



NFPA/FPIC/AMT Quarterly Conference

Thursday, March 3, 2022

8:00 AM to 11:45 AM Eastern Time



Virtual and In-person

Hilton Garden Inn
200 Wilshire Drive
Troy, MI 48084

Advanced Manufacturing Technologies for Fluid Power Components and Systems

8:00 – 8:10 AM	<p>Connection Time/Prepare for Event We want to make sure everyone is connected and ready to go for an informative and interactive morning. Use this time to make sure your connection is working, familiarize yourself with the platform and connect informally with other participants.</p>
8:10 – 8:30 AM	<p>Welcome and Opening Remarks Tom Wanke (MSOE) and Eric Lanke (NFPA) will call us to order and introduce Benjamin Moses from the Association of Manufacturing Technology (AMT), who is co-sponsoring the program.</p>
8:30 – 9:20 AM	<p>Integrated Computational Materials Engineering (ICME) for Improving Materials Performance, Light Weighting and Increased Power Density in the Fluid Power Industry Presenter: Jeff Grabowski; Manager of Business Development, QuesTek Innovations, LLC.</p> <p>Integrated Computational Materials Engineering (ICME) are effective technologies to reconfigure the materials development process and accelerate implementation of new higher performance alloys into demanding applications. This presentation covers QuesTek’s use of ICME to model and optimize legacy alloys and design new alloys that are relevant for the fluid power industry, such as for example high strength steel, cast iron, aluminum, and titanium alloys. Case studies and successful examples of designing and deploying new materials with high strength, high hardness and corrosion resistant properties for gears, shafts, actuators and bearings will be discussed. An overview of metallic additive manufacturing relevant to fluid power will be given along with perspective on future opportunities to leverage ICME technologies in the fluid power industry.</p>
9:20 – 9:40 AM	<p>First Break/Networking Session Use this 20-minute break to attend to details of your morning or join other attendees at a virtual or in-person table to network.</p>
9:40 – 10:30 AM	<p>Manufacturing Automation: When and How to Introduce Automation into Your Shop Presenter: John Tuohy; National Accounts Manager-Machine Tool, Authorized Systems Integrator Network; FANUC America</p> <p>This presentation discusses the overall market drivers while touching on ROI calculations. How to deploy collaborative robots easily and safely in you shop will also be covered. Finally, we will touch on where the market is headed using AI and other products available to us in the robotic industry.</p>
10:30 – 10:50 AM	<p>Second Break/Networking Session Use this 20-minute break to attend to details of your morning or join other attendees at a virtual or in-person table to network.</p>

10:50 – 11:40 AM	<p>Increasing Production Speeds While Maintaining Quality Presenter: Chris Davala; Principal Engineer; Okuma America Corp.</p> <p>In today’s fast-paced manufacturing environment, companies are being challenged to increase production speeds with parts constructed with tougher materials and complex geometries, all while maintaining the highest accuracy standards. How well a manufacturing company can leverage their machine tool and software technology can be a differentiator; it can be the difference in operating a cutting-edge company or running one struggling to keep pace. Okuma machines and technologies meet the challenge of increasing production speeds given all of these complexities, as well as improving finishing techniques and processes for the fluid power industry that can help keep you on that cutting edge. This presentation will cover the use of today’s technology to give companies the best possible competitive advantage by utilizing their assets to the fullest.</p>
11:40 – 11:45 AM	<p>Wrap-Up and Evaluation Tom Wanke (MSOE) will provide some summary comments on the morning, answer any remaining questions, and thank everyone for participating. Please fill out the provided online evaluation survey to gather feedback on the success of this program and to collect ideas for future programs.</p>

Presenter Contact Information

- Jeff Grabowski jgrabowski@questek.com (847) 425-8241
- John Tuohy john.tuohy@fanucamerica.com (248) 377-7350
- Chris Davala cdavala@okuma.com (704) 240-0670

AMT is the **Association for Manufacturing Technology** a leader in the manufacturing technology community. AMT focuses on supporting manufacturers with vital information on technological developments, developing winning business models, advocating for a next-generation Smartforce, and building dynamic ecosystems that nurture new concepts and solutions. By addressing these areas, AMT maximizes the development of our members as they adapt to new paradigms and business models and contributes to the overall growth of the manufacturing technology industry. For more information, contact:

Benjamin Moses, Director, Technology, AMT; bmoses@amtonline.org (703) 827-5289

FPIC is the **Fluid Power Industrial Consortium**, an industry networking group established by the Milwaukee School of Engineering to engage fluid power suppliers, manufacturers, distributors and OEMs in a quarterly series of half-day seminars on the latest fluid power technology advances with immediate implementation. All NFPA members are automatically members of FPIC. For more information contact:

Tom Wanke, Director, FPIC and Industry Relations, MSOE; wanke@msoe.edu (414) 277-7191

NFPA is the **National Fluid Power Association**, a trade association representing more than 300 companies across the fluid power supply chain, that works to strengthen the fluid power industry by convening an effective forum of industry stakeholders, delivering industry statistics and market information, providing opportunities for fluid power promotion and building an educated workforce for the industry. For mor information contact:

Eric Lanke, President/CEO, NFPA; elanke@nfpa.com (414) 778-3351

Future Programs:

- June 2, 2022 – Hybrid (Minneapolis, MN) “Advanced Pneumatic Solutions for Packaging Machines” Co-sponsored with the Packaging Machinery Manufacturers Institute
- September 1, 2022 – Hybrid (Location TBD) Tentative: “Increasing Efficiency and Reducing Emissions with Electric-Powered Hydraulics on Mobile Machines” Co-sponsored with the Association of Equipment Manufacturers
- December 1, 2022– Hybrid (Topic and Location TBD)