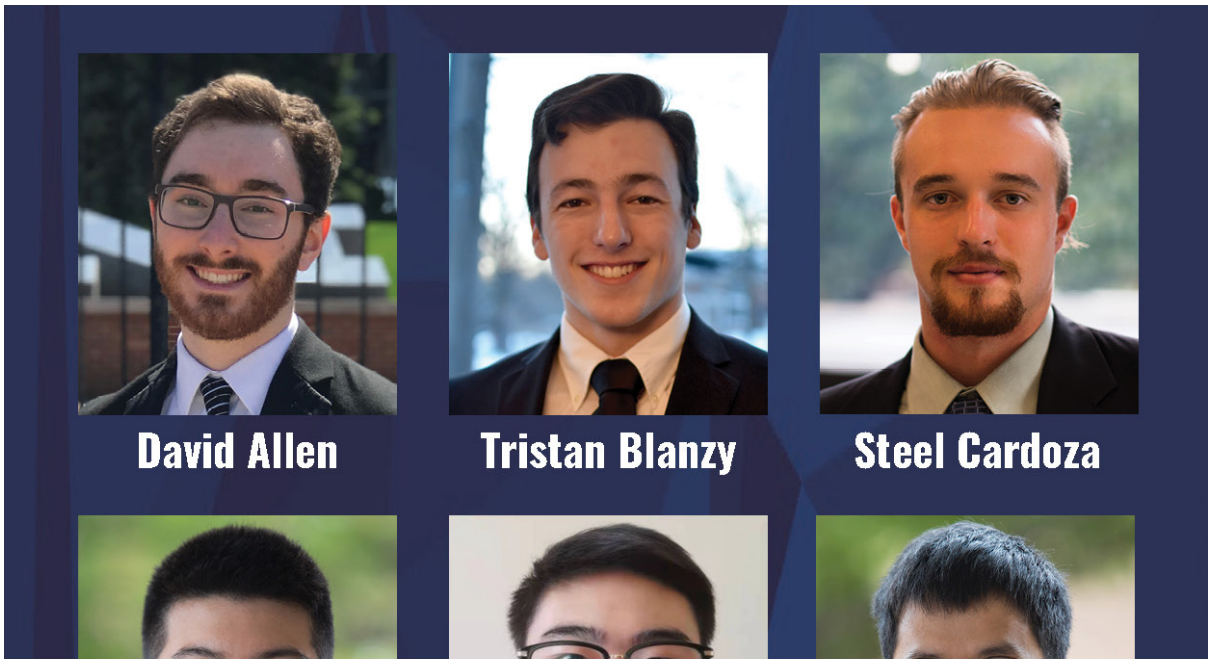
Alexandra Zimmerman

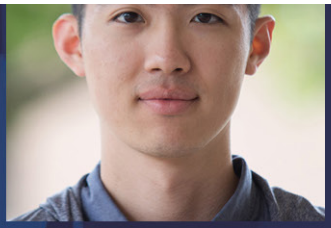
Plans for next year: Attending Stanford to pursue a Ph.D. in MSE

Favorite memories: All the long nights studying in the Dude and our

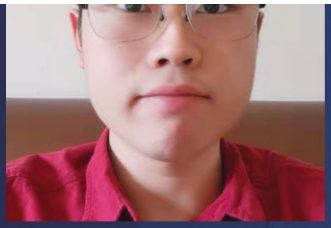
trip to Joyworks!

The following individuals earned their master of science in Materials Science and Engineering during the Fall 2020 and Winter 2021 terms:

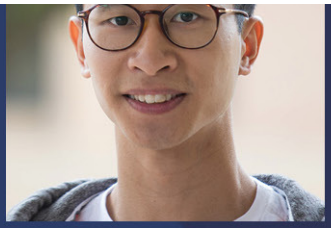




Albert Chang



Ganlin Chen



Tony Chiang

Ryan Fattal

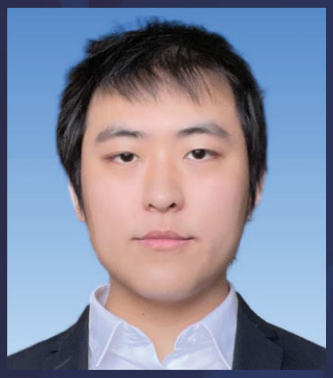
Fenghe Fu

Matthew Higgins

Chao Huang

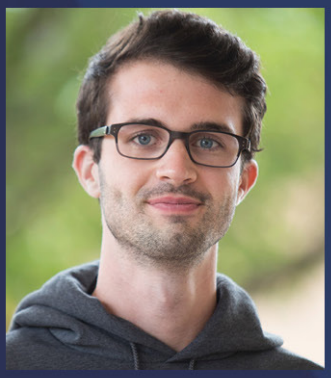
Huai-Fu Huang

Tao-Yu Huang

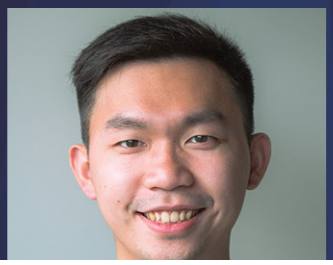


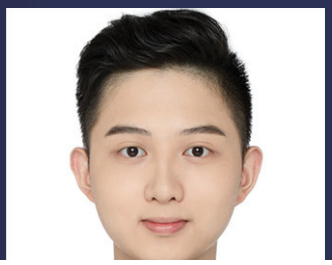
Jiajie Li

Yu-Ho Lin



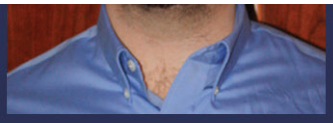
Javier Lopez-Nieto





Yu-Hung Luan

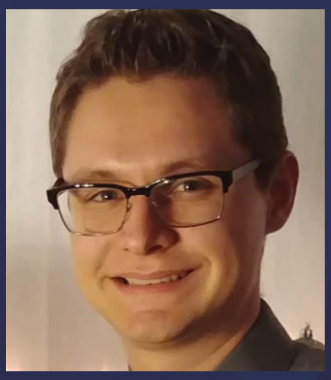
Yanjun Lyu



Brendan Casey Miles

Sudeep Nerlige Manjurath

Mayme Philbrick



Alexander Pielack

Max Rotenberg

Keara Saud

Sujay Shah

David Speer

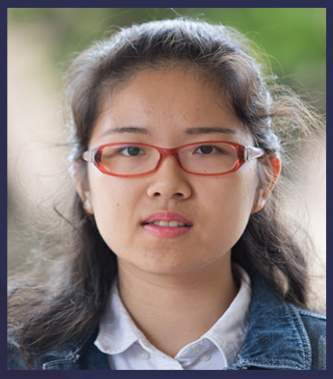
Suk Hyun Sung

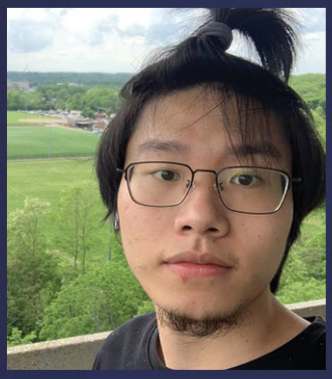
Mohsen Taheri Andani

Leonard Vallejo

Nicole Jiao Wang

Jiamin Wen

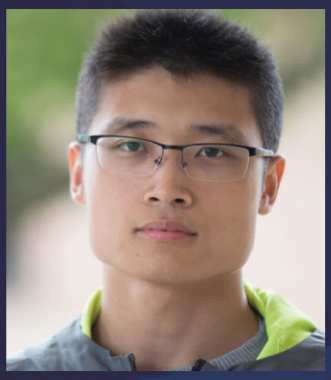




Bingyu Wu

Chao Wu

Yuchen Wu



Zhixiong Yin

Bokai Zhang

Mojue Zhang

MATERIALS SCIENCE & ENGINEERING
UNIVERSITY OF MICHIGAN

Zenghao Zhang

Zijing Zhang

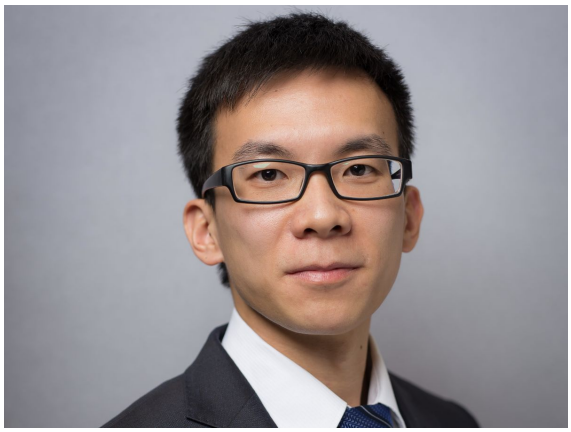
Tianyang Zhu

Ph.D.s

The following individuals earned their Ph.D. in Materials Science and Engineering during the Fall 2020 and Winter 2021 terms:

Michael Chen
(Dasgupta)

“Rational Design of Electrode Architectures for Improved Performance of Li-metal and Li-ion Batteries”

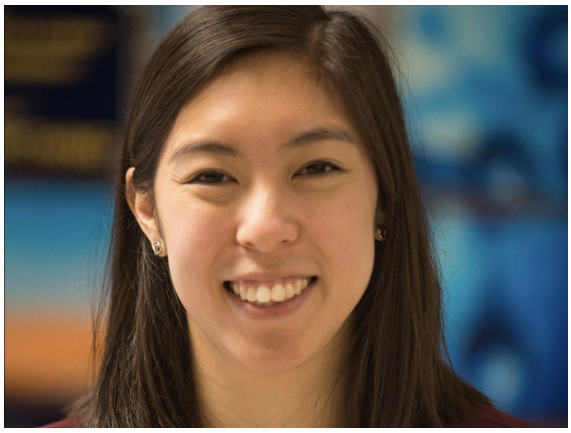


Wonjin Choi
(Kotov)

“Reconfigurable Kirigami Optics and Chiral Phonons”

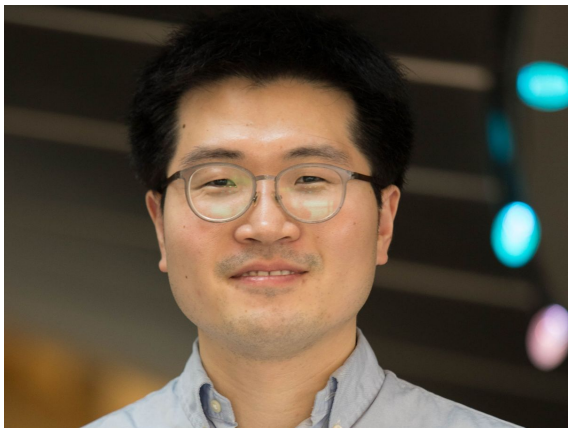
Kathleen Chou
(Marquis)

“Role of Oxygen on Phase Stability, Precipitation, Deformation, and Oxidation in Pure Titanium and Beta Titanium Alloys”



Erin Evke
(Shtein)
“Kirigami- Based Approaches to the Development of Highly Tunable Mechanical, Electrical, and Optical Systems and Devices”

Jiseok Gim
(Hovden)
“Hierarchical Nanostructure of Natural Biominerals and Man-made Semiconductors”



Christian Greenhill
(Goldman)
“Nanoscale Studies of Structural, Electronic, and Optical Characteristics in Thin Film Semiconductor Alloys and Heterostructures”

Alvaro Masias
(Sakamoto)
“Properties of Lithium Metal for Solid State Batteries”

Peter Meisenheimer
(Heron)
“Disorder-Engineering of Ferroic Properities”

Nocona Sanders
(Kioupakis)
"First-Principles Calculations on the Electronic and Optical Properties of Polar Functional Materials"

Catherine Snyder
(Mehta/Tuteja)
“Polymer Nanoparticle Design for Ovarian Cancer Therapies”

Eleni Temeche
(Laine)

“Solid electrolytes to enable the assembly of all solid-state batteries”

Brian Tobelmann
(Tuteja)

“Design of high-performance surfaces for controlling phase transformation”

Volunteers needed for MSE virtual outreach

event May 19-20

Hello! We are looking for anyone interested in helping out with our next MSE Outreach event with Renaissance High School (Detroit) on May 19-20. The theme of the demo will be Fun with Thermodynamics, and we will be doing a live aluminum casting! All of the classes will be one hour long and held over Microsoft Teams. You can sign up here. If you can, please sign up by May 10. We are mainly looking for assistance with moderating breakout rooms; a discussion guide and training will be provided! We hope to see you there.

Alumnus author Paul Krajewski looking for student micrographs for new children's books

MSE alumnus **Paul Krajewski (BSE '89, MSE '94, PHD '96)** is working on two children's books, *What's In Your Plane* and *What's In Your Car 2*. The books build off two previously published books*, What's In Your Car* and *What's In Your Body* that describe how the elements of the periodic table are used in everyday life. For each element discussed, they include a poem, some pictures, and an interesting fact. For the new books, he's giving YOU the opportunity to have your micrographs included! Please send a copy of your micrograph to **paul.e.krajewski13@gmail.com**. If your image is chosen, you will be properly credited, and receive a copy of the book.

The specific elements they're looking for are listed below. They can be optical, SEM, TEM or another technique and include either the pure element, or alloys or compounds which include that element: H, He, Li, Be, B, C, O, F, Ne, Na, Mg, Al, Si, P, Cf,, S, Cl, K, Ti, V, Cr, Mn, Fe, Ni, Zn, Mb, Ta, W, Au, Hg, Ar, Co, Ni, Ga, Ge, Sc, Rb, Sr, Y, Zr, Nb, Rh, As, Se, Br, Kr, Ru, Ag, Sb, In, I, Te, Nd

May is AAPI (Asian American Pacific Islander) Heritage Month, which we will be celebrating the next few weeks and take as an opportunity to learn about the diversity within AAPI communities as well as how deep the connections are to all facets of American life and history. All this month, PBS is featuring memorable and insightful films (both short and full-length), that feature a variety of moving and inspiring stories of Asian Americans through the decades fighting for justice ("American Revolutionary: The Evolution of Grace Lee Boggs"), succeeding in business ("The Donut King"), and celebrating their heritage ("Far East Deep South"). Check out the full offerings **here**.

Our mailing address is:
2300 Hayward St.
3062 H.H. Dow Building
Ann Arbor, MI 48109