

66th Annual Investment Casting Institute Technical Conference and Equipment Expo 2019

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27-30 October 2019

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PRELIMINARY AGENDA

SUNDAY, OCTOBER 27, 2019

3:00 p.m. - 6:00 p.m. **REGISTRATION – St. Louis Union Station Hotel Lobby**
 6:00 p.m. - 7:30 p.m. **WELCOME RECEPTION – Grand Hall (Hotel Lobby)**

MONDAY, OCTOBER 28, 2019

<p>8:00 a.m. - 8:10 a.m. WELCOME INTRODUCTION **** 66th Technical Conference & Expo 2019 Grand Ballroom: D / E / F</p> <p>8:10 a.m. – 9:00 a.m. Tim Sullivan, ICI Director <i>Hitchiner Manufacturing</i> Russ Rosmait, ICI Academic Advisor <i>Pittsburg State University,</i></p> <p>9:00 a.m. – 9:10 a.m. Joseph E. Fritz, ICI Executive Director <i>Investment Casting Institute</i></p> <p>9:10 a.m. - 10:10 a.m. Krister Ungerbock</p> <p>10:10 a.m. – 10:30 a.m. BREAK</p> <p>10:30 a.m. – 11:30 a.m. Julie Markee, ICI Director <i>Key Process Innovations</i> Chris Whitehouse <i>Ceradyne, Inc. – A 3M Company</i> Booth 113</p> <p>11:30 a.m. – 12:00 p.m. Erich Knoespel <i>Artcast, Inc.</i></p> <p>12:00 p.m. - 1:00 p.m. LUNCH - Grand Ballroom: A / B / C</p> <p>1:00 p.m. - 1:30 p.m. Steven Ashlock <i>Kyanite Mining Corp. – Booth 332</i></p> <p>1:30 p.m. – 2:15 p.m. Gavin Dooley <i>REMET UK, Ltd. – Booth 201</i></p> <p>2:15 p.m. – 3:00 p.m. Sam Duncan <i>Ransom & Randolph – Booth 213</i></p> <p>3:00 p.m. – 6:00 p.m. Expo - Midway West</p>	<p>Annual Awards Ceremonies - Scholarships, Casting Contest, Member Emeritus, Hall of Honor & Innovator of the Year</p> <p>ICI Updates</p> <p>Keynote Address: The Secret Sauce for Success In Business – and in Life</p> <p>Paper No. 1 ...pg. 1 Panel Discussion: Mold Dryness and its Impact on Shell Strength</p> <p>Paper No. 2 ...pg. 41 How it's Made: School of Fish Art Casting</p> <p>Paper No. 3 ...pg. 49 How it's Made: Premium Grade Virginia Mullite</p> <p>Paper No. 4 ...pg.65 Analysis of Surface Tension of Materials to Improve Coating Performance of Wax Coating</p> <p>Paper No. 5 ...pg. 79 A Comprehensive Analysis of Viscosity Measurements</p>
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TUESDAY, OCTOBER 29, 2019

- 8:00 a.m. - 8:10 a.m. **WELCOME INTRODUCTION **** 66th Technical Conference & Expo 2019 – Day 2**
Grand Ballroom: D / E / F
- Nip Singh, ICI Director**
S&A Consulting Group LLP
- Process Control Standards Update ...pg. 93**
- 8:10 a.m. - 8:55 a.m. **Aaron Phipps**
MPI, Inc. – Booth 312
- Paper No. 6 ...pg. 97**
Culture and Employment Strategies for Forward Thinking Companies
- 8:55 a.m. - 9:25 a.m. **Evan Letourneau**
MAGMA Foundry Technologies – Booth 131
- Paper No. 7 ...pg. 101**
Eliminating Shrinkage Porosity in a Complex Investment Cast Part
- 9:25 a.m. – 10:10 a.m. **Robert Zebick**
Atlantic Casting & Engineering
Brian Began
Foseco – Booth 108
- Paper No. 8 ...pg. 113**
An Investment Casting Foundry Experience in Improving Degassing and Grain Refining in Molten Aluminum Alloys
- 10:10 a.m. - 10:30 a.m. **BREAK**
- 10:30 a.m. - 11:15 a.m. **Will Jeffs**
Castings Technology International – Booth 342
- Paper No. 9 ...pg. 131**
Massive Shells and Castings in Reactive Alloys from a Highly Customized Facility.....Finally.
- 11:15 a.m. - 12:00 p.m. **Phil Geers**
Blasch Precision Ceramics – Booth 226
- Paper No. 10 ...pg. 135**
Improving Thermal Conditions and Reducing Process Costs for Core Setters in Aerospace and IGT Applications
- 12:00 p.m. – 1:00 p.m. **LUNCH - Grand Ballroom: A / B / C**
- 1:00 p.m. - 1:30 p.m. **Victor Okhuysen**
Cal Poly Pomona University
- Paper No. 11 ...pg. 145**
Analysis of 17-4 AND 15-5 Alloy Data from Investment Casting Trials
- 1:30 p.m. - 2:15 p.m. **Dan Z. Sokol**
Renaissance Services – PERFECT-3D Division – Booth 324
- Paper No. 12 ...pg. 163**
Enhanced Investment Casting Quality Using 3D-Printed Ceramic Filters
- 2:15 p.m. – 3:00 p.m. **Michael Kugelgen**
MK Technology GmbH – Booth 321
- Paper No. 13 ...pg. 177**
Innovation & the Race to Space
- 3:00 p.m. - 6:00 p.m. **EXPO – Midway West**
- 6:30 p.m. - 8:00 p.m. **EVENING RECEPTION - Grand Hall (Hotel Lobby)**

WEDNESDAY, OCTOBER 30, 2019

- 8:00 a.m. - 8:05 a.m. **WELCOME INTRODUCTION **** 66th Technical Conference & Expo 2019 – Day**
Grand Ballroom: D / E / F
- 8:05 a.m. – 8:50 a.m. **Jacob Lehman, CMfgE** **Paper No. 14 ...pg. 181**
Pittsburg State University 3D Printed Inserts and Mold Cavities that Can Be
Used for Producing Wax Patterns
- 8:50 a.m. – 9:35 a.m. **Rahul Alreja** **Paper No. 15 ...pg. 195**
VJ Technologies Inc. – Booth 334 Autonomous Quality Control: The Future is Now
- 9:35 a.m. – 10:20 a.m. **Aaron Meyer** **Paper No. 16 ...pg. 203**
Wisconsin Precision Casting Corporation An Evaluation of Using a Low-Cost 3D Printer for
Prototype Investment Casting Patterns
- 10:20 a.m. – 10:35 a.m. **BREAK**
- 10:35 a.m. – 11:20 a.m. **Ben Wynne** **Paper No. 17 ...pg. 215**
Intrepid Automation – Booth 144 Digitization & Automation of the Process of Printing
Patterns for Investment Casting
- 11:20 a.m. – 12:05 p.m. **Tom Mueller** **Paper No. 18 ...pg. 223**
Mueller Additive Manufacturing Solutions Improvements in the Burnout Process for Printed
Patterns
- 12:05 p.m. - 12:10 p.m. **Adjournment**
- 12:30 p.m. **Board bus for tour of O’Fallon Casting – Midway West, 20th St. Exit**