

hapter Micro-Examiner

SEPTEMBER 2025

Inside...

- 1 Professional/Student Mixer Night, Conor O'Neill's, 6pm, Thursday, Sept. 18th
- 1 Become an Advertising Supporter
- 1 2025-26 Chapter Program
- 2 2025-26 Officers and Executive Committee Members
- **2** Chair Note
- 2 AFC Holcroft
- 3 Allied High Tech Products
- **4 Sustaining Members**
- 5 2025 Golf Outing Summary
- **8 Teachers Camp**
- 8 IMAT/Heat Treat 2025 Mini Camp
- **8 NADDRG Fall Meeting**

The ASM Detroit and DWAFS Professional/Student Mixer Returns to Conor O'Neill's in Ann Arbor!

Mark your calendars for the upcoming annual ASM Professional/Student Mixer Night, scheduled for **6:00 PM on Thursday, September 18, 2025**. The event will take place at the charming **Conor O'Neill's** located in the heart of downtown Ann Arbor. This highly anticipated occasion offers an excellent platform for Chapter Members to connect with emerging talents in the field of Materials Science hailing from local universities and colleges. Set in a relaxed setting, the mixer fosters interactions between students and industry professionals, enabling discussions about the societies array of networking and scholarship opportunities. We invite you to save the date and participate in this engaging social gathering, where students and seasoned professionals can engage in conversations about diverse career paths within the realm of Materials Engineering.

ASM Detroit Chapter Micro-Examiner 2025-2026: Your Chance to Shine!

Be a Part of Our Exclusive Advertising Supporters

Exciting things are in the works for the upcoming chapter season of 2025–2026, and we want you to be a part of it! If you're already one of our valued advertisers, get ready for a special letter of solicitation that's making its way to you shortly.

For those who are considering joining our advertising supporters' roster for the first time, now is the perfect moment to seize the opportunity. Picture your brand featured prominently in the pages of Micro-Examiner, showing not only your commitment to ASM but also your dedication to the Materials community.

Want to step into the spotlight and support a thriving network of professionals? Reach out to the Detroit Chapter Administrator at (586) 944-5656 or drop us a line at **asmdetroitchapter @gmail.com** to explore this exciting avenue. Your support matters, and so does your place in the Micro-Examiner for the 2025–2026 season!

ASM Detroit Chapter 2025-2026 Program

- September 18 Student Mixer, Conor O'Neill's
- October 13 ASM & AFS Combined Meeting Sandy Calabrese – Director of Sales – DISA & Simpson NA/ Norican Group; Location: Livonia Marriott
- November 10 National Officers Night
- February 9 Membership Night
- March 9 Sustaining Members Night
- April 9 (Thursday) ASM & AFS Combined Meeting
- May 11 Woodside Lecture



2025-2026 ASM-Detroit Chapter CHAPTER OFFICERS

Rajan Bhambroo Chair

Maxwell Mayhew Vice-Chair

> Yi Liu Secretary

Daniel Baker Treasurer

Julie Nimer

Chapter Administrator

Olivia Peleg Chapter Intern

EXECUTIVE COMMITTEE MEMBERS

Jason Coryell Attendance/Publicity Chair

Nikki Tiernan Young Members/ Student Affairs Co-Chair

Nicholas Lessnau Young Members/ Student Affairs Co-Chair

Kae Poor

Chapter Council Representative/ National Affairs/Education/ MEI/Roundtable Chair

> Tim Stachowski Entertainment Co-Chair

> **Trisha Rouse**Entertainment Co-Chair

Manish Mehta Awards/Recognition Chair

Eric McCarty
Finance/Council of Fellows Chair

James Boileau Member-at-Large

JP Singh Member-at-Large

Robert Cryderman ESD Affiliate Representative

Tristan BrohmPaper/Programs Co-Chair

Mark Harper Paper/Programs Co-Chair

Kathy Hayrynen ASM Teacher's Camp

Peg Jones ASM Teacher's Camp

Chair's Note



Rajan Bhambroo Materials Engineer Tenneco Inc

ASM Detroit chapter had an amazing start to the new programming year with the annual ASM-AFS golf outing on August 8th. If you were not able to attend the outing, you truly missed a wonderful day. The weather could not have been better, the course was in great shape, and the post-outing meal was just right. A warm thank you to all our sponsors and volunteers who put in the effort to make this event such a success. And, as always, our hosts at Fellows Creek in Canton ensured everything was well taken care of—we are grateful for their consistent hospitality. A special thank you is due to Julie

Nimer, our wonderful ASM Detroit chapter administrator, Olivia Peleg, our ASM Detroit Intern, and Tim Stachowski, our entertainment co-chair who have put in a lot of effort in making this event such a success. A big thank you is also due to the participants in the golf outing who participated in this event and helped us raise funds for educational initiatives of the chapter.

Looking ahead, the ASM-Detroit Chapter has a strong lineup of programs for the coming year. Please do mark your calendars, beginning with the Student Mixer in Ann Arbor on September 18th. This event is always full of energy and provides such a nice opportunity for our professional members to connect with students from Wayne State, Michigan State, the University of Michigan, and other local colleges. It's an easy way to engage with the next generation in a relaxed setting.

One initiative that does not appear on the printed program is our Heat Treat Mini-Camp at IMAT 2025 conference this year. The camp is scheduled for October 21 and 22 this year. This effort speaks directly to our mission—introducing young people to the world of materials and showing them the career paths they may not even know exist. At Huntington Place in Detroit, our chapter and volunteers will run hands-on exhibits such as Foundry-in-a-Box, induction hardening, and more. For many students, it will be their first exposure to this field, and hopefully the spark that sets them on a path toward materials science.

I would encourage you to watch for our volunteer sign-up for this event. Even a few hours of your time can make a real difference in inspiring students. When we come together as a chapter, the impact is always greater.

AFC-HOLCROFT offers atmosphere-based heat treating equipment, built to the highest standards for quality. An extensive product range includes universal batch systems, mesh/cast link belt furnaces,



continuous pusher furnaces, roller hearth and rotary hearth furnaces, walking beam furnaces, austempering systems, atmosphere generators, aluminum processing equipment and more.

AFC-Holcroft, together with our AICHELIN Group companies, are the largest provider of atmosphere furnaces worldwide. We here at AFC-Holcroft know the importance of reducing our carbon footprint. Our equipment incorporates the latest technology to increase operating efficiency, reduce emissions, promote reusable energy systems and provide scheduled maintenance and inspections. Our aftermarket and service teams are equipped to help our customers evaluate and modernize older equipment to maximize heating efficiency, improve atmosphere controls and update existing electrical control systems.

We are proud of our many decades as Sustaining Members of ASM International and the ASM Detroit Chapter – and are also active in ASM International's affiliated society ASM HTS which focuses specifically on heat treating.

We invite you to visit our website **afc-holcroft.com** to learn more about us.



ALLIED HIGH TECH PRODUCTS, INC.

has been meeting the needs of companies engaged in the materials science, materials manufacturing, automotive. aerospace. military. optics, photonics, fiber microelectronics, and research & development industries for over 40 years. We aggressively pursue the advancement of methods and procedures related to each of these industries and therefore promote close working relationships with several hundred of the world's leading research universities. laboratories, and institutions.

The Allied commitment is simple and complete: we provide our customers with quality products for metallographic sample preparation and analysis, expert technical assistance, and unequaled service, before and after purchase.

SOLAR

Vacuum

Every day. Worldwide. Our measure of success has always been, and always will be, your complete satisfaction with Allied's products and services.

MODERN, FULLY-EQUIPPED LABORATORY

Allied offers customers and clients year-round, complimentary access to our modern, fully equipped laboratory, and dedicated technical and engineering team. We actively promote the use of our facilities, equipment, and consumables in the rapid development of procedures and applications. "Our Lab's For You!"

State-of-the-Art Equipment Design & Manufacturing

Allied designs and manufactures a complete range of state-of-the-art

Metals

Electronics

equipment at their California and Oklahoma facilities. Using the latest design software, a team of dedicated mechanical, electrical, and design engineers assure that Allied's equipment is built to specifications that deliver dependable results and durability.

TECHNICAL SEMINARS

Sample Preparation Solutions for YOUR Materials

Composites

Ceramics/Glass

Allied offers workshops for our customers that teach leading-edge techniques in the materials preparation field. These workshops are attended by our customers from all over the globe and sell out every time one is announced. We have also recently partnered with ASM International who now holds many of their West Coast seminars at Allied's facility.

Plastics/Polymers

jbutchart@alliedhightech.com

Thermal Sprays





The ASM Detroit Chapter Thanks It's Sustaining Members for Their Continued Support!

Detroit Flame Hardening

Dubois - Heatbath Park

Metallurgical

Element Materials Technology
Gasbarre Thermal Processing
Systems

GM Global R&D Laboratories

Inductoheat

Kolene Corporation

MetLab Corporation

Michigan Metrology

MSU Libraries/Serials

Acquistions

OMNI Metals Laboratory Incorporated

Rolled Alloys

RTI Laboratories, Inc.

Solar Atmospheres

Struers

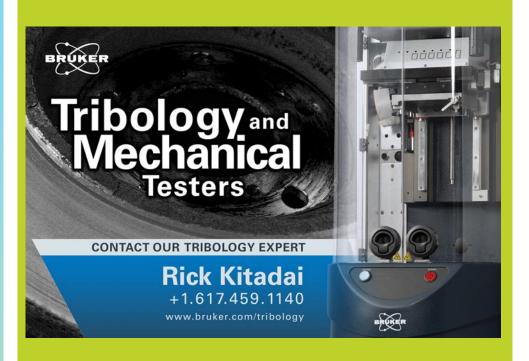
Sun Tec Corporation

Surface Combustion Incorporated

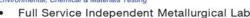
Titan Metallurgy

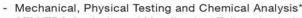
United Technical Inc.

Upton Industries Incorporated Weldaloy Specialty Forgings









- SEM/EDS Analysis and Metallurgical Failure Analysis*

Environmental Exposure Testing

- Salt Spray, Humidity & Corrosion Testing

· Materials Characterization & Analysis

- Paint Failure Analysis and Product Deformulation*



Lloyd Kaufman

lkaufman@rtilab.com 734-422-8000 x 109



Materials Testing Division 33080 Industrial Road Livonia MI 48150

ISO/IEC 17025:2005 accredited lab service
*Parameters that are specifically referenced in scopes of accreditation





2025 Joint ASM Detroit and DWAFS Golf Outing Summary, A Great Day Out!

The 2025 Joint ASM and AFS golf outing at Fellows Creek Golf Course in Canton on August 8th turned out to be another fun day. We were fortunate to have another year of beautiful weather, though it came with a bit of extra heat. Ninety-one golfers came out to play, enjoy the course, and win some great prizes.

A big thank-you goes to our volunteers who made the day run smoothly: Nikki Tiernan, Maxwell Mayhew, Kae Poor, Kim Farrugia, Olivia Peleg, Erin Leybourne, Tim Stachowski, Jonathan Goettsch, Rajan Bhambroo, and Ashley Eilers. After the golf wrapped up, everyone enjoyed a steak dinner followed by the awards ceremony and raffle. We're grateful to all of our sponsors for their support—see the full list of winners and sponsors below. On top of that, many companies donated raffle prizes, which made a lot of players very happy.

The money raised will go toward ASM and AFS scholarships and Teachers Camp. Thanks again to everyone who joined us, and we look forward to seeing you at next year's outing!



Lunch Cart Bluefire LLC
Beverage Carts Element
Ranger Roundup WGS Globa
Vegas Hole

HOLE SPONSORS

Gasbarre Thermal Processing Systems
 AFC Holcroft
 Dubois
 MT Systems/Novis Works
 Inductoheat
 Voxeliet

CH Winery

DIMAC graphics Auto/Steel Partnership Autokiniton HA Group Can-Eng

RAFFLE PRIZES AND GIVEAWAYS

Planet Rock Benihana Ford House Royal Oak Golf Center **Buffalo Wild Wings** Firekeepers Fellows Creek Benstein Liquor **AFS** Gordon Foods **Dunhams** Bavarian lodge Thunderdome Restaurants Whitecaps Outdoor Adventure Center Meijer Gardens Top Golf John Ball 700 Belle Tire Livonia Marriott Texas RoadHouse Benstein Liquor



Winning team from Element Team #2!



Closest To The Pin: Dave Steele



Longest Drive: Ron Benoot



Longest Drive: Andrea Johnson

2024-2025 ASM Detroit Chapter **STEM Outreach Sponsor!**



Thanks to Fluxtrol's generous donation we are able to offset the dinner cost at our monthly chapter dinner meetings for our STEM Outreach attendees. These attendees include: Teacher Scholarship Winners, University Scholarship Winners, Community College Scholarship Winners, Metro Detroit Science Fair Winners, and ESD Future City Winners.

College and university students can also attend our ASM Detroit Chapter dinner meetings for just \$5 thanks to this generous donation!



Largest Heating Element Bank In The World

- Rod Elements · Ribbon Elements · Coil Elements
- Ceramic · Refractory · Roller Chain · Pintle Chain
- Chain Edge Belts · Hinge Plate Belts · Forced Air Plugheaters for Tempering · Annealing

www.nationalelement.com 1-800-600-5511 / info@nationalelement.com

The Auto/Steel Partnership



Driving **Automotive** Steel Research and Education for 36 Years

FREE online training courses available



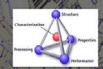
Room Temperature Tensile Testing

Hardness (Rockwell, Vickers, Knoop) Case Depth/Depth of Hardness Microstructure, Grain Size, SEM/EDS Nadcap ACCREDITED

Metallurgical Consulting Process and Product Failure Investigations Process, Structure, Property Correlations **Product and Process Research & Development**

Expertise in ferrous and non-ferrous, including exotic alloys

metallurgical laboratory 24011 Hoover Rd, Warren, MI 48089



For Inquiries, please reach out to lab@weldaloy.com and/or call (313) 407-4029

Custom solutions, rapid turnaround, with expert team of metallurgists. https://weldaloy.com/services/testing-analysis/

COR-ME

SPECIALTY CORED WIRE COATED WELDING ELECTRODES TOOL STEEL MIG & TIG

Tel: 810-227-3251 Fax: 810-227-9266

12500 Grand River Road Brighton, MI 48116 U.S.A. www.cor-met.com



Technology Leader for Thermal Processing Equipment

AFC-Holcroft, L.L.C. 49630 Pontiac Trail Wixom, MI 48393-2009 www.afc-holcroft.com

Phone +1 248-624-8191 +1 248-624-3710

sales@afc-holcroft.com Reliability at work

COMPLETE LINE OF THERMAL PROCESSING EQUIPMENT



Batch • Continuous • Atmosphere • Vacuum • Rebuilds Upgrades • Alloy Fabrications • Replacement Parts

734.656.2000 | 12250 Belden Court, Livonia MI 48150 | GasbarrelFS@gasbarre.com

www.gasbarre.com

regional sales manager

Mark Bergel

M: 231-342-5686 mark.bergel@aalberts-st.us

Aalberts surface technologies specialized heat treatment U.S. 209 West Mount Hope Ave. Lansing, MI 48910

www.aalberts-ht.us



METALLURGY, L.L.C.

We specialize in quick turnaround time and customer satisfaction.

10400 Capital St.

Oak Park, MI 48237 Telephone: (248) 543-3578 testing@titanmetallurgy.com www.titanmetallurgy.com



BUEHLER Your Partner for Success

Proven Innovations for

- Metallography Laboratories



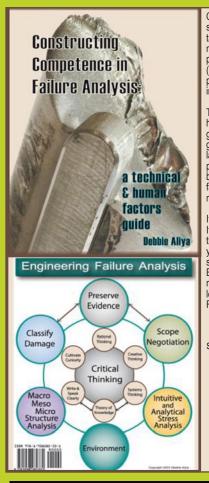
or to shop consumables



YOUR SOURCE FOR

METALLURGICAL TESTING.

ANALYSIS & CONSULTATION.



Constructing competence in Failure Analysis is the preeminent technical guide, detailing a comprehensive and new six-step method for performing fractography. It powerfully revisions the Failure Analysis (FA) Process detailing modern approaches for visual inspection, NDT, specimens selection, cutting and more.

This visionary compendium details how human factors enable or distract investigators. And it facilitates better scope negotiations, provides specialized vocabulary for clarity with clients, and has thought provoking real-life FA stories, making the book suitable for a Capstone course in failure analysis for multidisciplinary engineering programs.

It's a book full of images and instruction. If you love digging into how things fail, then you will love exploring this book. It is your definitive career-long companion. It shines a light on basic practical issues. By including epistemology, it promotes mastery of the technical body of knowledge and promotes confidence in your FA conclusions.

For information about failure analysis seminars, schedule and detailed content, please visit:

holistic-failure-analysis.com

To order a copy of the book, visit: a.co/d/7A6cJqh

For more info, contact Debbie at: DaAliya@itothen.com or 1-616-475-0059





Atmosphere

Batch

Continuous

Controls

Vacuum

Allcase® Batch Integral Quench Furnace

OEM Aftermarket Parts & Service

RX® Endothermic Gas Generators



Providing Analytical Solutions for Your Material Characterization Needs

> Allison Tyler 947.466.1135 allison.tyler@perkinelmer.com



Accredited Metallurgical & Mechanical Testing Laboratory

One Source for Your Complete Project

Metallurgical & Mechanical Testing

Failure Analysis Impact Testing - CVN
Fatigue Tensile Testing
SEM/EDS Micro & Macro Evaluation
Chemistry Mosaic Image Analysis

Grain Size Case Depth

Weld Evaluation

PQR & WPS Documentation & Testing

Non-Destructive Testing

Ultrasonic Testing (UT)
Eddy Current (ET)
Penetrant Examination (PT)
Magnetic Particle Examination (MT)
Radiographic/X-Ray Inspection (RT & CR)
Visual Inspection (VT)

Destructive Testing | Nondestructive Testing | Welding Engineering | Welding Training A full-service company providing technical solutions for more than 15 years.









1081 E North Territorial Road Whitmore Lake, MI 48130





Visit unitedtech1.com, call 248-667-9185 or email sales@unitedtech1.com



Teachers Camp:

Sixteen teachers attended the annual ASM Materials Camp for teachers hosted by Detroit ASM and the University of Michigan's MSE department in July. They had a great week packed with learning and laughter. About half of the teachers were from Michigan. Most of the home team were from the Detroit Chapter's territory. The remainder came from as far east as Boston and as far west as Las Vegas. We had a range of experience levels and disciplines in the group. A Civil Engineer became so bored sitting at the computer all day that she changed careers. She will begin teaching this fall and will be terrific. Another unique participant does K-12 STEM programming for the Sloan Museum in Flint. Dr. Kathy managed to bake treats for all possible combinations of food restrictions despite losing her air conditioning for 3 days the week before Camp. The Detroit Society for Coatings Technology sponsored 3 teachers. Their members are involved in automotive paints as well as industrial coatings for corrosion control. They observed our corrosion experiments and brought a short presentation and samples to show. We planned for them to talk for 15 minutes during lunch and then share the samples, but the teachers' questions went on for almost an hour and a half. Thanks to everyone who supports Camp financially, by participating in the Golf Outing, and who helps. The Van Vlack lab staff and other faculty at U of M provide unparalleled support. Our Detroit ASM intern, Olivia Peleg, was able to help one day. Dr. Katie Sebeck contributed 4 vacation days to provide whatever support was needed, and she also connected us with a volunteer from Dupont in Midland who had so much fun on Tuesday that she stayed to help for an extra day.

IMAT/Heat Treat 2025 Minicamp at Huntington Place, Detroit!

The IMAT/Heat Treat 2025 Minicamp will be held at the Huntington Place on October 21st and 22nd in conjunction with IMAT and Heat Treat 2025. We will be demonstrating materials based experiments for over 200 high school students from around Metro Detroit.

The experiments in the past included:

Foundry in a Box, Polymer Powders. Induction Heat Treating, Hardness Testing, Nitinol: A Shape Memory Alloy, Brassing a Penny: Solid State Diffusion. Lightweight Design through Materials Engineering Innovations. and Careers in Materials Science and Engineering

We are looking for volunteers to help with getting the students to and from the busses, assisting the presenters, and other behind the scenes tasks between 8:30 and 3:30 on Oct. 21 and 22. Please contact asmdetroit@gmail.com if interested!

NADDRG Fall Meeting

SAVE THE DATE! The North American Deep Draw Research Group (NADDRG) Fall Meeting takes place **December 4, 2025** at **St. John's Resort, Plymouth, MI**. This meeting will cover sheet metal forming and related topics such as defects, lubrication, coatings, and surface texture.

Join us and share your own research or industry experience.

NADDRG Meetings are informal with no recording or session proceedings. Advance registration is required at **naddrg.org/next-meeting**, with discounted rates available through November 14.