



TEAM **M** MSE

Flurry of activity

While the snow is flying outside, we have all you need to keep busy inside! In this issue we recognize six students who won awards at CoE's recent Engineering Research Symposium, bring you more "MSE Recommends" (this time TV shows/movies) - and give you a slew of new workshops, events, and job opportunities to check out. Oh, you can order MSE apparel now, too! Who says hibernating is boring...

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

We'd love to hear from you!



Campus COVID Status

Covid cases continue to rise among U-M students

Last week saw an increase in student COVID-19 cases, spread across all levels of students and largely due to social gatherings. New cases amongst faculty and staff are at a low level and are not increasing. Overall, U-M cases represent about **half of all cases in Washtenaw County**.

Mandatory testing for graduate students starts today

Starting today, ALL STUDENTS - including graduate and professional students - who live on or come to campus will be required to get tested **weekly**. Students can get tested through the [U-M Community Sampling and Tracking Program](#) or [University Health Service \(UHS\)](#). As a reminder, students who test positive for COVID-19 off campus should [report their test results](#) to the university, in order to help protect the community.

Note: **If you have previously tested positive for COVID-19**, you are excluded from testing for a 90-day period from the date of your test. If you were tested by the U-M Community Sampling and Tracking Program, University Health Service or Occupational Health Services, your result will automatically be captured. If you were tested elsewhere, [please submit your positive results here](#) - this has a 2 to 3-day delay to get into ResponsiBLUE.

Testing available at Pierpont

Convenient, saliva-based testing is available at **Pierpont Commons**, Boulevard Room (1st floor Mezzanine behind Fireside Cafe) **Monday-Friday, 9:00 a.m.-4:30 p.m.**

ResponsiBLUE

If you are coming to campus for any reason, use of this tool is required. As of yesterday, Feb. 8, all graduate and professional students will see the weekly COVID-19 testing status box in your ResponsiBLUE app. If you are up-to-date with testing through U-M, your last test date will display. For others, your screen will default to a test status of “Completed” with an expiration date of Feb. 16.

You will have until Feb. 16 to get into compliance with the weekly COVID-19 testing expectation.

Local vaccine rollout moving slowly

The change in the state of Michigan’s distribution strategy and the nationwide shortage of available vaccine prevented Michigan Medicine from scheduling additional first-dose vaccination appointments last week for employees and patients. As of yesterday, a total of 29,004 Washtenaw County residents had been fully vaccinated.

[Click here for U-M's COVID-19 Dashboard](#)

Car won't start? Call DPSS

Something to keep in mind on these bitter cold days: If your car won't start, DPSS can provide on-campus jumpstarts. Contact DPSS at 734-763-1131 or 911 in an emergency.

Upcoming Events



Seminar Lecturer this Friday: Shyue Ping Ong of UCSD

Associate Professor of NanoEngineering Shyue Ping Ong will present "Accelerating Materials Design with Data and Machine Learning" this Friday, February 19, at 10:30 am. Zoom link:

umich.zoom.us/j/97861640341,
passcode 952424

Wonjin Choi PhD Defense: Tuesday, February 23

Wonjin Choi (Kotov) will defend his PhD thesis "Reconfigurable Kirigami Optics and Chiral Phonons" next Tuesday, February 23 at 3:00 p.m. Zoom link:

umich.zoom.us/j/99931937340



Jiseok Gim PhD defense: Friday, March 5

A member of the Hovden lab, Jiseok Gim will present "Hierarchical Nanostructure of Natural Biominerals and Man-made Semiconductors" on Friday, March 5, at 1:30 p.m. Zoom link:



umich.zoom.us/j/97861640341,

passcode 749646

**Now's your chance to stock up on MSE apparel!
Sale ends Monday, March 1**



The *binding* MSE Apparel Order Form can be found [here](#). The form will close on **Monday, March 1**.

If you are on campus this semester, you will be expected to pick up your order from a designated location. If you are off campus this semester, MMS will be shipping your order to you. *Make sure to fill out your address on the form.*

The items we have for sale this year are (pictured above):

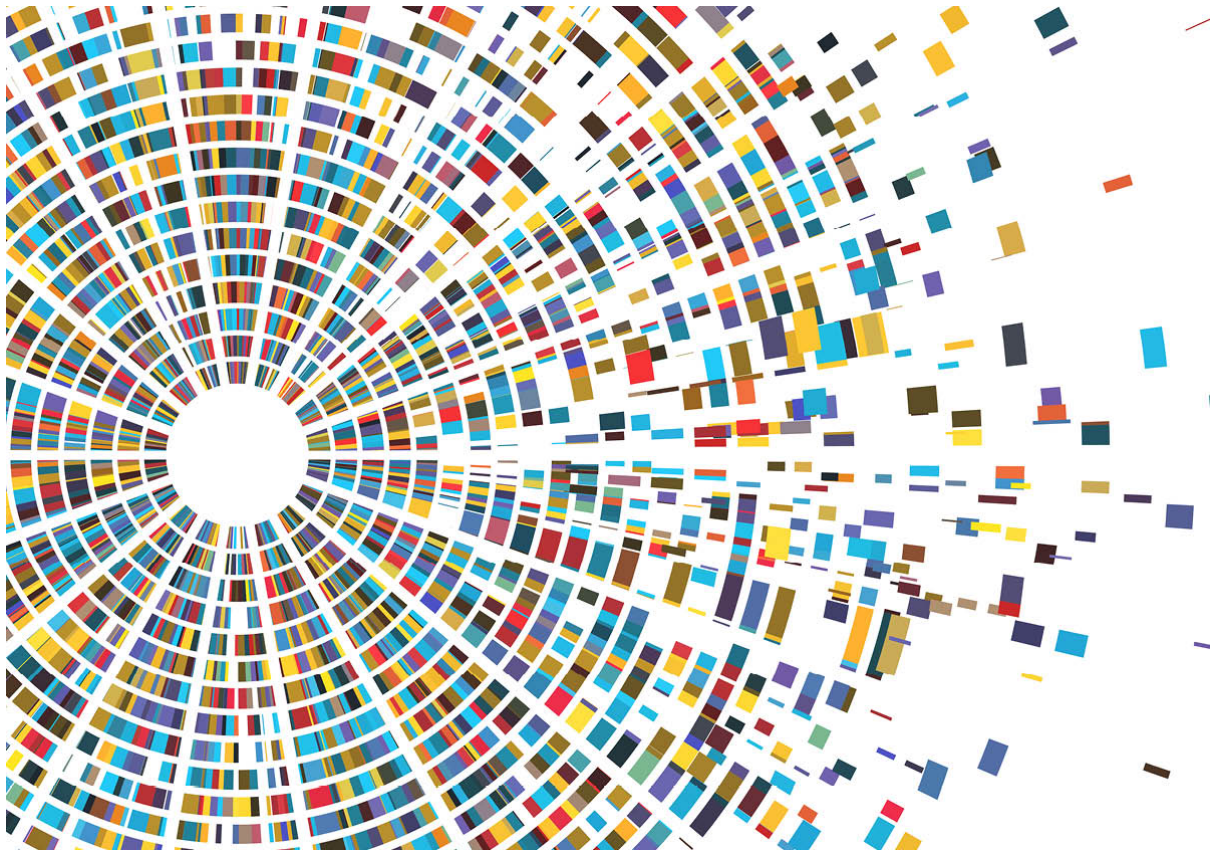
Navy Blue T-shirt (\$13)

Light Blue T-shirt (\$13)

Gray Crewneck (\$18)

Navy Blue Quarterzip (\$30)

More information on distribution/shipping and payment will be sent out later. If you have any questions or concerns, please [let us know](#)!



Scientific Illustration Workshop: Adobe Illustrator Tutorial Friday, February 19

Adobe Illustrator is a very common and user-friendly software to produce high-quality graphics for your research. The tutorial will consist of a lecture covering the basics of Adobe Illustrator and making a small project together under guidance. Please [RSVP](#).

Time:

Friday, Feb. 19

1:30 - 3:00 pm EST

Zoom link:

<https://umich.zoom.us/j/5587225945>

Preparation:

Please have Adobe Illustrator installed before the workshop. PC and Mac all work. U-M provides students and staff with free Adobe software. Please download Adobe Creative Cloud first and install Adobe illustrator following the

instructions here:

<https://its.umich.edu/computing/computers-software/adobe-creative-cloud/get-access>

Student News

Six win awards at CoE's Engineering Research Symposium



Mohsen Taheri Andani (ME and MSE-Misra) and **Abhishek Dhyani** (MACRO-Tuteja) each won the prestigious Towner Prize for Outstanding PhD Research. The College's highest research honor, the award highlights the creativity and outstanding research achievements demonstrated by Michigan Engineering Ph.D. students. [Read more.](#)

Also recognized at the Engineering Research Symposium (pictured below):

Wonjin Choi (Kotov): Engineering Innovation Award

Vishwas Goel (Thornton) and **Julie Rieland** (MACRO-Love): Advanced Session Honorable Mentions

Anshul Singhal (Taub): Emerging Session Honorable Mention

Congratulations to all!!



MSE Recommends:
TV shows/movies



TV shows/series

Animated Sci-fi/Fantasy

Avatar: The Last Airbender and Legend of Korra (Netflix)

Deca-Dence (Hulu)

Disenchantment (Netflix)

Rick and Morty (Hulu)

Comedy

Arrested Development (Hulu)

Better Off Ted (Hulu)

Brooklyn 99 (Netflix)

Community (Netflix/Hulu)

The Good Place (Netflix)

Julie and the Phantoms (Netflix)

The Politician (Netflix)

Schitt's Creek (Netflix)

Taskmaster (YouTube)

Drama

Bridgerton (Netflix)

Black Mirror (Netflix)

Breaking Bad (Netflix)

Friday Night Lights (Peacock)

Mad Men (IMDb TV)

The Magicians (Netflix)

Mr. Robot (Amazon Prime)

One Tree Hill (Hulu)

The Queen's Gambit (Netflix)

The Shield (Hulu)

Movies

Dr. Zhivago

Klaus (Netflix)

Mr. Bean's Holiday. Although the style of humor is not for everyone, the movie has many great lessons about perseverance! International students will be able to relate to the experience of fending for yourself in a foreign country. The movie is also very family-friendly. (YouTube/Amazon Prime)

The Secret Life of Walter Mitty (Hulu)

Wreck-it Ralph (Amazon Prime)

***Next week's **MSE Recommends** will feature favorite exercise videos/meditation sites. Add your top exercise/meditation picks [here](#).

Alumni News



Proof that MSE degrees prepare students for a wide variety of successful careers, **Neil Weissman (BSE '95)** was just named one of the Best in State Wealth Advisors by Forbes. Neil is managing director of the Weissman Eppler Investment Group of Wells Fargo Advisors in Ann Arbor and a member of the MSE External Advisory Board.

DEI News

Next Tea Time Tangent is this Friday, Feb. 19

The next Tea Time Tangent, led by MSE DEI Undergraduate representative Angelica Rose Gavan, will be this **Friday, Feb. 19** from **3:00-4:00 p.m.** Sign up [here](#).

MSE DEI Tea Time



February 2021

DEI LECTURE SERIES

That Ain't Right: AI Mistakes and Black Lives





Presented by Odest Chadwicke Jenkins

Professor of Electrical Engineering and Computer Science

Associate Director of the Michigan Robotics Institute

FEBRUARY 18

12-1 pm | Presented via Zoom

Our nation is poised to invest billions of dollars to remain the leader in artificial intelligence as well as quantum computing. This investment is critically needed to reinvigorate the science that will shape our future.

In order to get the most from this investment, we have to create an environment that will produce innovations that are not just technical advancements but will also benefit and uplift everybody in our society. We are increasingly seeing how AI is having a pervading impact on our lives, both for good and for bad.

This talk will explore the causes of systemic inequality in AI, the impact of this inequity within the field of AI and across society today, and offer thoughts for the next wave of AI inference systems for robotics that could provide introspectability and accountability. Ideas explored build upon the [BlackInComputing.org](https://blackincomputing.org) open letter and "[Before we put \\$100 billion into AI...](#)" opinion.

Equal opportunity for anyone requires equal opportunity for everyone.

RSVP

The poster features a large white circle on the left containing the text "DEI + CEE" in large yellow letters, with "SPEAKER SERIES" in smaller white letters below it. Underneath, it says "Sponsored by the Pelham Scholars Program". In the bottom left corner is the logo for the Civil & Environmental Engineering Department at the University of Michigan, featuring a yellow "M". On the right side, there is a portrait of Yvette Pearson, a Black woman with glasses wearing a blue blazer. Above her photo is her name "YVETTE PEARSON" in large yellow letters. Below her photo, the event details are listed: "FRIDAY, FEB. 19TH 1:30 PM" and the Zoom link "HTTPS://UMICH.ZOOM.US/j/92442057031". Below this, the title "REDEFINE ENGINEERING: EQUITY AND INCLUSION IN EDUCATION, RESEARCH AND PRACTICE" is displayed in white. At the bottom right, there are two bullet points in white text.

DEI + CEE
SPEAKER SERIES
Sponsored by the Pelham Scholars Program

YVETTE PEARSON
FRIDAY, FEB. 19TH 1:30 PM
HTTPS://UMICH.ZOOM.US/j/92442057031

REDEFINE ENGINEERING: EQUITY AND INCLUSION IN EDUCATION, RESEARCH AND PRACTICE

- To best serve society, we must educate, graduate, and employ engineers from diverse backgrounds and engage them in equitable and inclusive problem solving with, not just for, the communities they serve.
- RE-image who we see as engineers and what we see as engineering; DE-silo education and problem solving; and FINE-tune climate and culture in academia and practice

REDEFINE Engineering: Equity and Inclusion in Education, Research and Practice - Friday, February 19 - 1:30 p.m.

With Dr. Yvette Pearson, Associate Dean for Accreditation, Assessment, and Strategic Initiatives in the George R. Brown School of Engineering at Rice University and Founder of The PEER Group, LLC.

In this seminar, Dr. Pearson will offer strategies to help REDEFINE engineering education:

- RE-image who we see as engineers and what we see as engineering;
- DE-silo education and problem solving; and
- FINE-tune climate and culture in academia and practice.

This is the first of three seminars hosted by the Civil and Environmental Engineering Diversity, Equity and Inclusion (DEI) Committee and the Pelham Scholars Program (PSP).

[Register here](#) to receive a Zoom link.

A graphic with a dark blue background featuring yellow and white circles of various sizes, some with white dots inside, resembling a night sky or a festive theme. The text is in a bold, yellow, sans-serif font.

Black History Month Alumni Round Table

**Tuesday, February 23
6-7:30 pm EST**

This year as part of Black History Month, CoE invites you to join in celebrating the stories, experiences, and accomplishments of some of our Distinguished Black Alumni through a Virtual Round Table. Alec D. Gallimore, the Robert J. Vlastic Dean of Engineering, will kick-off the event and we will introduce our special alumni guests. After the introductions, you will join breakout rooms with alumni to learn about their journey and have the opportunity to converse. It will be a fun night of engagement and connection.

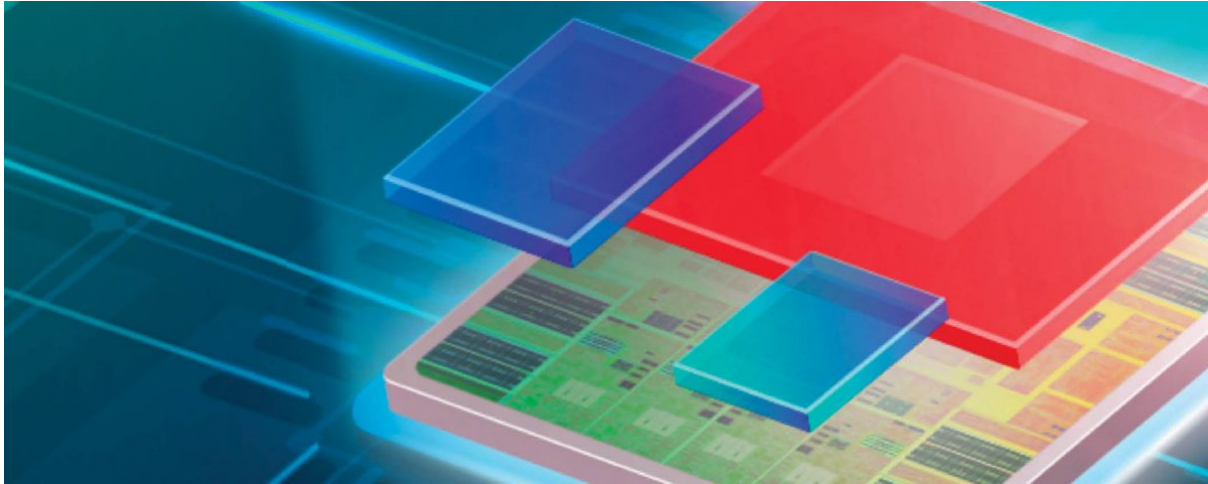
This event is open to any U-M student and takes place on February 23rd from 6-7:30pm EST on Zoom. Joining details will be sent to all RSVP participants two days before the event. We hope you will join us!

[RSVP Here](#)

DEI Student Allies Mailbox

Share your feedback on the DEI program and/or ask the DEI student allies questions: <https://forms.gle/98uKGHPbcAMzCF3B7>

Internship/Job Opportunities



Taiwan Semiconductor hiring engineers for June start date

[TSMC](#) is currently hiring hundreds of new semiconductor engineers (mostly Process Engineers for their Fabrication Facilities) this Summer 2021.

TSMC is currently building a [\\$12 billion fab facility](#) in Phoenix, AZ.

A large reason for this is due to [Apple's transition to TSMC to build their M1 chips](#).

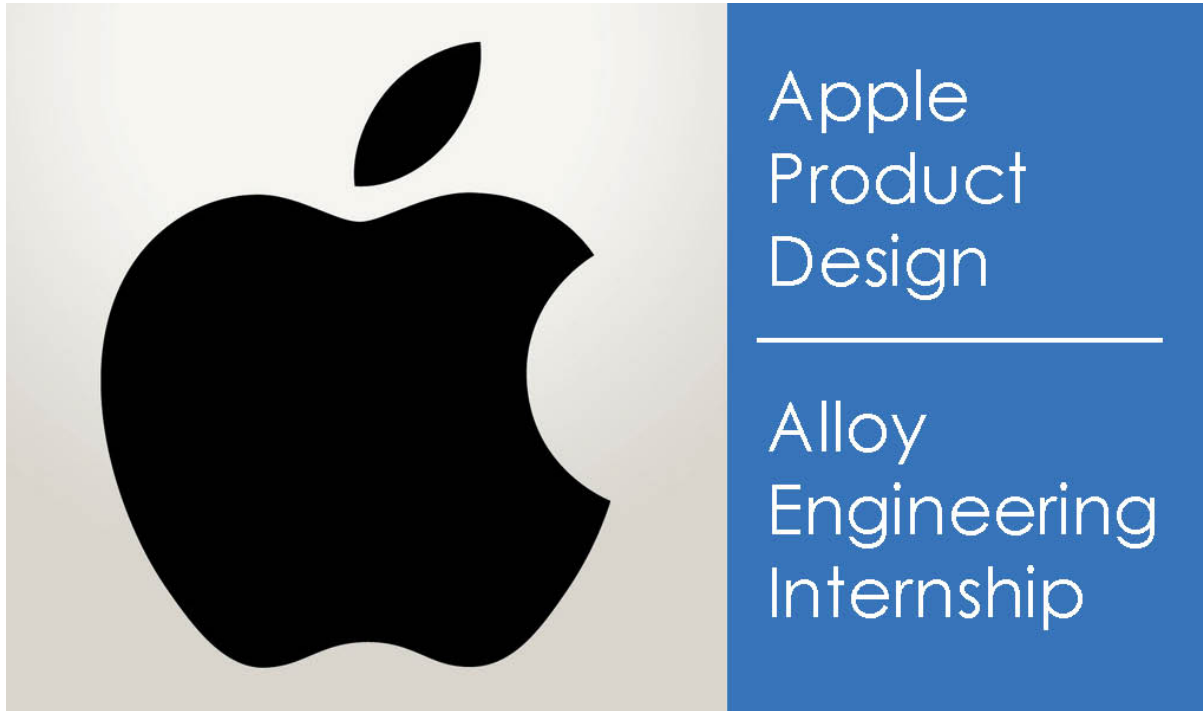
TSMC is hiring for a targeted start date of June 2021 where additional details include:

- TSMC will pay to relocate the employee to Taiwan
- TSMC will provide corporate housing to the employee during their stay in Taiwan
- TSMC will have the employee work in Taiwan on 7nm chip technology, starting June 2021, for 18 months. After 18 months, the employee will relocate to Phoenix, AZ in order to start working in the 5nm fab facility.
- TSMC starting salary is approx. \$80-90k (with up to \$110k for Masters, PhD Students, or a candidate with extensive experience in the semiconductor industry) - which is above market salary for this position.

This is a groundbreaking opportunity for new engineers to pioneer a career at TSMC, as they will be directly involved in the first group of individuals to work at

the Phoenix facility by setting up and troubleshooting the first semiconductor technology out of that facility.

Submit resume to Matt Sharkey: sharkeym@broadleafresults.com



[Alloy Engineering Product Design Internship at Apple](#)

Apple is currently seeking enthusiastic Metallurgical and Materials Science Engineering students that will provide support to alloy design, engineering, failure analysis, microstructural characterization, and materials modeling and validation activities for all hardware product lines. The intern position will be available as early as September 2021, concluding before September 2022.

As a member of a cross-functional Product Design team at Apple, you will help create the next generation of the world's finest hardware devices. You will work closely with a team of metallurgists to conceive, design, test, and validate metals and products that will re-define the user experience. You will also work with cross-functional teams within Apple and with outside vendors to fabricate and characterize alloys and components.

While we can employ students for the summer of 2022 for this program, we strongly prefer candidates who are available for more than one semester during the fiscal year (e.g. winter + summer) for the most effective and impactful internship experience.

Required Experience

- Working towards a BS, MS or PhD in Metallurgy, Materials Science or related Engineering field*
- Flexibility and comfort working in a quickly changing environment
- Strong oral, written, and visual communication skills
- Strong physical metallurgy background
- Ability to work in fast paced, team-based environment
- Self-motivating, creative, proactive, and resourceful

Desired Experience

- Metallographic sample preparation and mechanical testing
- Light optical microscopy and scanning electron microscopy (SEM)
- Fractography and failure analysis of metals and alloys
- Laboratory experience with metal alloys and structure-property relationships
- Computational thermodynamics and materials design

***You must be enrolled in school or have applied to graduate school to qualify for an internship. Recent graduates who have NOT applied to graduate school are not eligible.*

Contact

Please send questions and resumes to Isabel Yang at isabel_yang@apple.com, and include “Alloy Engineering Internship” in the email subject.



Job Opening: Applications Scientist

Nanoscience Instruments is hiring an applications scientist for their demonstration and analytical laboratory in Phoenix. If you have a background in surface science, they are hiring a PhD level scientist to support QCM-D,

optical and force tensiometers, and nanoparticle generation instrumentation.

Job Responsibilities:

- Perform product demonstrations at application labs or at customer sites
- Perform online product demonstrations, perform sample analysis and provide sample analysis reports
- Work with product manager and sales team to meet goals for product sales
- Works with product manager and marketing to develop marketing strategy for assigned products
- Develop expertise in key applications supporting product
- Requirements:
- Experience with QCM-D, AFM or other similar analytical technique
- Chemistry, Physics, or Engineering PhD with a focus on surface science
- Willingness and ability to travel domestically and internationally
- Because this position requires access to Government, Military, and other high security labs, U.S. citizenship is required.

Submit resume to Matt Dixon: mdixon@mail.nanoscience.com. Learn more about the position [here](#).



59 postdoctoral opportunities listed!

Application deadline Feb. 26, 2021

The Intelligence Community (IC) Postdoctoral Research Fellowship Program offers scientists and engineers from a wide variety of disciplines unique opportunities to conduct research in a wide range of topics relevant to the Intelligence Community. The research is conducted by the Postdocs, while working in partnership with a Research Advisor and collaborating with an advisor from the Intelligence Community.

The Program supports postdocs to conduct research at universities, colleges, and U.S. government laboratories throughout the United States.

In partnership with the Research Advisor, the Postdoc composes and submits a technical proposal that responds to a research opportunity identified at: <https://orise.ora.gov/icpostdoc/current-opportunities.html>

Award Details:

- Stipends range from \$75,000 to \$79,000, depending on research location.
- Annual travel budget of up to \$6,000
- Appointments for two years, and option to extend for a third year
- Host institutions receive an annual laboratory budget of up to \$5,000.
- Advisors receive a \$10,000 stipend and a travel budget of up to \$2,000.

Postdoc Eligibility:

- U. S. citizenship required
- Ph.D. received within 5 years of the application deadline

[Learn More](#)



Sanda National Labs announces a full-time postdoctoral position for in-situ Microscopy in Extreme Environments. Location is Albuquerque, NM; job posting closes this Thursday, February 18. Learn more [here](#).

Copyright © 2020, Materials Science & Engineering, University of Michigan

Our mailing address is:

2300 Hayward St.
3062 H.H. Dow Building
Ann Arbor, MI 48109