MONDAY, JUNE 8TH
REGISTRATION & GOLFING; (Cost: $70.00; sign up directly through Eaglewood Resort)
4 p.m. Golf tee times available
3 – 4 p.m. Conference Pre-Registration

TUESDAY, JUNE 9TH
7 a.m. Registration opens/ Breakfast
8 a.m. Conference starts/ Introductions; Doug Kurkul, Steve Robison, AFS, Schaumburg IL

KEYNOTE
8:15 - 8:45 a.m. The Future of Work and the Worker; Challenges and Opportunities for Manufacturing and Foundry Industries; Diran Apelian, Advance Casting Research Center, Worcester Polytechnic Institute, Worcester MA

Session 1: Data Collection, Data-Driven Decision Making & Artificial Intelligence
8:45 – 9:15 a.m. Artificial intelligence; David Wang, Beet Mfg
9:15 – 10:15 a.m. Data-Driven Decision-Making Using Sensors and Controls; Jim Wenson, Sinto America, Lansing MI
10:15 – 10:30 a.m. Break
10:30 – 11 a.m. Collecting and Analyzing Time-Series Data for Process and Predictive Maintenance; David Blondhiem, Mercury Marine, Fond Du Lac, WI
11 – 11:45 a.m. Capturing Unknown Variables using AI for Better Process Control; Jiten Shah, Product Development and Analysis, Naperville IL; Frank Headington, American Foundry Society, Schaumburg IL
11:45 a.m. – 12:45 p.m. Lunch
12:45 – 1:15 p.m. Keeping Your Data Safe; Data Protection and Cyber Security; Mike Lakas, AFS, Schaumburg IL

CASE STUDIES:
1:15 – 1:35 p.m. Laser Scanning and BIM for Complex Industrial Installations; Ryan M. Larson, ZS LLC, Milwaukee, WI
1:35 - 1:55 p.m. Casting Quality Prediction via Supervised Machine Learning; Adam Kopper, Mercury Marine, Fond Du Lac WI
1:55 – 2:15 p.m. IoT and Sensors for Improving Predictive Maintenance and Reliability in a Permanent Mold Foundry; Craig Truempi; ATEK Access Technologies, Eden Prairie MN
2:15 – 2:30 p.m. Break
2:30 – 2:50 p.m. How a Permanent Mold Foundry is Taking the 4.0 Turn Towards Data-Driven Melt Quality and Casting Process decision making: Now What’s Next?; Yohan Tremblay, Foundry Solutions and Metallurgical Services, Magog, QC, Canada
2:50 – 3:40 p.m. Process Control and Traceability for The Foundry Industry; David Gilson, SinterCast, Brookfield WI

Session 2: Workforce Development, Recruiting, & Training.
3:40 - 4:10 p.m. Attracting, Hiring and Managing Personnel in the New Manufacturing Environment; Joey Leonard, HS Group Hr Inc, Green Bay WI
4:10 – 5:30 p.m. Q&A wrap-up
5:30 – 7:30 p.m. NETWORKING RECEPTION: Demonstrations and Sponsor Presentations
WEDNESDAY, JUNE 10TH
7 – 8 a.m. Breakfast

KEYNOTE
8 – 8:45 a.m. Digital Twins, Cyber Security and Digital Manufacturing for the Metalcasting Industry; Federico Sciammarella, MxD, Chicago IL

Session 3: Environment Health and Safety
8:45 – 9:15 a.m. Exoskeletons for Ergonomics; Cayla Zielinski, Camau, Southfield, MI
9:15 – 9:45 a.m. Wearable Biometrics to Monitor Employees for Heat Stress & Fatigue; Melissa Glossup, KOSTechnology; Long Beach, CA
9:45 – 10:15 a.m. CASE STUDY: Eye Tracking Glasses for Training Metal Pourers; Mike Bartels, Toby Younis, Tobii Pro, Reston, VA

Session 4: Automation & Robotics
10:15 – 10:45 a.m. Break

CASE STUDIES:
10:45 - 11 a.m. Flexible Casting Cleaning in a Robotic Cell; Dave Weiss, Eck Industries, Manitowoc WI
11 – 11:15 a.m. Robotic Pouring and Placement of Cores; Hideki Gebken, Standard Manufacturing, Winnipeg Manitoba, Canada
11:15 – 11:30 a.m. Mechanical Arm Design for Dipping or Coating; Randy Oehrlein, Carley Foundry, Blaine MN

Session 5: Augmented & Virtual Reality
11:30 - Noon CASE STUDY: Augmented Reality for Equipment Maintenance and Training; Peter Reich, Laempe Reich, Trussville AL
Noon – 1 p.m. Lunch
1 – 1:30 p.m. Virtual Reality for Interactive Training; John Moreland, Purdue University Northwest, Hammond IN

The Foundry in 2050
1:30 – 2 p.m. CUSTOMER PERSPECTIVE; Lockheed Martin’s Future Vision for Foundries; Bill Harris, Heather Woodworth, Sikorsky, A Lockheed Martin Company
2 – 3 p.m. Achieving Real-Time Process Monitoring During Sand Castings with Additive Manufacturing and Wireless Sensors; Jason Walker, Eric MacDonald, Youngstown State University, Youngstown, OH; Kirk Rogers M & P Gravity Works, Youngstown, OH
3 – 4 p.m. The Foundry in a Starship; Melting and Pouring in a Zero Gravity Atmosphere; Dave Weiss, Eck Industries, Manitowoc WI
4 p.m. Conference Concludes