

2nd World Congress on **AIM**
ARTIFICIAL INTELLIGENCE IN
MATERIALS & MANUFACTURING 2024

Symposium on
**DIGITAL & ROBOTIC
FORMING 2024**

ACCELERATING DISCOVERY
FOR MECHANICAL BEHAVIOR
OF MATERIALS 2024

TMS SPECIALTY CONGRESS 2024

JUNE 16-20, 2024

Cleveland Hilton | Cleveland, Ohio, USA

CONFERENCE GUIDE

THANK YOU TO OUR SPONSORS:



TMS

The Minerals, Metals & Materials Society

www.tms.org/SpecialtyCongress2024

SCHEDULE OF EVENTS

Sunday, June 16		
Registration	4:00 PM - 7:00 PM	3rd Floor Lakeside Foyer
President's Welcome Reception	6:00 PM - 7:00 PM	Superior Ballroom AB - 5th floor
Monday, June 17		
Registration	7:00 AM - 5:20 PM	3rd Floor Lakeside Foyer
Poster Installation	7:00 AM - 9:50 AM	Hope Ballroom E
Breakfast	7:30 AM - 8:30 AM	Superior Ballroom AB - 5th Floor
All Congress Plenary	8:20 AM - 12:00 PM	Hope Ballroom D
Break	9:50 AM - 10:20 AM	Hope Ballroom E
Digital and Robotic Forming 2024: Luncheon	12:00 PM - 1:40 PM	Superior Ballroom AB - 5th Floor
Lunch (for non-ticketed luncheon attendees)	12:00 PM - 1:40 PM	On Your Own
Technical Sessions	1:40 PM - 5:20 PM	Center Street A, & BC; Hope Ballroom A, B, C, & D
Digital and Robotic Forming 2024: Keynote	1:40 PM - 2:20 PM	Center Street BC
Accelerating Discovery for Mechanical Behavior of Materials 2024: Keynote	3:00 PM - 3:30 PM	Hope Ballroom D
Networking Break	3:30 PM - 4:20 PM	Hope Ballroom E
Tuesday, June 18		
Registration	7:30 AM - 6:30 PM	3rd Floor Lakeside Foyer
Breakfast	7:30 AM - 8:30 AM	Superior Ballroom AB - 5th Floor
Technical Sessions	8:30 AM - 12:00 PM	Center Street A, & BC; Hope Ballroom A, B, C, & D
Break	10:00 AM - 10:20 AM	Hope Ballroom E
Accelerating Discovery for Mechanical Behavior of Materials 2024: Luncheon	12:00 PM - 1:40 PM	Superior Ballroom AB - 5th Floor
Lunch (for non-ticketed luncheon attendees)	12:00 PM - 1:40 PM	On Your Own
Technical Sessions	1:40 PM - 5:20 PM	Center Street A, & BC; Hope Ballroom A, B, C, & D
Networking Break	3:10 PM - 4:00 PM	Hope Ballroom E
Poster Session and Reception	5:20 PM - 6:20 PM	Hope Ballroom E
Wednesday, June 19		
Registration	7:30 AM - 5:20 PM	3rd Floor Lakeside Foyer
Breakfast	7:30 AM - 8:30 AM	Superior Ballroom AB - 5th Floor
Technical Sessions	8:30 AM - 10:00 AM	Center Street A, & BC; Hope Ballroom A, B, & C
Break	10:00 AM - 10:20 AM	Hope Ballroom E
Programming Officer Panel Discussion	10:20 AM - 12:00 PM	Center Street BC
2nd World Congress on Artificial Intelligence in Materials and Manufacturing 2024: Luncheon	12:00 PM - 1:40 PM	Superior Ballroom AB - 5th Floor
Lunch (for non-ticketed luncheon attendees)	12:00 PM - 1:40 PM	On Your Own
Technical Sessions	1:40 PM - 5:20 PM	Center Street A, & BC; Hope Ballroom A, B, & C
Networking Break	3:10 PM - 3:50 PM	Hope Ballroom E
Poster Dismantle	4:00 PM - 6:00 PM	Hope Ballroom E
Thursday, June 20		
Registration	8:00 AM - 12:00 PM	3rd Floor Lakeside Foyer
Technical Sessions	8:30 AM - 12:00 PM	Center Street A; Hope Ballroom A, B, & C
Morning Break	10:00 AM - 10:20 AM	Hope Ballroom E

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The TMS Specialty Congress 2024 is an unparalleled gathering of professionals and researchers at the forefront of the materials science field. This vibrant, inaugural event promises a rich exchange of knowledge and ideas, featuring keynote presentations, interactive panels, and robust technical sessions covering a wide spectrum of topics on materials issues in artificial intelligence (AI), robotics, machine learning, and more. This meeting allows you to explore your technical interest in a focused, small event environment, while also having access to cross-disciplinary learning and collaboration opportunities with aligned materials communities. The TMS Specialty Congress series convenes the Society's recurring specialty meetings with a single registration fee that includes all programming and access to multidisciplinary networking opportunities. TMS Specialty Congress 2024 will feature the following three co-located events: the 2nd World Congress on Artificial Intelligence in Materials and Manufacturing (AIM 2024), Digital and Robotic Forming 2024, and Accelerating Discovery for Mechanical Behavior of Materials 2024.

ORGANIZERS

STEERING COMMITTEE

The following individuals have been involved in stringently curating programming and organizing the TMS Specialty Congress 2024.

- **Glenn Daehn**, The Ohio State University
- **Frank Delrio**, Sandia National Laboratories
- **Adam Kopper**, Mercury Marine
- **Aeriel D.M. Leonard**, The Ohio State University
- **John Lewandowski**, Case Western Reserve University
- **Robert Maass**, Federal Institute of Materials Research and Testing (BAM)
- **Tim Rupert**, University of California
- **Taylor Sparks**, University of Utah



ORGANIZERS

- Lead Organizer: **Adam Kopper**, Mercury Marine
- Programming Chair: **Adrian Sabau**, Oak Ridge National Laboratory

ORGANIZING COMMITTEE:

- **Rémi Dingreville**, Sandia National Laboratories
- **Roger H. French**, Case Western Reserve University
- **Thilo Muth**, Robert Koch Institute
- **Elsa Olivetti**, Massachusetts Institute of Technology
- **Taylor Sparks**, University of Utah
- **Pawan Tripathi**, Case Western Reserve University



ORGANIZERS

- Lead Organizer: **Glenn Daehn**, The Ohio State University
- Programming Chair: **Sarah Wolff**, The Ohio State University

ORGANIZING COMMITTEE:

- **Jian Cao**, Northwestern University
- **Kester Clarke**, Colorado School of Mines
- **Babak Raeisinia**, Machina Labs
- **Iain Todd**, University of Sheffield



ORGANIZERS

- Lead Organizer: **Aeriel D.M. Leonard**, The Ohio State University
- Programming Chair: **Frank Delrio**, Sandia National Laboratories

ORGANIZING COMMITTEE:

- **Brad Boyce**, Sandia National Laboratories
- **Daniel Gianola**, University of California, Santa Barbara
- **John Lewandowski**, Case Western Reserve University
- **Erica Lilleodden**, Fraunhofer Institute for Microstructure of Materials and Systems
- **Pania Newell**, University of Utah
- **Corinne Packard**, Colorado School of Mines

REGISTRATION

Attendees are required to register. Badges must be worn for admission to technical sessions, social functions, and all-conference events.

Your registration badge ensures admission to each of these events:

- Technical sessions
- Welcome reception
- Buffet breakfast (Monday, Tuesday, Wednesday, and Thursday)
- Refreshment breaks
- Poster reception
- One ticket for the luncheon of your choice

CONFERENCE DETAILS

TECHNICAL SESSIONS

All technical sessions and keynote presentations will take place in Hope Ballroom A, Hope Ballroom B, Hope Ballroom C, Hope Ballroom D, Center Street A, and Center Street B&C. Poster presentations will be held in Hope Ballroom E. Refer to the technical program for details.

INTERNET ACCESS

Complimentary internet access is available for attendees in the meeting areas. To access Wi-Fi, sign-in to the following network:

Network: Hilton_Meeting

Password: TMSSC2024

REGISTRATION HOURS

The registration desk will be in Lakeside Foyer on the 3rd Floor at the following times (subject to change):

Sunday, June 16, 4:00 p.m. to 7:00 p.m.

Monday, June 17, 7:00 a.m. to 5:20 p.m.

Tuesday, June 18, 7:30 a.m. to 5:20 p.m.

Wednesday, June 19, 7:30 a.m. to 5:20 p.m.

Thursday, June 20, 8:00 a.m. to 12:00 p.m.

DOWNLOAD THE CONGRESS APP



Powered by Engagefully Search "Engagefully" on the App Store® or on Google Play™. Once you've downloaded the Engagefully app, search for TMSSpecialtyCongress2024.



Logging in to the App

An e-mail containing links to your personalized app access was sent to the e-mail address you used to register for TMS Specialty Congress 2024. The e-mail was sent under the subject line: "Access the TMS Specialty Congress 2024 App" from noreply@rdmobile.com.

Trouble Logging In?

For assistance see TMS Staff at the registration desk located in the 3rd Floor Lakeside Foyer.

Improved Search Function

Use the search function of the app located in the "Schedule" tab to find sessions and events. Results display at the talk-level detail but will also show related sessions to your search terms. To find a specific speaker and the presentations they are providing, use the search function in the "Speakers" tab. You can also use filters to narrow your results and navigate the meeting with ease.

Receive App Notifications

Enable notifications from the app to be alerted when key events are happening or important updates are announced.

Access a Web-Based Version of the App

Visit <https://events.rdmobile.com/Events/Enter/18003> to access a web-based version of the app's tools.



AIM 2024

Congress participants are encouraged to submit their work to the TMS journal *Integrating Materials and Manufacturing Innovation*, which will be publishing a topical collection dedicated to the meeting. This collection will take the place of a traditional conference proceedings publication. Only submissions from attendees will be considered for this collection. Submissions will go through the journal's standard peer review process, and there is no guarantee of acceptance. Submissions are due **August 31, 2024**.



DIGITAL AND ROBOTIC FORMING 2024

Congress participants are encouraged to submit their work to the TMS journal *Integrating Materials and Manufacturing Innovation*, which will be publishing a topical collection dedicated to the meeting. This collection will take the place of a traditional conference proceedings publication. Only submissions from attendees will be considered for this collection. Submissions will go through the journal's standard peer review process, and there is no guarantee of acceptance. Submissions are due **August 31, 2024**.



MECHANICAL BEHAVIOR 2024

Meeting participants are encouraged to submit their work to the TMS journal *JOM*, which will be publishing a topical collection dedicated to the event. This collection will take the place of a traditional conference proceedings publication. Only submissions from participants will be considered for this collection. Submissions will go through the journal's standard peer review process and there is no guarantee of acceptance. Submissions are due **September 1, 2024**.

ALL-CONGRESS PLENARY SPEAKERS

Date: June 17, 2024 | **Time:** 8:20 a.m. to 12:00 p.m. | **Location:** Cleveland Hilton, Hope Ballroom D



Chris Eberl, Fraunhofer Institute and University of Freiburg
Presentation: Navigating the Digital Transformation in Materials Science and Engineering and Your Role in Shaping Tomorrow



Emily Molstad, VALIS Insights
Presentation: Recovering Resources from the Past: How AI Can Enable a More Circular Future



Ian Foster, Argonne National Laboratory and the University of Chicago
Presentation: Advancing Materials Science: Intelligent Agents in Data-driven Discovery



Charles Ward, Air Force Research Laboratory (Retired)
Presentation: Thriving in the Digital Epoch of Materials and Manufacturing

KEYNOTE SPEAKERS

DIGITAL AND ROBOTIC FORMING

Date: June 17, 2024 | **Time:** 1:40 p.m. to 2:20 p.m.

Location: Cleveland Hilton, Center Street BC



David Furrer,
Pratt & Whitney

ACCELERATING DISCOVERY FOR MECHANICAL BEHAVIOR OF MATERIALS 2024

Date: June 17, 2024 | **Time:** 3:00 p.m. to 3:30 p.m.

Location: Cleveland Hilton, Hope Ballroom D



Somnath Ghosh,
Johns Hopkins University

PROGRAM OFFICER PANEL DISCUSSION

OPEN TO ALL ATTENDEES!

Date: June 19, 2024 | **Time:** 10:30 a.m. to 12:00 p.m. | **Location:** Cleveland Hilton, Hope Ballroom D

TMS Specialty Congress 2024 will feature a dynamic panel discussion featuring distinguished leaders from prominent government programs dedicated to funding research in materials science and engineering. Gain insights into the funding landscape for materials research, as panelists discuss the strategic priorities of their respective agencies, highlight key funding opportunities, and share tips for navigating the grant application process. Don't miss this opportunity to engage with leaders at the forefront of materials research and chart the course towards a brighter, more technologically advanced future.

MEET THE ESTEEMED PANELISTS:



Khershed Cooper, National Science Foundation (NSF)



Philseok Kim, Program Director, Advanced Research Projects Agency – Energy (ARPA-E), Department of Energy (DOE)



Glenn Daehn, HAMMER, The Ohio State University



Moderator:
Alexis Lewis, Deputy Division Director, NSF

PRESIDENT'S WELCOME RECEPTION

Please join us for the President's Welcome Reception on Sunday, June 16, from 6:00 p.m. to 7:00 p.m. in Superior Ballroom AB on the 5th Floor. This event is an excellent opportunity to meet the TMS President, mingle with fellow attendees, and kickstart the TMS Specialty Congress 2024 in a celebratory atmosphere. Don't miss out on this special event filled with networking, camaraderie, and excitement as we come together to embark on a memorable journey of knowledge exchange and collaboration.

BREAKFAST

Start your mornings off right with a hearty breakfast served from 7:30 a.m. to 8:30 a.m. in Superior Ballroom AB on the 5th Floor. Join us on Monday, Tuesday, Wednesday, and Thursday to fuel up for the day ahead while enjoying a selection of delicious breakfast options. This convenient and energizing start to your day ensures you're ready to make the most of each session, networking opportunity, and discussion throughout the congress.

NETWORKING BREAKS

Join us for informal, longer breaks on Monday, Tuesday, and Wednesday afternoons in Hope Ballroom E. These dedicated sessions offer the perfect chance to engage in discussions with colleagues, fostering meaningful connections and exchanges of ideas. Whether you're looking to network, collaborate, or simply unwind, these breaks provide a welcoming environment for all attendees to come together and build lasting professional relationships.

POSTER RECEPTION

Join us on Tuesday, June 18, from 5:20 p.m. to 6:20 p.m. in Hope Ballroom E for the poster reception. Enjoy light refreshments while mingling with fellow attendees and viewing posters showcasing the latest research and innovations in the field. Don't miss this fantastic opportunity to engage with peers, exchange insights, and gain inspiration during this vibrant and interactive event.

LUNCHEONS

Join us for the congress luncheons, all taking place in Superior AB on the 5th Floor. All full-conference registrants receive one ticket to the luncheon of their choice included in their registration fee. Please note that pre-registration was required, and no additional tickets will be available onsite.

- **Monday, June 17, 2024:**
Digital and Robotic Forming 2024
- **Tuesday, June 18, 2024:**
Accelerating Discovery for Mechanical Behavior of Materials 2024
- **Wednesday, June 19, 2024:**
AIM 2024

MDISCOVERY CHALLENGE ANNOUNCEMENT

Date: June 17, 2024 | **Time:** 4:20 p.m. | **Location:** Cleveland Hilton, Hope Ballroom A

Be sure to attend this session as the MDiscovery Challenge at TMS Specialty Congress 2025 is announced. This challenge promises an exciting glimpse into the future of materials science and manufacturing innovation. Join us and learn more about how to participate in this challenge.

ABOUT THE VENUE

CLEVELAND HILTON

100 Lakeside Ave E | Cleveland, OH 44114

The Cleveland Hilton is ideally located in the heart of downtown Cleveland. Friendly staff and inviting interior spaces help to make guests feel at home. The hotel's amenities include high-speed internet access, a state-of-the-art fitness center, a business center, and both room service and on-site restaurants. The city and its surrounding area are full of tourist attractions and interesting destinations, including the Rock & Roll Hall of Fame, the Cleveland Museum of Art, West Side Market, Progressive Field, and the Cleveland Zoo, as well as a plethora of shopping and dining options.

EXPLORE THE CLEVELAND HILTON RESTAURANTS

The Cleveland Hilton has several on-site dining options to suit every palate.

Burnham Restaurant

Breakfast/Lunch: 6:30 a.m. to 2 p.m.*, Monday – Friday
Brunch: 6:30 a.m. to 2 p.m.*, Saturday and Sunday
Dinner: 5:00 p.m. to 10:00 p.m.*, Monday – Saturday
*subject to change based on occupancy

Bar 32

Tuesday – Thursday: 4:00 p.m. to 1:00 a.m.
Friday and Saturday: 4:00 p.m. to 1:00 a.m.
Food Served Until 11:00 p.m.

Eliot's

Sunday – Thursday: 2:00 p.m. to 12:00 a.m.
Friday and Saturday: 2:00 p.m. to 1:00 a.m.
Last Call for Alcohol: 30 minutes Prior to Closing
Kitchen Closes Nightly at 12:00 a.m.
Last Food Order Taken at 11:30 p.m.

In-Room Dining

Breakfast: 7:00 a.m. to 11:00 a.m., Daily
Dinner: 5:30 p.m. to 10:00 p.m., Daily

CORPORATE SPONSORS

TMS would like to thank our corporate sponsors for supporting this event:



American Elements
www.americanelements.com



Thermo-Calc Software
www.thermo-calc.com

BADGES

All attendees must wear registration badges at all times during the conference to ensure admission to events included in the paid fee, such as technical sessions and receptions.

REFUNDS

The deadline for all refunds was April 30, 2024. No refunds will be issued at the conference. Fees and tickets are nonrefundable.

CELL PHONE USE

In consideration of attendees and presenters, we kindly request that you minimize disturbances by setting all cell phones and other devices on "silent" while in meeting rooms.

AMERICANS WITH DISABILITIES ACT

The federal Americans with Disabilities Act (ADA) prohibits discrimination against, and promotes public accessibility for, those with disabilities. In support of, and in compliance with ADA, we ask those requiring specific equipment or services to contact TMS Meeting Services at mtgserv@tms.org or by visiting the registration desk onsite.

ANTI-HARASSMENT

In all activities, TMS is committed to providing a professional environment free of harassment, disrespectful behavior, or other unprofessional conduct.

TMS policy prohibits conduct that is disrespectful, unprofessional, or harassing as related to any number of factors including, but not limited to, religion, ethnicity, gender, national origin or ancestry, physical or mental disability, physical appearance, medical condition, partner status, age, sexual orientation, military and veteran status, or any other characteristic protected by relevant federal, state or local law or ordinance or regulation.

Failure to comply with this policy could lead to censure from the TMS Board of Directors, potential legal action, or other actions.

Anyone who witnesses prohibited conduct or who is the target of prohibited verbal or physical conduct should notify a TMS staff member as soon as possible following the incident. It is the duty of the individual reporting the prohibited conduct to make a timely and accurate complaint so that the issue can be resolved swiftly.

PHOTOGRAPHY AND RECORDING

TMS reserves the right to all audio and video reproduction of presentations at TMS-sponsored meetings. By registering for this meeting, all attendees acknowledge that they may be photographed by TMS personnel while at events and that those photos may be used for promotional purposes, in and on TMS publications and websites, and on social media sites.

Any recording of sessions (audio, video, still photography, etc.) intended for personal use, distribution, publication, or copyright without the express written consent of TMS and the individual authors is strictly prohibited. Attendees violating this policy may be asked to leave the session.

ANTITRUST COMPLIANCE

TMS complies with the antitrust laws of the United States. Attendees are encouraged to consult with their own corporate counsel for further guidance in complying with U.S. and foreign antitrust laws and regulations.

TMS DIVERSITY AND INCLUSION STATEMENT

TMS is committed to advancing diversity in the minerals, metals, and materials professions, and to promoting an inclusive professional culture that welcomes and engages all who seek to contribute to the field. TMS recognizes that a diverse minerals, metals, and materials workforce is critical to ensuring that all viewpoints, perspectives, and talents are brought to bear in addressing complex science and engineering challenges. To build and nurture this diverse professional community, TMS welcomes and actively engages the participation of underrepresented groups in all of its initiatives and endeavors.

EMERGENCY PROCEDURES

The chances of an emergency situation occurring at Specialty Congress 2024 are quite small. However, being prepared to react effectively in case of an incident is the most critical step in ensuring the health and safety of yourself and those around you. Please take a few moments to review the maps of the Hilton Cleveland printed in this program. When you enter the building, familiarize yourself with the exits and the stairs leading to those exits. When you arrive at your session or event location, look for the emergency exits that are in closest proximity to you. If you are staying at the Cleveland Hilton, please review the evacuation routes and emergency procedures in your hotel room after checking-in.

Should you or anyone near you experience anything requiring either immediate security or medical attention, please alert someone on the TMS staff. If it's a true medical emergency, please dial 911 first.

In An Emergency, Dial 911.

NEAREST POLICE DEPARTMENT:

Cleveland Police Department, Third District
4501 Chester Ave
Cleveland, Ohio 44103
+1 216-623-5300
<https://www.clevelandohio.gov/city-hall/departments/public-safety/divisions/police>

NEAREST FIRE DEPARTMENT:

Cleveland Fire Department, Fire Station #28
312 Carnegie Ave
Cleveland, Ohio 44115
+1 216-664-6800
<https://www.clevelandohio.gov/city-hall/departments/public-safety/divisions/fire>

NEAREST HOSPITAL:

Cleveland Clinic - Lutheran Hospital
1730 W 25th St
Cleveland, Ohio 44113
+1 216-696-4300
<https://my.clevelandclinic.org/locations/lutheran-hospital>

URGENT CARE:

Downtown Express Care Clinic
315 Euclid Ave
Cleveland, OH 44114
+1 216-442-6700
<https://my.clevelandclinic.org/locations/directions/444-downtown-express-care-clinic>

TMS

UPCOMING MEETINGS

TMS offers programming that spans the technical interests of the global minerals, metals, and materials community.

SUPERALLOYS



September 8–12, 2024
Champion, Pennsylvania, USA
DISCOUNT REGISTRATION DEADLINE:
JULY 15, 2024
www.tms.org/Superalloys2024

TMS FALL 2024

@ MATERIALS SCIENCE & TECHNOLOGY

October 6–9, 2024
Pittsburgh, Pennsylvania, USA
DISCOUNT REGISTRATION DEADLINE:
AUGUST 22, 2024
www.tms.org/TMSFall2024

THE WORLD COMES HERE. TMS 2025

154th Annual Meeting & Exhibition

March 23–27, 2025
Las Vegas, Nevada, USA
ABSTRACT SUBMISSION DEADLINE:
JULY 1, 2024
www.tms.org/TMS2025



TMS SPECIALTY CONGRESS 2025

June 15–19, 2025
Anaheim, California, USA
ABSTRACT SUBMISSION DEADLINE:
OCTOBER 30, 2024
www.tms.org/SpecialtyCongress2025

TMS FALL 2025

@ MATERIALS SCIENCE & TECHNOLOGY

September 28–October 1, 2025
Columbus, Ohio, USA
SAVE THE DATE
www.tms.org/TMSFall2025



November 16–20, 2025
Phoenix, Arizona, USA
ABSTRACT SUBMISSION DEADLINE:
NOVEMBER 1, 2024
www.extractionmeeting.org/2025



For a complete listing of upcoming meetings, scan this QR code or visit
www.tms.org/UpcomingMeetings

TMS

UPCOMING COURSES

TMS offers a variety of online and in-person courses that span the technical interests of the global minerals, metals, and materials community.

TMS (ONLINE COURSE)

Metallurgical and Materials Engineering
**PROFESSIONAL ENGINEER (PE)
LICENSING EXAM REVIEW COURSE**

July 30, August 1, and 6–8, 2024
Online Course

**DISCOUNT REGISTRATION DEADLINE:
JUNE 28, 2024**

www.tms.org/PEReview2024

TMS (ONLINE COURSE)

**VERIFICATION, VALIDATION, AND
UNCERTAINTY QUANTIFICATION IN
THE COMPUTATIONAL MODELING OF
MATERIALS AND STRUCTURES**

August 20–22, 2024
Online Course

**DISCOUNT REGISTRATION DEADLINE:
JULY 22, 2024**

www.tms.org/VVUQ2024

TMS ALUMINUM COURSE



INDUSTRIAL
**ALUMINUM
ELECTROLYSIS**

Course on Advancing Aluminum Production

December 1–6, 2024
Sydney, Australia

**DISCOUNT REGISTRATION DEADLINE:
NOVEMBER 1, 2024**

www.tms.org/IAE2024



For a complete listing of upcoming courses and other professional development events, scan this QR code or visit

www.tms.org/UpcomingMeetings

TMS SPECIALTY CONGRESS 2025

JUNE 15–19, 2025

Anaheim Marriott | Anaheim, California, USA

#TMSpecialtyCongress

SHARE YOUR WORK

ABSTRACT SUBMISSION DEADLINE:
OCTOBER 30, 2024

ONE REGISTRATION. THREE MEETINGS. COUNTLESS BENEFITS.

2025 CO-LOCATED MEETINGS

3rd World Congress on
AIM
ARTIFICIAL INTELLIGENCE
MATERIALS & MANUFACTURING 2025

ICME
MANUFACTURING
DESIGN MATERIALS
8TH WORLD CONGRESS ON
INTEGRATED COMPUTATIONAL MATERIALS
ENGINEERING (ICME 2025)

The 7th International Congress on
3DMS
3D Materials Science 2025

Key issues and future pathways
in the implementation of
artificial intelligence.

www.tms.org/AIM2025

Recognized hub of interaction
that focuses on integration
priorities in the field.

www.tms.org/ICME2025

3D characterization, visualization,
and more of structure–property
relationships of materials.

www.tms.org/3DMS2025



Learn more and submit an abstract today at:

www.tms.org/SpecialtyCongress2025

TMS
The Minerals, Metals & Materials Society

THE WORLD COMES HERE.

TMS 2025

154th Annual Meeting & Exhibition

March 23–27, 2025

MGM Grand Las Vegas Hotel & Casino

Las Vegas, Nevada, USA

#TMSAnnualMeeting | www.tms.org/TMS2025



BOOK YOUR ROOM TODAY!

Reserve your place at the MGM Grand Las Vegas Hotel & Casino, the headquarters hotel for TMS2025.

Great rates now available at
www.tms.org/TM2025.

CALL FOR ABSTRACTS

SUBMIT YOUR WORK BY JULY 1

Act now to present your work at the TMS 2025 Annual Meeting & Exhibition (TMS2025) in Las Vegas. This year's technical program consists of **more than 100 symposia** in 11 topic tracks. Choose the one that most closely matches your interests!

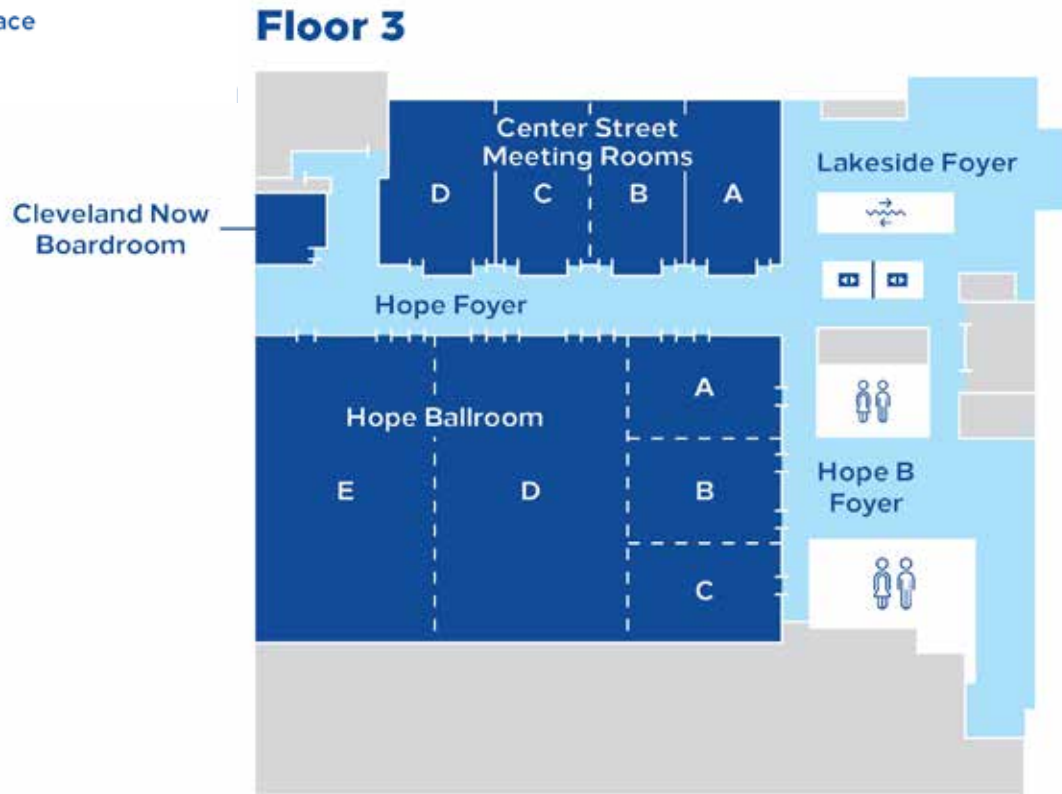
TOPIC TRACKS

- Additive Manufacturing
- Advanced Characterization Methods
- Biomaterials
- Data-Driven and Computational Materials Design
- Electronic, Magnetic, and Energy Materials
- Light Metals
- Materials Degradation and Degradation by Design
- Materials Synthesis and Processing
- Mechanics of Materials
- Nuclear Materials
- Special Topics

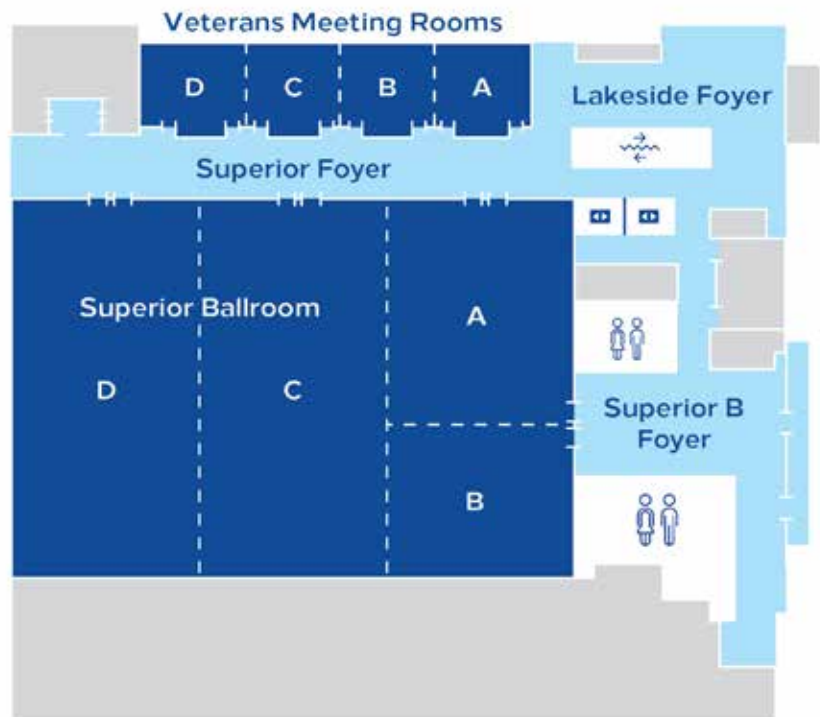
**Submit your abstract today, visit
www.tms.org/TMS2025**

FLOOR MAPS KEY

- Meeting/Conference Rooms
- Amenities
- Public Space
- Private



Floor 5





AMERICAN
ELEMENTS

THE MATERIALS SCIENCE MANUFACTURER®

1 H 1.00794 Hydrogen																	2 He 4.002602 Helium														
3 Li 6.941 Lithium	4 Be 9.012182 Beryllium																														
11 Na 22.98976928 Sodium	12 Mg 24.305 Magnesium																														
19 K 39.0983 Potassium	20 Ca 40.078 Calcium	21 Sc 44.955912 Scandium	22 Ti 47.867 Titanium	23 V 50.9415 Vanadium	24 Cr 51.9961 Chromium	25 Mn 54.938045 Manganese	26 Fe 55.845 Iron	27 Co 58.933195 Cobalt	28 Ni 58.6934 Nickel	29 Cu 63.546 Copper	30 Zn 65.38 Zinc	31 Ga 69.723 Gallium	32 Ge 72.64 Germanium	33 As 74.9216 Arsenic	34 Se 78.96 Selenium	35 Br 79.904 Bromine	36 Kr 83.798 Krypton														
37 Rb 85.4678 Rubidium	38 Sr 87.62 Strontium	39 Y 88.90585 Yttrium	40 Zr 91.224 Zirconium	41 Nb 92.90638 Niobium	42 Mo 95.96 Molybdenum	43 Tc (98.0) Technetium	44 Ru 101.07 Ruthenium	45 Rh 102.9055 Rhodium	46 Pd 106.42 Palladium	47 Ag 107.8662 Silver	48 Cd 112.411 Cadmium	49 In 114.818 Indium	50 Sn 118.71 Tin	51 Sb 121.76 Antimony	52 Te 127.6 Tellurium	53 I 126.90447 Iodine	54 Xe 131.293 Xenon														
55 Cs 132.9054 Cesium	56 Ba 137.327 Barium	57 La 138.90547 Lanthanum	58 Ce 140.90765 Cerium	59 Pr 140.90765 Praseodymium	60 Nd 144.242 Neodymium	61 Pm (145) Promethium	62 Sm 150.36 Samarium	63 Eu 151.964 Europium	64 Gd 157.25 Gadolinium	65 Tb 158.92535 Terbium	66 Dy 162.5 Dysprosium	67 Ho 164.93032 Holmium	68 Er 167.259 Erbium	69 Tm 168.93421 Thulium	70 Yb 173.054 Ytterbium	71 Lu 174.9668 Lutetium	72 Hf 178.48 Hafnium	73 Ta 180.948 Tantalum	74 W 183.84 Tungsten	75 Re 186.207 Rhenium	76 Os 190.23 Osmium	77 Ir 192.217 Iridium	78 Pt 195.084 Platinum	79 Au 196.966569 Gold	80 Hg 200.59 Mercury	81 Tl 204.3833 Thallium	82 Pb 207.2 Lead	83 Bi 208.9804 Bismuth	84 Po (209) Polonium	85 At (210) Astatine	86 Rn (222) Radon
87 Fr (223) Francium	88 Ra (226) Radium	89 Ac (227) Actinium	90 Th 232.03806 Thorium	91 Pa 231.03688 Protactinium	92 U 238.02891 Uranium	93 Np (237) Neptunium	94 Pu (244) Plutonium	95 Am (243) Americium	96 Cm (247) Curium	97 Bk (247) Berkelium	98 Cf (251) Californium	99 Es (252) Einsteinium	100 Fm (257) Fermium	101 Md (258) Mendelevium	102 No (259) Nobelium	103 Lr (262) Lawrencium	104 Rf (261) Rutherfordium	105 Db (262) Dubnium	106 Sg (266) Seaborgium	107 Bh (264) Bohrium	108 Hs (270) Hassium	109 Mt (268) Meitnerium	110 Ds (281) Darmstadtium	111 Rg (280) Roentgenium	112 Cn (285) Copernicium	113 Nh (284) Nihonium	114 Fl (289) Flerovium	115 Mc (288) Moscovium	116 Lv (293) Livermorium	117 Ts (294) Tennessine	118 Og (294) Oganesson

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