WHAT’S NEW
AT MOTION + POWER TECHNOLOGY EXPO?

WHO SHOULD ATTEND?

Shop and compare the full range of power transmission solutions utilizing mechanical power transmission, pneumatics, hydraulics, electric motors, and drives.

At MPT Expo, you’ll see the entire power transmission supply chain — from forgings to machine tools to robotics. More than 300 exhibitors will show you the latest technologies and solutions.

Experience the brand-new MPT Conference, presented by NFPA and AGMA, with sessions presented by 16 speakers focusing on business topics and emerging technologies that all manufacturers will want to hear.

Participate in the inaugural Women’s Breakfast featuring Society of Women Engineers’ Fellow Stacey DelVecchio.

50 first-time exhibitors showcasing unique solutions.

Fluid Power Pavilion — your destination to learn if hydraulics and pneumatics could improve your project.

Emerging Technology Pavilion — provides a look at new, cutting-edge technology that is coming into the manufacturing space.

Young Professionals Reception — meet and mingle with the next generation of leaders.

The Heat Is On networking event — get the flavor of Detroit with regional food and drink.
This meeting brings together top researchers from across the globe who will provide the latest information on their peer-reviewed gear industry research. Network with industry experts, academics, and engineers; ask your burning questions; and see what’s next for the future of this industry.

EXHIBIT HALL HOURS

TUESDAY, OCTOBER 15 | 9:00 AM – 6:00 PM
WEDNESDAY, OCTOBER 16 | 9:00 AM – 5:00 PM
THURSDAY, OCTOBER 17 | 9:00 AM – 4:00 PM

To search a complete list of exhibitors by name or product category, visit MotionPowerExpo.com

FALL TECHNICAL MEETING NETWORKING AND EVENTS SCHEDULE

MONDAY, OCTOBER 14 | 1:00 PM – 8:00 PM
TUESDAY, OCTOBER 15 | 7:00 AM – 5:00 PM
WEDNESDAY, OCTOBER 16 | 7:00 AM – 5:00 PM

Each session will showcase five to six presenters sharing their highly technical knowledge of specific topics within the following research areas:

- **SESSION 1**: Application, Design, and Rating
- **SESSION 2**: Efficiency, Lubrication, Noise, and Vibration
- **SESSION 3**: Materials and Heat Treatment
- **SESSION 4**: Manufacturing, Inspection, and Quality Control
- **SESSION 5**: Optimization, Gear Wear, and Failure

PRICING — INCLUDES ADMISSION TO THE EXHIBIT HALLS:

- Member early bird: $995
- Non-member early bird: $1,295
- Member regular: $1,095
- Non-member regular: $1,395
- Single session member: $295
- Single session non-member: $395
- FTM Fun and Games Reception: $50

Your MPT Expo badge gives you access to the co-located 2019 ASM International Heat Treating Society Conference & Exposition, recognized by industry, academia, and government professionals as the premier heat treating event in North America.
will dispel some of the myths about the cloud and can be applied to drive your business ahead of the curve. As well, we will cover some of the ways data is using data to drive down costs and increase revenue, as well as cover some of the ways data is using data to drive down costs and increase revenue.

4.0 success? So what’s the secret sauce to Industry 4.0 success? Advances in IoT technology provide greater visibility insights through real-time data and monitoring to eliminate tracking blind spots across providers and modes. These smart sensors and devices continually log data in transit and transmit the information to a cloud portal that is accessible anywhere. You will learn how a supply chain with embedded IoT technology provides this key data for making critical decisions on improving your operations and reducing risk.

9:00 AM – 10:00 AM
Supply Chain: Jeff Newman, VP, Supply Chain Visibility Solution Sales, CalAmp

Improve In-Transit Visibility to Reduce Supply Chain Risk

Advances in IoT technology provide greater visibility insights through real-time data and monitoring to eliminate tracking blind spots across providers and modes. These smart sensors and devices continually log data in transit and transmit the information to a cloud portal that is accessible anywhere. You will learn how a supply chain with embedded IoT technology provides this key data for making critical decisions on improving your operations and reducing risk.

10:30 AM – 11:30 AM
Market Info: Chloe Parkins, Fluid Power Specialist, Oxford Economics

Economic Outlook and Trends within the Industrial Fluid Power Market

The aim of this session is to provide an understanding of the economic backdrop faced by industrial fluid power manufacturers and purchasers. We will first set the scene with an overview of the global economy, highlighting key issues and trends affecting overall industrial activity. Then we will drill down to the U.S. economy, giving a forecast outlook for the macro economy, including factors affecting investment and capital expenditure. We will cover a couple of relevant scenarios around recent trends, events, and sources of risk. We will then delve deeper into the key drivers for industrial fluid power, focusing on key demand sectors that purchase and use fluid power equipment.

Electric Drive Technology: John Bennett, VP and CTO, Meritor

The Future of eMobility in the Commercial Vehicle Space

Commercial vehicles are currently undergoing a shift in powertrain technologies driven by the need for lower GHG emissions and the desire for lowest total cost of ownership. In this presentation, John will explore the current state of eMobility systems in commercial vehicles, the drivers and barriers for widescale adoption of electric commercial vehicles, the future outlook of the various architectures of electric drivetrains, and the impact to gearing technology in those architectures.
Many other industry verticals, have unique research organizations, and governments and protocols developed by industry, academia, and governments around the globe. The rate of electrification seems to be accelerating every day. Major OEMs make regular announcements about battery electric vehicles and Tesla continues to disrupt its segments. But where does that leave a gear supplier or engineer? In this session, we’ll take a look at some of the new challenges and new applications and see where the gears and bearings of the future will be deployed.

Cybersecurity: James McQuiggan, CISSP, Chapter President, (ISC)² Central Florida Chapter

Cybersecurity Hygiene in Motion

When it comes to hygiene, we grew up understanding what is good hygiene, washing our hands before dinner, brushing our teeth before bed, and taking a shower at least every other day. In cybersecurity, similar hygiene can be applied to our daily lives that can help not only at home, but also in the places we work. Within the company and as it relates to cybersecurity, leaders are unsure of that hygiene in the standards they need to follow, what technology they need to purchase, and how they can protect against an attack. In motion or standing still, there are simple things that we can do to protect ourselves online, at home, and at the office.

3D Printing: Jeff Grabowski, Materials Specialist, QuesTek Innovations, LLC

Materials Challenges and Solutions in Additive Manufacturing

Much of the research in additive manufacturing (AM) has focused on a relatively small set of legacy and commodity alloys, such as stainless steel, Ti-6-4, and castable Al alloys. Often, the same alloy chemistry and standard heat treatment practices developed for forged bar are used, resulting in material performance issues. This talk will provide recent project updates to optimize legacy alloys and design, develop and deploy novel high-performance alloys for additive manufacturing processes, leveraging an Integrated Computational Materials Engineering (ICME) approach and showing improvement over current commodity alloys. Alloys covered will be relevant to gear and power applications.

Collaborative Operation in Industry Today

Collaborative operation and more generally the collaborative robot are very popular topics in the automation industry. In order to successfully implement and use collaborative technology, it is important to understand what collaborative operation is and how it can fit into your facility. Looking at the safety standards for collaborative operation is a great start; however it is highly recommended to review the technical report guidelines for integrating collaborative operations in the RIA TR 15.606 and validating force and power limited collaborative operation in the RIA TR 15.806. Choosing a good application for your first collaborative robot will help integrate this technology into your facility and introduce your employees to the exciting world of shared workspaces between people and robots.
EDUCATION COURSES
Free pass to both exhibit halls when you register for any education course.

Technical Overview of Automotive Differentials
Instructor: William Mark McVea, KBE+, Inc.
TUESDAY, OCTOBER 15
8:00 AM – 12:00 PM
This seminar will provide insight into automotive differential technologies — specifically, the intended function, issues with the common differential types (i.e., open differential), the concept of traction aiding differentials and the difference between passive mechanical and active electronic, and finally an overview of the design requirements and common manufacturing nuances specific to differential gears.
Registration Fee:
Early Bird, through September 13, 2019: Member: $295
Non-Member: $395
After September 13, 2019:
Member: $350
Non-Member: $450

Supply Chain Management
Instructors: Dr. Justin Jones and Keyvan Gerami, Ranken Technical College
TUESDAY, OCTOBER 15
8:00 AM – 12:00 PM
This course provides an overview on knowledge of supply chain management concepts, components, and principles. An introduction to the competitive advantages needed by skilled individuals to design, execute, and manage their supply chain.
Registration Fee:
Early Bird, through September 13, 2019:
Member: $295
Non-Member: $395
After September 13, 2019:
Member: $350
Non-Member: $450

Hydraulic Fluid Properties, Efficiency, and Contamination Control
Presented by: Paul Michael, Research Chemist, MSOE
TUESDAY, OCTOBER 15
8:00 AM – 12:00 PM
In this seminar, participants will learn about the composition of oils, the properties of lubricants, and how hydraulic fluids can affect machine performance. Conventional, multi-grade, synthetic, and biodegradable fluids will be discussed. Research studies examining fluid efficiency effects in hydraulic motors, as well as piston and gear pumps will be presented. The principles of oil analysis and filter selection will be outlined. The seminar will conclude with case studies that demonstrate how filter debris analysis can be used to troubleshoot hydraulic system contamination control problems.
Registration Fee:
Early Bird, through September 13, 2019:
Member: $295
Non-Member: $395
After September 13, 2019:
Member: $350
Non-Member: $450

Overview of Fluid Power Components and Systems
Presented by: Thomas Wanke, CFPE Director, Fluid Power Industrial Consortium and Industry Relations, MSOE
TUESDAY, OCTOBER 15
1:00 PM – 5:00 PM
This introductory-level course will cover the benefits and challenges of using fluid power systems for power transmission and motion control. Physical laws that govern how and why fluid power systems function will be discussed. Individual components that comprise a fluid power system, including their design, construction, and operational characteristics, will be presented. ISO symbology used for representing individual components will be covered. The course will collimate with a brief overview of circuit architectures.
Registration Fee:
Early Bird, through September 13, 2019:
Member: $295
Non-Member: $395
After September 13, 2019:
Member: $350
Non-Member: $450

Why Bearings Are Damaged
Presented by: ABMA
TUESDAY, OCTOBER 15
1:00 PM – 5:00 PM
The American Bearing Manufacturers Association is offering this course on rolling element bearings for those involved in industrial equipment design, reliability, and maintenance. It will include a basic overview of rolling bearings, their selection, precision and mounting considerations, service life estimation, and lubrication-related influences. A hands-on damage analysis session will be the featured portion of this program.
Registration Fee:
Early Bird, through September 13, 2019:
Member: $295
Non-Member: $395
After September 13, 2019:
Member: $350
Non-Member: $450

Fundamental Understanding of Electro Fluid Power Technology
Presented by: Dr. Medhat Khalil, CHFPS, CFAPI, Director of Professional Education and Research Development
WEDNESDAY, OCTOBER 16
8:00 AM – 12:00 PM
This seminar briefly introduces electro fluid power technology and its outstanding features as compared to the other power transmission and motion control systems. Fundamental knowledge about the most common types of electrohydraulic and electropneumatic valves will be covered. Various criteria to select a specific valve for an application, including valve type, spool design, operating conditions, and static and dynamic characteristics, will be discussed. This seminar also covers various system-level control loops architectures and tuning methods for system performance.
Registration Fee:
Early Bird, through September 13, 2019:
Member: $295
Non-Member: $395
After September 13, 2019:
Member: $350
Non-Member: $450
Reverse Gear System Engineering — Why, When, and How
Instructor: Raymond Drago, P.E., Drive Systems Technology

WEDNESDAY, OCTOBER 16
8:00 AM – 5:00 PM

Reverse engineering a gear system is not too unusual of a task. In many cases — but not all — the process goes fairly well, thus it is easy to become complacent. It is important, however, to fully understand the process and the best practice procedure for reverse engineering a gear system. Failure to fully follow best practice can result, at best, in an unhappy user, but in the worst case it can lead to very expensive, time-consuming, and reputation-damaging litigation. We will discuss the basic types of reverse engineering. The need for understanding the operation of the system in which the gears will be used, the conditions that led to the need for the project, and especially the specific nature of the failure that occurred (if that is the reason for the project) are key and often ignored elements of the process.

Registration Fee:
Early Bird, through September 13, 2019:
Member: $445
Non-Member: $575
After September 13, 2019:
Member: $525
Non-Member: $655

Materials Selection and Heat Treatment of Gears
Presented by: AGMA and ASM International

THURSDAY, OCTOBER 17
8:00 AM – 5:00 PM

Because of their unique contribution to the operation of so many machines and mechanical devices, gears have received special attention from the technical community for more than two millennia. New developments in gear technology, particularly from the materials and heat treatment perspectives, have improved gear performance. This course, developed jointly by AGMA and ASM International, will provide an overview of materials selection and heat treatment of gears.

Registration Fee:
Early Bird, through September 13, 2019:
Member: $445
Non-Member: $575
After September 13, 2019:
Member: $525
Non-Member: $655
EXCITING EVENTS TO NETWORK AND BUILD YOUR COMMUNITY

FTM FUN AND GAMES RECEPTION
MONDAY, OCTOBER 14 | 6:00 PM – 8:30 PM
MPT Expo attendees are invited to join AGMA Fall Technical Meeting attendees at our FTM Fun and Games Reception at Punch Bowl Social Detroit. Enjoy food and drinks with your colleagues while participating in fun activities such as bowling, darts, karaoke, and arcade games. A great way to kick off a busy week at MPT Expo!
✓ FREE for FTM attendees
✓ $50 for all other attendees

OPENING NIGHT WELCOME RECEPTION
TUESDAY, OCTOBER 15 | 5:00 PM – 6:00 PM
Don’t miss this meet-and-greet event right on the show floor!
✓ FREE for all attendees
✓ Two drink tickets included with registration.

YOUNG PROFESSIONALS RECEPTION AT MPT EXPO
TUESDAY, OCTOBER 15 | 6:00 PM – 8:00 PM
The evening will be a great opportunity for all those business professionals 35 and under to network and engage in industry discussion while enjoying food drinks and entertainment.
✓ $15/person

THE HEAT IS ON
WEDNESDAY, OCTOBER 16 | 6:30 PM – 9:30 PM
Join your fellow Heat Treat and MPT attendees during our premier networking event, “The Heat Is On.” This special evening will capture the heart of Detroit and all attendees with live music, a tempting array of Detroit-inspired food, craft beer, and a few “hot” surprises!
✓ Member: $85
✓ Non-Member: $95

WOMEN IN MANUFACTURING BREAKFAST
THURSDAY, OCTOBER 17 | 7:30 AM – 8:30 AM
This breakfast will allow women in all sectors of manufacturing and power transmission to share thoughts and ideas about industry innovation. Hear our guest speaker share her experience and leave with ideas and a fun giveaway!

Featured Speaker:
Stacey M. DeVecchio, President, StaceyD Consulting, F. SWE, Secretary of Women in Engineering Committee for WFEO
✓ $15/person

REGISTER TODAY AT MotionPowerExpo.com
With the latest demands for efficiency and power density, often the solution is a choice combining mechanical, fluid power, electric, and hybrid technologies. Learn about the research driving the next generation of innovation at the MPT Conference, AGMA’s Fall Technical Meeting, and other education seminars. And then experience it hands-on with new products and demonstrations inside the exhibit hall, including start-ups in the emerging technology pavilion.

Register Toda
MotionPowerExpo.com

MPT EXPO IS ALL ABOUT INNOVATION.

OCTOBER 15–17, 2019

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300 EXHIBITORS
15+ KNOWLEDGEABLE SPEAKERS
3 ACTION-PACKED DAYS

MOTION TECHNOLOGY EXPO

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