Outline

- MSE Strategic Plan
- Faculty, Staff
- Grad Program
- Undergraduate Program
- Research
- Special Events
- External Advisory Board (EAB)
MSE Mission/Vision Statements

KEY MISSION
Educate and train a diverse workforce of materials scientists and engineers at undergraduate, graduate, and postdoctoral levels who will be the future leaders in industry, academia and national laboratories

VISION
A premier MSE department in the U.S. and beyond at both undergraduate and graduate levels
MSE Department Strategic Priorities

- “Critical mass” of world-class faculty in key topical areas
- Increase institutional support for state-of-the-art research infrastructure
- Increase externally sponsored research
- Enhanced, broader impacts and DEI initiatives
Materials are the building blocks for modern technologies and sustainability

**Expected world population:** \( \approx 9.6 \text{ billion by 2050} \)

**Structural Materials**

**MECHANICAL PROPERTIES**
(Metals, composites)
- National infrastructure: (buildings, bridges)
- Automotive, Aerospace, Navy
- Defense
- Oil and gas
- Power generation
- Nuclear reactors
- Coatings

![Lightweight structural materials for transportation](image)

**Functional Materials**

**INORGANIC**
(Semiconductors, ceramics)
- Electronic, magnetic, optical (civilian & defense)
- Energy: Solar, Solid state lighting
- Thermoelectrics
- Batteries/energy storage

![Kirigami-inspired solar cells](image)

**ORGANIC “soft matter”**
(Polymers, biomaterials)
- Healthcare
- Consumer products

![Icephobic coating](image)

![Bionic heart tissue](image)

![Organic phosphors](image)

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**Materials Science & Engineering**
**University of Michigan**
“We do not inherit the Earth from our ancestors; we borrow it from our children.”

–American Indian
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.

MSE bid adieu to Joanna Millunchick

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.
MSE Tenured & Tenured-Track Faculty: 24
(Fall 2022)

Structural Materials

John Allison
Amit Misra
Alan Taub
Katsuyo Thornton (I)(C)
Emmanuelle Marquis
Liang Qi (C)
Ashwin Shahani

Functional Materials (Inorganic)

Rachel Goldman
Rick Laine
Steve Yalisove
Manos Kioupakis (C)
P. Ferdinand P. Poudeu
Robert Hovden (O)
Yiyang Li
Wenhao Sun (C)

Electronic/Energy Materials (Organic)

John Kieffer (C)
Jinsang Kim
Brian Love
Max Shtein
Anish Tuteja
Geeta Mehta
Abdon Peña-Francesch
Claudia Loebel

(C)=Computational (I)=Inorganic (O)=Organic
Lecturers

Tim Chambers
Lecturer III

Kathy Sevener
Diversity, Equity & Inclusion (DEI) Lecturer
Associate Research Scientist

George Wynarsky
Lecturer IV (50%)
New Courtesy Appointment Faculty in MSE

Total = 23 (F’22)

ME (8): Ashley Bucsek, Neil Dasgupta, Vikram, Gavini, Jerard Gordon, Wei Lu (ME), Pramod Reddy, Jeff Sakamoto, Michael Thouless
ChemE (4): Sharon Glotzer, Xiwen Gong, Joerg Lahann, Nick Kotov
NERS (4): Michael Atzmon (emeritus starting W23); Fei Gao; Gary Was (emeritus); Lumin Wang
ECE (3): Steve Forrest, Becky Peterson, Wei Lu(EE)
Aero (1): Henry Sodano; Civil (1): Victor Li
School of Dentistry (1): Peter Ma; Chemistry (1): Ageeth Bol.
Heron and Shahani promoted to Associate Professor with tenure, effective Fall 2022

John Heron

Ashwin Shahani
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.
Assistant Professor Yiyang Li wins the Intel® Rising Star Faculty Award (RSA)

Intel RSA recognizes early-career academic researchers for leading groundbreaking technology research in computer science, electrical engineering, computer engineering, material science, and chemical engineering.

Yiyang Li is building a materials research program that can be fundamentally disruptive to semiconductors by incorporating electrochemical principles.

A grand challenge for brain-inspired neuromorphic computing that can improve AI energy efficiency is to develop an analog nonvolatile memory. Li is investigating how ions move to store information in memristors, a promising solution for analog memory. He was one of the inventors of the electrochemical random-access memory (ECRAM). Like a lithium-ion battery, ECRAM operates through ionic motion in solids. Li recognized that the state of charge of a battery is an analog value (100%, 99%, etc); ECRAM utilizes this intrinsically analog nature of ionic materials to store analog memory in a solid-state device.

Li has applied microelectronic principles to batteries. Device-to-device variability is an important metric in microelectronics. However, it has not been possible to directly quantify variability in batteries. Motivated by the need to measure “particle-to-particle variability,” Li is building novel instrumentation platforms able to study the electrochemical variability by cycling one battery particle at a time.

15 winners
- Carnegie Mellon University
- Cornell University
- Georgia Institute of Technology
- Indian Institute of Science, Bangalore
- Massachusetts Institute of Technology
- Purdue University
- Technion - Israel Institute of Technology
- Trinity College Dublin
- University of California, Berkeley
- University of California, Los Angeles
- University of California, San Diego
- University of Illinois Urbana–Champaign
- University of Michigan
- University of Pennsylvania
- University of Washington
Shahani earns two professional society awards

2022 ASM
Bradley Stoughton
Award for Young Teachers

TMS 2023
Frontiers of Materials Award
2022 MSE Faculty Outstanding Accomplishment Award
MSE Department Chair Amit Misra was appointed Edward DeMille Campbell Collegiate Professor of Materials Science and Engineering during the AY19-20. The recognition ceremony, postponed due to the pandemic, will be hosted by College of Engineering Dean Alec Gallimore on Friday, January 14 at 3:30 p.m. in the Johnson Rooms, LEC. As part of the proceedings, Professor Misra will present "Laser Processed Hierarchical Metallic Alloys." A reception will immediately follow in Masco Commons.
MSE chair Amit Misra was elected Fellow of TMS. The award recognizes TMS members for outstanding contributions to the practice of metallurgy, materials science and technology. Misra was selected "for pioneering research in nanomechanics and interface-enabled mechanical behavior and radiation effects in multiphase and multilayered materials, professorship leadership, and mentoring of early-career scientists."

Faculty emeritus Wayne Jones was honored with a symposium organized by the Light Metals Division: Failure, and a Career that is Anything But: An LMD Symposium Honoring J. Wayne Jones. The symposium was organized by MSE alums Tori Miller (Univ. of Florida), Nik Chawla (Purdue University), Trevor Harding (California Polytechnic State University), and Paul Krajewski (GM), and former faculty member Tresa Pollock (UC-Santa Barbara).
MSE department administrator Todd Richardson recognized with CoE MLK Spirit Award

The MLK Spirit Awards are given to students, student organizations, staff, and faculty in North Campus schools and colleges who exemplify the leadership and vision of Dr. Martin Luther King, Jr. through their commitment to social justice, diversity, equity, and inclusion.
Renee Hilgendorf, graduate program advisor, and Kevin Worth, senior IT administrator – marked 25 years with MSE
CONGRATULATIONS to our 2021 CoE Staff Incentive Award winners!

Keith McIntyre (Sr. facilities manager), Sahar Farjami (Engineering technician), Amy Holihan (Finance and research manager)
Not pictured: Cassandra Franklin-Smith (HR), Ellen Kampf (administrative assistant) were also recipients of the honor.

Sr. facilities manager Keith McIntyre and undergraduate program advisor Patti Vogel were among the winners of the 2021 CoE Staff Incentive Award announced recently. Congratulations, Keith and Patti!
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MSE Graduate Program

- **Fall 2022 Enrollment:** 151 total (101 Ph.D. and 50 MS)
- **Diversity:** 33% female, 47% domestic, 9% URM
- **2022-23 U.S. News & World Report ranking:** #8
- **Research Expenditures:**
  $414K per T&TT and research faculty (2020 ASEE survey)

Manos Kioupakis
PhD/Graduate Chair

Renee Hilgendorf
Program Advisor

P. Ferdinand Poudeu
Master’s Chair
New Ph.D. students, Fall 2022

Total: 24  |  Female: 10  |  URM: 4  |  International: 7
New MS students, Fall 2022

Yu-Shan Chen  Yuxuan Deng  Vedant Gaikwad  Yimo Hou  Jindong Huang  Tzu-Yun Hung  Jonah Jarczewski  Anto Jerish Jeyadimal  Maheshwari Kakade

Thomas Korejsza  Zhan Liang  Yushen Liu  Emily MacInnis  Jessica McGahan  Caleb Phelan  Ziyuan Qin  Chaobo Tong  Zenan Zhang

SUGS

Ryan Gast  Kate Moo  Sahana Prabhu

Total: 25  |  Female: 7  |  URM: 0  |  International: 16
2022 Graduate Fellowships

CoE and Department Fellowships

MSE Graduate Fellowship Funds:
FREDERICK N. RHINES
Robert D and Julie A PEHLKE
Harry M. FERRARI
Karl Betz
Gerald I. and Joyce C. Madden
Graduate Student Awards

(presented at the Graduation Dinner, April 2022)
MSE UG Program

- Fall 2022 Enrollment: 95
- Diversity: 38% female, 96% domestic, 13% URM
- Degrees awarded in 2021-22: 42

Katsuyo Thornton
UG Comm Chair

Steve Yalisove
Program Advisor, ABET

Patti Vogel
Academic Advisor
MMS Board 2022-23
(MSE Undergraduate Student Organization)

Mackenzie Darling
Vice-President Internal

Katie Wei
President

Jenny Chong
Vice-President External

Elliott Gorishek
Secretary

Kellie Chu
Treasurer

Denise Schlautman
Social Chair

Alexa Goldstein
Outreach Chair

Erdem Ozdemir
UG Committee Rep

Rachel Rajkumar
UG Committee Rep

MMS Advisor:
Tim Chambers
2022 UG Scholarships

**Field** (Nathaniel L.)
Aaron Cooke
Edward Spengler

**Flinn** (Richard A.)
Andrew Danbury

**Fontana-Leslie** (Mars-William)
Gabi Grey

**Freeman** (James W.)
Liam Cotter
Bao Vo

**Heller** (Jack J.)
Amanda Diddams

**Hosford** (William F.)
Leah Fleming
Megan Klein
Raj Koorapaty
Rishabh Kothari
Nina Perry
Denise Schlautman
Matthew Walker
Katie Wei

**Schwartzwalder** (Karl)
Erdem Ozdemir
Rachel Rajkumar

**Siebert** (Clarence A.)
Alexa Goldstein
Kevin Masel
Brianna Roest

**White** (Alfred H.)
Abigail Ahn
Zeyuan Hu
Reegan Ketzenberger

New:
Wilbur C. Bigelow Scholarship Fund
MSE Faculty also supervise PhD students from interdisciplinary PhD programs such as Macromolecular Science & Engineering, Applied Physics, and other departments (Chemical, ME, etc).

- Fall 3rd week counts
Diversity in MSE Degree Programs

Undergrad Demographics

<table>
<thead>
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<th>Year</th>
<th>% Female</th>
<th>% URM</th>
<th>% International</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 2018</td>
<td>37%</td>
<td>13%</td>
<td>4%</td>
</tr>
<tr>
<td>Fall 2019</td>
<td>41%</td>
<td>12%</td>
<td>6%</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>39%</td>
<td>13%</td>
<td>5%</td>
</tr>
<tr>
<td>Fall 2021</td>
<td>37%</td>
<td>14%</td>
<td>3%</td>
</tr>
<tr>
<td>Fall 2022</td>
<td>38%</td>
<td>13%</td>
<td>4%</td>
</tr>
</tbody>
</table>

URM = Underrepresented Minorities, which include Black, Hispanic, Hawaiian, Native American or Two or More Races with at least one of the previous included. Percent based on ethnicity of domestic students only.

Grad Demographics

<table>
<thead>
<tr>
<th>Year</th>
<th>% Female</th>
<th>% URM</th>
<th>% International</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 2018</td>
<td>42%</td>
<td>16%</td>
<td>17%</td>
</tr>
<tr>
<td>Fall 2019</td>
<td>49%</td>
<td>31%</td>
<td>21%</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>50%</td>
<td>28%</td>
<td>21%</td>
</tr>
<tr>
<td>Fall 2021</td>
<td>52%</td>
<td>32%</td>
<td>19%</td>
</tr>
<tr>
<td>Fall 2022</td>
<td>53%</td>
<td>33%</td>
<td>18%</td>
</tr>
</tbody>
</table>

Demographics Legend
- % Female
- % URM
- % International
MSE Degrees: 5-year Trend

CoE total degrees in 2022
BS = 2,309 (MSE is ≈1.8%)
MS= 1,143 (MSE is ≈1.7%)
PhD= 308 (MSE is ≈4.2%)
MSE ≈ 5.9% T&TT CoE faculty
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Externally Sponsored Research Expenditures

Research Expenditures per T&TT Faculty & Research Faculty

Northwestern: $1,649,835
MIT: $964,969
Stanford: $935,165
UCSB: $858,963
Johns Hopkins: $792,799
Pennsylvania: $612,176
Cornell: $591,037
Purdue: $516,755
U-M: $413,521
Carnegie Mellon: $413,494
North Carolina State: $405,656
U of Illinois: $312,164
Ohio State: $283,061
U of Wisconsin: $275,521
U of Florida: $251,000
Penn State: $236,789
Ga Tech: $170,365
UC Berkeley
Harvard
Cal Tech
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.

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.
A semiconducting material that performed a quantum “flip” from a conductor to an insulator above room temperature was reported. It potentially brings the world closer to a new generation of quantum devices and ultra-efficient electronics.

Observed in two-dimensional layers of TaS$_2$ only a single atom thick, the exotic electronic structure that supported this quantum flip was previously only stable at ultra-cold temperatures of -100° F. The new material remains stable at up to 170° F.

Atomic resolution cross-sectional HAADF-STEM of h pristine and i heat-treated TaS$_x$Se$_{2-x}$ confirms polytypic transformation. After treatment, prismatic (Pr) layers encapsulate monolayers of octahedral (Oc) layers. Scale bar is 2 nm. A selenium doped sample was imaged to enhance chalcogen visibility.

Suk Hyun Sung, Noah Schnitzer, Steve Novakov, Ismail El Baggari, Xiangpeng Luo, Jiseok Gim, Nguyen M. Vu, Zidong Li, Todd H. Brintlinger, Yu Liu, Wenjian Lu, Yuping Sun, Parag B. Deotare, Kai Sun, Liuyan Zhao, Lena F. Kourkoutis, John T. Heron & Robert Hovden,
*Two-dimensional charge order stabilized in clean polytype heterostructures*, Nature Communications **13**, 413 (2022)
An epitaxial heterostructure designed of perovskite $\text{BaZr}_{0.5}\text{Hf}_{0.5}\text{O}_3$ (BZHO) and rock salt MgO is shown to be stable up to 1,100 °C in air.

The material uses destructive interference to reflect infrared energy while letting shorter wavelengths pass through. This could potentially reduce heat waste in thermophotovoltaic cells which convert heat into electricity. The material could also be useful in optical photovoltaics, thermal imaging, environmental barrier coatings, sensing, camouflage from infrared surveillance devices and other applications.

Department of Energy – Basic Energy Sciences (DOE-BES)
Energy Frontier Research Center

Mechano-Chemical Understanding of Solid Ion Conductors (MUSIC)

DoE - EFRC: $10.95 Million, 4 years
PIs: K. Thornton, M. Thouless, D. Kwabi, B. Bartlett

Jeff Sakamoto (Director)  Neil Dasgupta (Deputy Director)

Partner Institutions:

MIT  TEXAS
The University of Texas at Austin
PRINCETON  I
GT  N
OAK RIDGE
National Laboratory  P
Professor Jinsang Kim and team recently made the cover of the American Chemical Society’s ASC Sensors for their manuscript "Polydiacetylene Liposome Microarray toward Facile Measurement of Platelet Activation in Whole Blood."
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Don Sadoway, MIT
- Liquid metal battery for large-scale stationary storage
- Molten oxide electrolysis for carbon-free steelmaking
- Founder of six companies: Ambri, Boston Metal, Avanti Battery, Pure Lithium, Lunar Resources, and Sadoway Labs.
- 100 Most Influential People in the World (Time Magazine 2012)
MSE Graduation Dinner
April 28th 2022

May 2022 Graduates: 37 undergraduates, 17 Master's graduates and 23 Ph.D. graduates

MSE Distinguished Alum Lecture 2022: Dave Martin
Happy to be Back on Campus In-Person

Graduation Dinner, Class of 2022
"Overcoming Climate Change: The Critical Role and Challenges of Energy Storage"

Please join us for this special lecture with

Stanley Whittingham,
2019 Nobel laureate in Chemistry

Monday, May 23 (2022)
4:30 p.m.
in Hill Auditorium


Lawrence H. Van Vlack Distinguished Lectureship
Madison Forstner takes her turn pouring liquified aluminum into a Block M mold during the MSE Undergraduate Open House on January 24. Photo by Steve Yalisove.
Graduate students Geordie Lindemann (left) and Paul Chao (center), along with Professor John Heron field questions about MSE during the Majors Fair.
Macromolecular Science & Engineering Graduate Program
&
Department of Materials Science & Engineering

We are all in this together

DEI/Mental Health Workshop

June 17th 2022, 9am – 5pm + social afterhours

Organized by: Prof. Claudia Loebel, Prof. Abdon Pena-Francesch

Keynote: Becoming a Resilient Scientist
Dr. Sharon Milgram
Director of the Office of Intramural Training And Education – NIH

Break & snacks
MACRO Faculty Panel (open)
Discussion III: faculty experiences
Workshop: reflection, challenges & opportunities
MSE students Marisa Perez, Yumeng Bai, and Kate Moo pose with their creations at MMS' pumpkin-carving event last Thursday night in Mason Hall.
MSE Annual Holiday Party
December 2021
Organized by GSC and MMS

Justin Marshall (3rd place), Aaron Gladstein (2nd place), Duncan Greeley (1st place)
MSE Hosts ASM Materials Camp
Discover the Many Possibilities in Engineering

Designed for 8th – 10th-grade kids who want to thoroughly explore various engineering disciplines

Discover Engineering 2022
July 28-29
MSE Fall 2022 Picnic

Welcome Back Picnic
MSE Bladesmithing becomes a UM-level Student Organization

The MSE Bladesmithing team has grown and upgraded to become a university-level student organization! They are now an official Sponsored Student Organization (SSO) registered as The Michigan Blacksmithing Club. Congratulations to the team on this new status and to MSE rising senior Megan Klein, who is the incoming club president.
Joyworks hosts the Annual Pizza and Pour

Students display their U-M manganese bronze seals during MMS's Pizza and Pour event at Joyworks Friday evening. Thanks to Chip Keough for hosting!
Graduate Recruiting Visit back in-person for first time since 2019.

MSE welcomed 29 prospective Ph.D. students to campus last Friday, March 11, after a two-year, pandemic-induced hiatus.

“We had a really great visit,” commented MSE graduate program advisor Renee Hilgendorf. “Everyone was so happy to be here and eager to talk to our faculty and students about our program.”

The prospective students hailed from 24 colleges across the U.S. and Puerto Rico.
A GSC outreach team led by Brian Lezzi and Paul Chao researched and created a self-guided materials tour that explains the science behind select art objects.
UM-OSU Alumni & Friends Mixer
TMS Annual Meeting,
Anaheim, CA, March ’22
Front cover: “Psychedelic”
by Lauren Duke ’22
Optical Microscopy image of liquid crystal channels along in a TI-20 calculator display.

“Snow Globes” by Alex Halvey (Tuteja)
Water droplets resting on a superhydrophobic surface made from fluorinated polyurethane, silica, and fluoroalkyl polyhedral oligomeric silsesquioxane.

“Snowflakes” by Aaron Gladstein (Taub)
Al$_3$Ti intermetallics and TiC particles in an aluminum matrix! SEM images of an Al-TiC metal matrix composite were colorized.

“Frozen Rainbow” by Lauren Duke ’22
Optical Microscopy image of liquid crystals along a fracture point in a four function calculator display.

“Silicon Rib Cage” by Babhu Sahu (Misra)
Silicon flakes with patterned ribs.

“Field of Eutectic” by Geordie Lindemann (Shahani)
A blue sky of Ag$_2$Al and Al$_2$Cu, peppered with clouds of Al, overlooks a pasture of green Ag$_2$Al eutectic rods.

“Microscopic Fireworks” by Taylor Repetto (Mehta/Tuteja)
Carbamazepine printed on fluorinated silane.

“Bridge Over Troubled Water” by Amy Langhorst (Taub)
Strengthening iron oxide nanoparticle bridge between individual flax fiber plant cells.

“Patchwork Quilt” by Paul Chao (Shahani)
Cross-sectional projection view from a subvolume containing ultrafine Al-Si eutectic colonies.

“Rings of Fire” by Anshul Kamboj (Marquis)
TEM image from an irradiated NiCr alloy showing perfect and frakt loops in the image plane (represented by circles and ellipses) and in the plane perpendicular to the image plane (represented by lines).

“Something is out there” by Fanwei Wang (Tuteja)
Metallic foam structure (Copper).

“Fire Coral” by Thomas Valenza (Marquis)
Top surface of pure Ti oxidized in air, showing textured, spiky TiO$_2$ reminiscent of coral.

“Constellation X” by Xander Mensah ’23 (Thornton)
Artistic fractal interpretation of a decagonal-quasicrystal electron diffraction pattern along the 18-fold axis.

“2022 Calendar art images”
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MSE Alumni Awards

**DISTINGUISHED ALUMNI LECTURE**

- Dave Martin (2022)
- **Mark Nichols** (2019)
- Greg Hilmas (2019-Fall)
- Nik Chawla (2018-Fall)
- **Keith Bowman** (2018)
- Dawn Bonnell (2017)
- **Liz Holm** (2016)

*(Fall 2020/S2021: no lecturer awarded due to COVID)*

**CoE Alumni Merit Award**

- Rita Baranwal (2022)
- Michelle Griffith (2020): presented Fall 21
- Jim Yurko (2019)
- **Max Madden** (2018)
- Kim O. Flesner (2017)
- Aaron Crumm (2016)
- Don Nolan (2015)
- Paul Krajewski (2014)
- Dave Martin (2013)
- **Jason Hertzberg** (2012)
- Dawn Bonnell (2011)
- Jim Speck (2010)
- Leonard G. Miller (2009)
- Kevin Chang (2008)
- Jody Hall (2007)
- Won Suk Cho (2006)
- Bob Pehlke (2005)
- **Chip Keough** (2004)
- Wally Rhines (2003)
- Thomas Brady (2002)
- Chris Dingell (2001)
- Ernest Kirkendall (1999)
- Vincent Gorguze (1998)
- Dean Hanink (1997)
- Jere Brophy (1995)
- **Ray Decker** (1994)
- Arden Bement (1993)
- Don Frey (1992)
Dr. Jim Yurko (BSE '97), Senior Distinguished Engineer with Apple, has been elected to the National Academy of Engineering, the nation's most prestigious engineering association. Yurko is one of 111 U.S. members inducted this year. Fellow 2022 inductees include SpaceX CEO Elon Musk and Microsoft CEO Satya Nadella.
MSE Alumni Recognized at TMS Annual Meeting

Elizabeth A. Holm, CMU, MSE alum and EAB member, presented the Plenary talk: "Alloy Design at Apple."

Victoria Miller, an assistant professor at the University of Florida, received the Young Leaders International Scholar - JIM.

Clinique Brundidge, Lead Materials Scientist with the Naval Surface Warfare Center, received the TMS Structural Materials Division Young Leaders Professional Development Award.

Jim Yurko, NAE, Senior Distinguished Engineer at Apple, headlined the EPD/MPMD's luncheon with "An Automotive View of Sustainability."

Paul Krajewski, MSE Alum, NAE, General Motors, headlined the EPD/MPMD's luncheon with "An Automotive View of Sustainability."

Corbett Battaile, Principal Member of Technical Staff at Sandia National Laboratories, earned the TMS Materials Processing & Manufacturing Division Distinguished Service Award.

TMS Structural Materials Division Distinguished Scientist/Engineer Award as well as the AIME Honorary Membership Award.

MSE alum and EAB member Jim Yurko, NAE, Senior Distinguished Engineer at Apple, presented the Plenary talk: "Alloy Design at Apple."
Thank you to all alumni for their gifts and donations.

Full list is published in the annual MSE newsletter.