The automotive industry is in the midst of a transformation that will drive more change over the next 5 years than the last 100 years combined. A new automotive world of electrified vehicles and autonomous vehicles with no steering wheels or pedals will only be enabled by challenging the status quo and thinking very differently about how automobiles are designed and manufactured. Additive manufacturing will be one of the key technologies to support the transformation and help deliver this new and exciting future. Not only will 3D printing continue to support the vehicle development process through quick and efficient prototype parts, but end use serial production is within sight. Additively manufactured production parts can enable unique, fully optimized, component designs that will deliver performance and capability to customers that could not be realized with traditional manufacturing methods. The opportunities are endless as the technology continues to grow and develop.

Kevin Quinn was named Director, Additive Design & Manufacturing in June 2017 at General Motors. In this role, Quinn leads the team responsible for creating and executing the global corporate additive design and manufacturing strategy. He leads the cross functional internal team to identify and implement additive manufacturing opportunities in addition to developing key external partnerships to grow capability and advance the technology.

Prior to this appointment, Quinn held the position of Senior Manager, Safety Process & GPD Federal Oversight responsible for coordinating activities of the government appointed monitor across the organization.

Throughout his career at GM he has held several other engineering roles including; Business Planning Manager - Global Vehicle Components & Subsystems, Engineering Group Manager, Vehicle Engineering Operations Manager, Bill of Material Family Owner and Design Release Engineer.

Quinn holds a Bachelor of Science degree in Mechanical Engineering from the University of Michigan, a Master of Science in Engineering from Purdue University, and a Master in Business Administration from Indiana University.
Spring Forward

As the season turns to Spring, one can feel the impending energy of change and new beginnings. The days get longer and brighter, and the first traces of warmth hint at outdoor weather that will be enjoyed! This change is also felt with our Chapter; soon, we will be bringing another Chapter year to a close and beginning the planning for our next one. Our Chapter’s Executive Committee has stayed focused on our key strategic goals that we set up for next five years.

One key strategic area has been chapter programming; the goal was to provide topics that meet your needs for staying informed on new topics of interest as well as key developments in materials technologies. I am proud to say that our last two meetings have met these goals with well-presented topics on heat-resistant and sustainable materials that had high (60+) member attendance. Our upcoming dinner meetings on Additive Manufacturing (on April 8th at the Gazebo) and on Induction Heating (May 13 at the Burton Manor) both promise to be exciting and informative presentations as well. Plan on being part of these events!

In addition, our recent two-day course on Failure Analysis was also well-received and attended; multiple attendees remarked on the high value of the information and instruction. In addition, the cost of the course was minimized to allow our membership to take maximum advantage of the opportunity. Because of this success, we will strengthen our programming by holding another training session in the future.

Another key strategic area has been to bring in new personnel into executive committee positions; these volunteers have been working closely with their mentors to learn and expand the effectiveness of these committees. We continue to make good progress in this area; we will have at least two candidates for nominations to the Board for our annual May vote.

We continue to call for New Board Members. As I mentioned previously, our chapter has remained strong and vibrant due to the time and effort of our many dedicated Committee Chairs and Board members. We are always looking for new individuals to join the board so that their time, talent, and experiences can be incorporated to enhance and grow the chapter. If you have never served before, or know of an individual who could contribute, please encourage them to email me (jboileau@ford.com) or stop me at one of the upcoming meetings – I am always willing to spend time talking about the benefits of involvement with ASM.

These strategic areas are designed to keep our chapter healthy and of value to our membership. We would like to hear from you on any suggestions that you may have; we are always looking to improve and make Chapter events more engaging and relevant for our members. Please feel free to contact any of us on the Executive Committee; your support and engagement at every level is key to our Chapter’s success.
Thank You to Our Social Hour Sponsor – April 8, 2019

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2018-2019 Chapter Season

Monday, April 8, 2019
Joint ASM and AFS Meeting
Kevin Quinn
Director–Additive Design & Manufacturing
Drive to Production: The Expanding Role of Additive Manufacturing in the Automotive Industry
Location: The Gazebo Banquet Center, Warren

May 13, 2019: Woodside Lecture
Dr. Valery Rudnev
Recent Theoretical and Practical Novelities in Induction Heat Treatment
Burton Manor, Livonia

August 3, 2019
ASM/AFS Joint Golf Outing
Science and Engineering Fair 2019

The 2019 Science and Engineering Fair of Metropolitan Detroit was held on Wednesday, March 13, 2019, at Cobo Hall in Detroit. Celebrating its 62nd year, SEFMD had 2000 students from 125 middle and high schools prepare and present their research projects to over 500 professionals. ASM volunteers judged those projects focused upon the creation, development, and application of materials. The fair is divided into a Senior division (students in grades 9 – 12) and a Junior division (students in grades 6 – 8.)

The chapter is proud to recognize Grace Endrud, a junior at Detroit County Day Upper, with the ASM-Detroit Chapter First Place Award. Grace’s research was titled “Agar and Filtration: A New Application for Biodegradable Materials.” The chapter is also proud to recognize Christian Nicholson, an eighth-grader at Nolan Elementary-Middle School, with an ASM-Detroit Chapter First Place Award for his project “Alkali-Silica Reaction in Concrete.” Rebecca Murray, a junior at the International Tech Academy, received the ASM International Award for her project “Creating Insulative Concrete from Mainstream Waste.”

In addition to the first place and international awards, the judging team also awarded two second place awards to Margaret Yang, Alyssa Sun, and Trinity Lee (Cranbrook Kingswood Upper School) for their work on dual-precipitation nano-structured aluminum alloy for engine applications and the “Reducing, Reusing, and Recycling Styrofoam” team (8th Grade, Huda School & Montessori) for their research into converting Styrofoam into activated charcoal to filter water. Team members include: Aminah Lawal, Shaza Ahmed, and Mariam Abdelhamid. The two third place awards went to Maheen Haq, Shreya Chalasani, and Niki Movva (Detroit County Day HS) and Matthew Mason (University Prep Science and Math MS).
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April 2019

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The ASM Detroit Chapter held a two-day course on Failure Analysis On February 28 and March 1, 2019 which was led by Debbie Aliya from Aliya Analytical

A total of 28 attendees were present for the course and were surveyed for what they liked/what could be improved. On a 5-point scale, an overall rating of 5 was given. Attendees remarked that they thought it was a fabulous course, the instructor was very engaging and informative, and overall a great value. They also remarked that the course was professionally prepared and the food was great!

Attendees remarked that they would like to see additional courses on “Fatigue/Impact Design,” “Metallurgy for the Non-metallurgist” and “Automotive Materials.”

The chapter would like to thank Pridgeon and Clay and Mager Scientific for sponsoring the course breakfasts and lunches.

Finally, the chapter would like to thank Thomas Kozina and John Tartaglia for assisting with the course and helping to make the event a huge success!

From Left to Right: Thomas Kozina, John Tartaglia, and Debbie Aliya. Thanks to all for making the course such a great success!

College and University Scholarship Recipients

Our chapter is happy to announce that it awarded three $1500 scholarships to students pursuing a degree in materials science and engineering this year. The scholarships were presented at the March meeting. The Marion Semchyshen, James A. Mansfield, and Chapter Membership Scholarships were given to three students selected for their high scholastic achievement and their activities in the field of materials science or metallurgy.

Joshua Cooper received the James A. Mansfield Scholarship. Joshua is a junior at the University of Michigan. Joshua has interned at DTE Energy with the Combustion and Draft Team. After he graduates, he would like to continue pursue a doctorate in materials science and engineering and become an expert in clean energy generation.

Nate Graff received the Chapter Membership Scholarship. Nate is a junior at Michigan State University and has interned for ArcelorMittal. He is part of the graduate student metals research group at Michigan State.

Nathan Ng received the Marion Semchyshen Scholarship. Nathan is a junior at University of Michigan who has interned with BASF and plans to work in the process design industry or in coatings when he graduates.

Angella Sell (18-19 ASM Detroit Chapter Student Affairs Co-Chair) presents awards to two of our University Scholarship winners at the March 11th dinner meeting. Joshua Cooper and Nate Graff.

We had 28 attendees at the course held at the Engineering Society Detroit Building in Southfield. The class was divided in to smaller groups throughout the day to examine failed parts and analyze potential causes for the failures.
March Meeting Re-Cap

We had 64 attendees at our dinner meeting at the Livonia Marriott on March 11, 2019.

James Boileau (18-19 ASM Detroit Chapter Chair) presents Gary Crosbie with an ASM Life Membership Award at the March 11th Dinner Meeting.

Thomas Kozina (March 11th Technical Chair) and James Boileau (18-19 ASM Detroit Chapter Chair) present Debbie Mielewski with an ASM Detroit Chapter Speaker Award at the March 11th Dinner Meeting.

Continued on next page
March Meeting Re-Cap

Thanks to our Social Hour Sponsor Gasbarre Thermal Processing Systems for sponsoring our March 11th Dinner Meeting.

We had 11 Sustaining Member Companies attend our March 11th Dinner Meeting. From Left to Right: Omni Metals (David Sponseller), Gasbarre Thermal Processing Systems (Ben Gasbarre), Michigan Metrology (Don Cohen), Park Thermal International (Steve Cropper), United Technical (Richard Slade), Burris Law (Mark Harper), AK Steel (Ron Radziowski), Materials Technology Consulting (Eric McCarty), Applied Process (Angella Sell), General Motors (JP Singh) and Element (Jim Keimig).

Thanks to the Geisler Middle School Future Cities Team for attending our dinner meeting and bringing their winning 2019 Future Cities display to our March 11th, Dinner Meeting.
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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!
Detroit Chapter ASM Member runs Girl Scout Materials Girl Patch Event

On Saturday, March 9, Brownie scout Troop 76837 traveled to Ionbond IHI in Madison Heights to attend a Materials Girl workshop put on by their troop leader, ASM member Jessica Owens-Mawson. The second grade girls were introduced to Materials Engineering and got to hear all about what inspired their troop leader to follow her career path. The Brownie scouts also had the opportunity to try their hand at being junior engineers by performing an experiment to determine the hardness of portable snacks (such as granola bars, graham crackers, rice krispy treats, etc.). Working in small teams, the girls determined the fracture load necessary to break the snacks and then examined the failure patterns to learn the effects of grain structure and material choice. After witnessing the enthusiastic participation at the workshop, hopefully we will see some of these girls at a chapter meeting in about 15 years!

Mark Your Calendar for the August 3, 2019 ASM/AFS

We know that winter can’t last forever and we want to invite you to save Saturday, August 3rd as the date to come out and join us for the ASM and AFS Golf Outing. The outing will once again be at Fellows Creek Golf Course in Canton, MI. See page 12 for the golf flyer.
ASM Detroit Chapter and AFS Detroit/Windsor Chapter

11th Annual Golf Outing
Saturday, August 3rd, 2019
at Fellows Creek Golf Course in Canton, Michigan

The event is ASM-Detroit Chapter’s & Detroit Windsor AFS Chapter’s yearly fundraising project and is only made possible by our generous sponsors and golfers. This is a unique opportunity for local business owners and chapter members to promote their goods and services. It’s also a great place to network with others and have a great time.

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