PRESENT A JOINT DINNER MEETING and Tour
“The Forest or the Trees?”

SEE BELOW FOR SEPARATE SIGN-UP FOR THE TOUR! There are still spots available.

Date: Monday, November 11, 2019
Time: 5:30 pm Social Hour: Fellowship and Networking
6:30 pm Dinner
7:15 pm Brief Presentation by Social Sponsor on Industrial CT Scanning
7:30 pm Main Presentation

Place: **DOUBLETREE BY HILTON- GRAND RAPIDS AIRPORT**
4747 28th Street SE, Grand Rapids, MI 49512 USA

Cost: Members and Non-members $25.00
Students, retirees and unemployed $12.00
Payment by cash or check at the door.
Credit Card Now Available with $1 Convenience Fee ($0.50 for Students/ Retirees)

Menu: Your Choice of Barbecue Spiced Pork Loin Chop with Apple Mustard Jam, or Wild Mushroom Risotto (Vegetarian). All dinners accompanied by mixed greens salad, rolls, dessert bars, and coffee or tea. **Special needs meal requestors must sign up by noon, Monday, November 4. All others must sign up by Wednesday, November 6, at NOON!**

Speaker: **Mark VanSolkema**, Consulting Engineer at GE Aviation Systems in Grand Rapids, Michigan

Presentation Topic: Failure Analysis Case Study and Introduction to GE Aviation’s Activities, with highlights of the Patterson Plant.

Technical Presentation Abstract:
Is your electronic device giving you fits? Have you examined all the pieces and parts but can’t seem to see the forest for the trees? Take a closer look. The trees may just be the problem! In this case study, optical microscopy and especially SEM/EDS are used to identify electrochemical metal migration or “dendrite shorting” in electronic circuits. The causes, detection, and prevention of metal dendrites will be reviewed.

**Mark Van Solkema** is a Consulting Engineer at GE Aviation Systems in Grand Rapids, Michigan, specializing in testing and analysis of electronic components and assemblies. Mark began his career at Lear Siegler where he was hired fresh out of technical school to operate and maintain the first Scanning Electron Microscope in the Grand Rapids area. Under the mentorship of metallurgist and ASM member Lee Wilbur, Mark developed a keen interest in electronic materials, especially the “physics of failure” approach to failure analysis. While working at “Lear”, Mark furthered his education at Grand Rapids Community College and Michigan State
University. He also took advantage of several ASM home-study courses. Lear Siegler was acquired by Smiths Aerospace, and eventually GE Aviation. These changes brought new computer-based products and many opportunities to delve into the latest electronic components and materials technologies. Mark is currently the subject matter expert for lead-free electronic assembly and continues to perform troubleshooting, testing, and analysis of electronic parts, assemblies, and processes. Tools of the trade include Optical Microscopy, Scanning Electron Microscope/Energy Dispersive Spectroscopy, Radiography, Infrared Spectroscopy, and Metallography.

**GE AVIATION Business Activity Presentation – Loren Strelow**

Great opportunity to find out what’s going on at a local manufacturing company. Pair with the tour. See info below.

**Loren Strelow** is the Regional Sales Leader for GE Aviation. Loren leads the sales team responsible for new programs in the Americas, focusing on defense OEMs such as Boeing, Lockheed Martin and Northrop Grumman as well as direct government programs. Loren joined GE Aviation in 2016. Prior to GE, Loren was the regional sales leader at Astronautics, a privately held aerospace firm. Loren started his aerospace career at Honeywell, formerly Allied Signal, holding various leadership roles over a span of 15 years in Sales, Marketing, Business Development and Customer Support. Loren holds a BS from the University of Minnesota and an MBA from University of Phoenix. Outside of work, Loren enjoys spending time with his family, home renovation projects and volunteering at Habitat for Humanity.

RESERVATIONS TO [DaAliya@itothen.com](mailto:DaAliya@itothen.com)

**TOUR- Separate Sign-up!**

Monday, November 11, 2019 Tour of GE Aviation on Patterson: Limited to 20 People MAX  
MUST RESERVE BY NOVEMBER 4 at noon.

Tour Guide: Mark VanSolkema


* Tour at 4 pm, November 11.
* Tour limited to 20 participants.
* Tour limited to US citizens only. (Must declare you are a citizen, and bring a state or national government photo ID.)
* List of participants legal names and addresses needed by October 24. Last date to sign up.

Preference given to ASM and SAE members. Provide your member number when you register.
* Meet in the front lobby, 3290 Patterson Ave.
* Park out front in designated visitor parking. If full, use any other open spot.
* Smocks and safety glasses will be provided. Personal safety glasses are acceptable.

SAVE THE DATE: Monday, March 16, 2020
Dr. Mohamed Zaher, Functional Safety of Self Driving Cars
Social Sponsor: Intertek

SAVE THE DATE: Monday, April 21, 2020
Dr. Judith A. Todd, FASM P.B. Breneman Chair and Professor of Engineering Science and Mechanics Penn State University, University Park, PA Dr. Todd is Department Head, P. B. Breneman Chair and Professor of Engineering Science and Mechanics at Penn State University. Prior to joining Penn State in 2002, Professor Todd was the Associate Dean for Research, Professor of Mechanical and Materials Engineering, and Associate Chair (six years) for the Materials Science and Engineering Program, Department of Mechanical, Materials and Aerospace Engineering, Armour College of Engineering and Science, at the Illinois Institute of Technology. She was an Iron and Steel Society Professor, Iron and Steel Society, American Institute of Mining, Metallurgical and Petroleum Engineers, from 1996-2002.

Abstract: In 1972, Dr. Todd lived for a year in the remote highlands of South-West Ethiopia, with the Deemay people, who were still producing iron by methods used over 2000 years ago. In this talk, we will travel back to the African Iron Age to learn about the bloomery iron process, the importance of iron not just for tools but in warding off the “evil eye”, the day to day life of the Deemay, and the position of the smith caste in society. The role of inclusion analysis in determining patterns of trade in iron artefacts will be discussed.