The Annual ASM Professional/Student Mixer Night is set for 6:00 PM on Thursday, September 21, 2017, at Conor O’Neill’s in the heart of downtown Ann Arbor. This is a great event where Chapter Members can meet the up and coming talent in Materials Science from local universities and colleges in a casual environment. It also provides an opportunity for students to interact with professional leaders to discuss the various networking and scholarship opportunities ASM has to offer. Please plan on joining this social event, which provides a unique social opportunity for students and professionals to discuss various carrier paths as Materials Engineers.

Thank You! To Our Student Mixer Sponsors

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. Recently acquired by the AICHELIN Group, AFC-Holcroft has become a part of the largest provider of atmosphere furnaces worldwide. 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. Our staff enjoy meeting other ASM Detroit Chapter participants and appreciate the unique opportunity to talk with students and other members, hearing firsthand from different perspectives while receiving suggestions how we might continue to evolve our industry in ways that are relevant and exciting to the workforce of the future. We invite you to visit our website, www.afc-holcroft.com to learn more about us.

Joyworks Studio in Ann Arbor, Michigan was founded in 2005 by its proprietor John R. (Chip) Keough, PE, FASM, as a creative outlet for his passions for metal and, particularly, metal castings. Serving as a platform for casting design, product development, research, teaching, and creative, metallurgical endeavors, Joyworks puts a new spin on the continuing development of one of human kind’s oldest professions. Joyworks harnesses the full breadth of technology, and works closely with customers to develop the smartest casting designs and prototypes. Specializing in ferrous castings, Joyworks takes pride in shortening the new product development cycle by optimizing the casting design for fit, form, function and cost. Equipped with 200# Inductotherm furnaces, Solidworks CAD and FEA software, and a 3-D printer, Joyworks applies the 1800 sq ft studio to craft the highest quality gray, ductile, and austempered ductile iron casting prototypes. Joyworks strongly believes in paving the way for future metallurgical innovations and innovators. Partnering with the University of Michigan, Joyworks helps teach future Materials Science and Engineering.

To Our Student Mixer Sponsors (continued on page 2)
In July I was able to attend the ASM International Leadership Days in Cleveland. Leaders representing 52 Chapters from 5 countries were in attendance. This was my first opportunity to attend training for ASM. I had heard that the highlight of the training would be the tour of the ASM International’s Complex. Seeing the Dome up close and personal didn’t disappoint. Who wouldn’t appreciate a GIANT Buckyball? There were many takeaways from the meeting. Segments included standard best practice, review of great things that are happening, and digging deeper into our purpose as a professional society. The fascinating section for me was reviewing the survey results. The survey pertained to chapter educational courses. The goal of the survey was to help ASM International determine what their members want in the form of education. About 1/3 of the chapters don’t offer any courses, 1/3 of the chapters use ASM materials and the last 1/3 of the chapters develop their own content. My question to you is: what do you want from the Detroit Chapter in regards to courses? Please take this simple Survey to show your interest.

Also at Leadership Days, the Detroit Chapter received an award for Outstanding Student Outreach. Congratulations to all who have attended our professional/student mixer in the past year. Thanks for helping us make this a great outreach event.

Over the August 19th weekend, Metro Detroit celebrated the Woodward Dream Cruise. This year I had a great curbside seat. While I was watching the cars go by, I was able to watch the old and the new. As a side note I can understand why the muscle cars of today want to cruise alongside their gold standards from yesteryears. Seeing the classic cars with their nostalgic styles contrasted to today’s sleek use of materials, made me appreciate the many eras we have seen as a country and an industry. The parade of vehicles is a tribute to all people that have worked and still work in the auto industry, a job well done!

Starting in September we will have the opportunity to connect again as a chapter with the start of our 2017/2018 programming season. The year kicks off with our now annual (award winning) Professional/Student Mixer night in Ann Arbor. Next on the list is October is a tour of Trumpf in Plymouth. Details of these events can be found in the newsletter.

I look forward to seeing you at the upcoming Networking event at Conor O’Neill’s In Ann Arbor, September 21, 2017.

Micro- Examiner 2017-2018 Advertising Supporters

We are currently in the process of updating our newsletter advertising supporters for the 2017-2018 season. If you are a current advertiser you will be receiving a letter of solicitation shortly. If you wish to be a new advertiser in the Micro- Examiner and show your support of ASM, please contact the Detroit Chapter Administrator at (586) 944-5656 or asmdetroitchapter@gmail.com.

JOYWORKS continued from page 1

students the science and art of the foundry. The team also aims to serve the industry and industrial associations related to metal casting. To find out more about Joyworks Studio, please visit Joyworksstudio.com. We look forward to sharing with you at member events.
September 23, 2017

Science & Engineering Festival

Detroit ASM Members and their families are invited to the Southeast Michigan Science and Engineering Festival at Schoolcraft College in Livonia from 10-3 on Sat. Sept. 23. This is a wonderful hands-on science event for all ages, and is free. Families can drop in anytime from 10-3 and explore over 100 activities hosted by the Michigan Tech Mind-Trekkers club, Schoolcraft staff, and volunteers.

ASM Members are also welcome to host an activity. Peg Jones is coordinating about 5 materials engineering themed activities and needs help anytime between 9:30am and 3:30pm on Sat. The activities are easy to learn and demonstrate. Please get in touch with Peg if you can help for an hour or more on Saturday Sept. 23. You can reach Peg at (989) 860-8968 or peggy.jones@gm.com (There are also openings to host demos for 2,500 middle school students from 8:00am to 3:00pm on Fri. Sept. 22 – contact Peg for details.)

The ASM Detroit Chapter

Thanks It’s Sustaining Members for Their Continued Support!

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We celebrated the 15th annual Teachers Camp at Ann Arbor in July with a wonderful group of 25 teachers, most of whom are already teaching a materials science elective in their high schools. The first Teachers Camp ever held was hosted by our chapter, and one of the teachers who attended that first year was back for the advanced version we did this summer. It’s amazing to think that since 2002 ASM has held 381 camps for 8,915 teachers and spread from Ann Arbor all across the US and Canada and as far as Brazil! It wouldn’t have been possible without the investment the Detroit Chapter, Sustaining Members, U of M Van Vlack lab staff and faculty, and individual members have made year after year to support the Camp financially and with their volunteer time. We are known as the premier Camp location thanks to all of you.

We did more activities requiring a real furnace at the advanced camp, including making a metastable zinc-aluminum alloy which undergoes a very exothermic precipitation reaction when banged on the floor, and making glass from sand and other raw materials. We made patterns from thermostet resins, then pressed them into sand to make metal castings – the Star Wars patterns were popular! The faculty hosted small groups of teachers to show them current research in their labs, ranging from computational and materials characterization innovations to looking at how mechanical stresses applied to cancer cell cultures affects their biological characteristics.

We also worked on new curriculum content related to light weight design. This project, supported by LIFT, involves optimizing the specific stiffness of beams. Students engineer the geometry and materials selections in the beams, measure the modulus of their beam using a cantilever beam, and crash test the beams. It was inspired by the advanced materials and topological design methods in the “B Pillar” that protects passengers in t-bone automobile crashes.

We melted aluminum and zinc together to create a metastable alloy that has a dramatically exothermic precipitation reaction when you strike it on the floor. The samples can be used over and over by heat treating them to redissolve the precipitates. The teachers had a chance to practice working with hot materials in the advanced camp.

The highlights from this years ASM Teachers Camp include:

- Sand casting, using patterns we made from thermosetting resins, was popular – especially the star wars figures.
- The gourmet treats baked by Dr. Kathy Hayrynen are legendary.
- One of this years attendees, George Granlund, came to the very first Camp in 2002.
- The “Came the Farthest” award went to Darren from Yakima, WA.

ASM Teacher’s Camp “Aha!” Moments

“Making R2D2 and Hans Solo sand castings” - Justin

“Developing a materials science program for 9th grade” – Erin

“Learned to grow a single crystal!” – Nate

“Great to be around career professionals” – Paul

“All schools must offer materials science classes!” - Natalie

“Finding ideas of ways to do Physical Science” - Kate
The 2017 Joint ASM / AFS golf outing held at Fellows Creek Golf Course in Canton, MI this past August was a great success! We had perfect weather to add to the enjoyment of the event this year. The weather proved the old adage: “Golfing with great people will always be a great time”. I truly had a great time getting to see 81 golfers enjoy the day hitting their best shots and winning some fantastic prizes. Of course my being able to see 81 golfers enjoy the day comes as the result of incredible work on the part of the golf committee. Therefore, a “BIG” thanks goes out to the golf committee which included Eugene Kuo, Greg Wojcik, Jim Panasiewicz, Julie Nimer, Mike Blazejewski, Alex Preisser, Urban de Souza, JP Singhand ASM Entertainment Chairman Tim Stachowski for organizing the event. I also have to recognize our volunteers: Nikki Tiernan deserves thanks for helping out by selling raffle tickets and handing out free drinks to our golfers from the beverage cart. Thanks to Kae Trojanowski for assisting with the raffle and thanks also to David Masha this year for taking photographs of the golfers. The banquet held after golf consisted of a delicious steak dinner followed by the awards ceremony. Sponsors were all recognized for the generous donations. Included in the Micro-Examiner is a complete list of all sponsors for the golf outing. Many other companies brought additional prizes which were raffled off and made some happy participants multiple winners. A final thank you needs to go out to these companies for their contributions. The funds raised from the outing will be used by both ASM and AFS to better serve their respective programs and community activities. Hope to see everyone again next year!

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Winning Team: Rod Capling, Greg Capling, Mike Diegel, Wally Ducharme
Women’s Longest Drive: Kim Tynan
Women’s Closest to the Pin: Alison Kuelz
Men’s Longest Drive: Patrick Jewula
Men’s Closest to the Pin: Matt Smale
2017-18 Season
ASM Detroit Chapter Schedule

September 21, 2017 – ASM Professional/Student Mixer Night
Conor O’Neill’s, Ann Arbor

October 16, 2017 – ASM Fellows Night
David Havrilla, Trumpf
CJ’s Brewery, Plymouth

PLEASE NOTE
NEW DATE

November 6, 2017 – National Officer’s Night
Dr. Schmidt - ASM President
The Gazebo, Warren

February 12, 2018 – Membership Night
Dr. Steve Shaffer - Bruker
The Livonia Marriott

March 12, 2018 – Sustaining Members Night
Dan Risner, Hitachi – Metals
Southfield - Saint John’s

April 2018 – AFS/ASM Joint Meeting
TBD

May 14, 2018 – Woodside Lecture
Farmington Hills Manor

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September 2017