

# **64th Annual Investment Casting Institute Technical Conference and Equipment Expo 2017**

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## 64th Annual Technical Conference & Equipment Exposition AGENDA

### Receptions

SUNDAY 6:00 P.M.  
TUESDAY 6:30 P.M.



### Equipment Expo

MONDAY 2:00 P.M. - 6:00 P.M.  
TUESDAY 2:00 P.M. - 6:00 P.M.



#### SUNDAY, OCTOBER 15, 2017

3:00 p.m. - 6:00 p.m. REGISTRATION  
6:00 p.m. - 7:30 p.m. WELCOME RECEPTION

#### MONDAY, OCTOBER 16, 2017

8:00 a.m. - 8:10 a.m. WELCOME INTRODUCTION  
8:10 a.m. - 8:40 a.m. 2017 Casting Contest, Innovator of the Year, Hall of Honor and Honorary Member Awards  
Tim Sullivan, Esq.  
*Hitchiner Manufacturing, ICI Director, Awards Committee Chairman*  
8:40 a.m. - 9:10 a.m. 2017 INTERN SCHOLARSHIP AWARDS  
Russ Rosmait, Ph.D.,  
*Pittsburg State University, ICI Academic Advisor*  
9:10 a.m. - 10:10 a.m. KEYNOTE ADDRESS: *Planning Is Important But Improvising is Essential*  
Avish Parashar  
10:10 a.m. - 10:30 a.m. Coffee Break sponsored by **Paramelt**  
10:30 a.m. - 10:50 a.m. How will 3D Metal Printing Impact Investment Casting?  
Tom Mueller,  
*Mueller Additive Manufacturing Solutions*  
10:50 a.m. - 11:10 a.m. Advancing Sculpture  
Rob Arps,  
Eyal Chernichovsky, *Form 3D Foundry*  
11:10 a.m. - 11:30 a.m. 3D Printed Ceramic Cores and Shells for Investment Casting Through Large Area Maskless Photopolymerization (LAMP) Technology  
Dr. Suman Das, *DDM Systems*

#### MONDAY, continued

11:30 p.m. - 12:00 p.m. Additive Manufacturing/ 3D Printing Discussion Panel  
John Marcin, *Pratt & Whitney, ICI Director*  
12:00 p.m. - 1:00 p.m. LUNCH  
1:00 p.m. - 1:30 p.m. Industry 4.0 for Investment Casting  
Michael Kügelgen, *MK Technology GmbH*  
1:30 p.m. - 2:00 p.m. Prototyping Opportunities for Investment Castings, From an Ounce to 9,000 lb.  
Will Jeffs, James Collins  
*Castings Technology International*  
2:00 p.m. - 6:00 p.m. EXPO

#### TUESDAY, OCTOBER 17, 2017

8:00 a.m. - 8:10 a.m. OPENING REMARKS  
8:10 a.m. - 8:55 a.m. Permeability Panel Discussion  
Julie Markee,  
*Key Process Innovations, ICI Director, Nipendra "Nip" Singh, S&A Consulting, ICI Director, Craig Lanham, Taylor Thornhill, O'Fallon Casting*  
8:55 a.m. - 9:25 a.m. Comprehensive Study of Thermo-Physical Properties of Investment Shells  
Mingzhi Xu, *Missouri University of Science and Technology*  
9:25 a.m. - 10:10 a.m. Economical Engineered Powder Blends for Precision Investment Casting Backup Slurries- "How Its Made"  
Scot Graddick, *Imerys Refractory Minerals*

**TUESDAY, continued**

- 10:10 a.m. - 10:30 a.m. **Coffee Break sponsored by AluChem**
- 10:30 a.m. - 11:00 a.m. Optimizing the Tetrashell Build Structure to Reduce Shell Cracking in the Autoclave with SLA Patterns  
**Kevin Zaras, DSM SOMOS**
- 11:00 a.m. - 11:30 a.m. Improved Consistency of Slurry and Shell Properties using Particle Size Control of Ceramic Flours  
**Tom Branscomb, Buntrock Industries**
- 11:30 a.m. - 12:00 p.m. Autonomous Engineering Applied to Investment Casting Processes  
**Gerald Richard, Magma Foundry Technologies**
- 12:00 p.m. - 1:00 p.m. **LUNCH**
- 1:00 p.m. - 1:30 p.m. Process Control Standards Update  
**Nipendra "Nip" Singh, S&A Consulting, ICI Director**
- 1:30 p.m. - 2:00 p.m. Update on ICI-AFS Joint Research Project on MMPDS Inclusion of 17-4 PH and 15-5 PH Investment Cast Steels  
**Jiten Shah, Product Development & Analysis (PDA)  
Al Torok, ICI Director,  
Yamaha Marine Precision Propellers  
Dr. Zayna Connor, AFS, Inc.**
- 2:00 p.m. - 6:00 p.m. **EXPO**
- 6:30 p.m. - 8:00 p.m. **RECEPTION**

**WEDNESDAY, OCTOBER 18, 2017**

- 8:00 a.m. - 8:10 a.m. **OPENING REMARKS**
- 8:10 a.m. - 8:35 a.m. Case Study: Recruitment and Retention Challenges of Today and Beyond  
**Tim Sullivan, Esq., Hitchiner Manufacturing, ICI Director, Awards Committee Chairman**
- 8:35 a.m. - 9:00 a.m. Case Study: The Merging of Cultures in an Acquisition: Personnel, Systems and Technology  
**Cliff Fischer, Wisconsin Precision Casting, ICI Director**
- 9:00 a.m. - 9:25 a.m. Case Study: Plant Modernization: Navigating Challenges and Overcoming Obstacles  
**Vince Gimeno, O'Fallon Casting**

**WEDNESDAY, continued**

- 9:25 a.m. - 10:00 a.m. Managing Change Discussion Panel  
**Brad DeSplinter, TPM Inc., ICI Director**
- 10:00 a.m. - 10:20 a.m. **Coffee Break**
- 10:20 a.m. - 10:50 a.m. Fluid Flow Modeling Validation of Complex Geometries  
**Alan Druschitz, Virginia Tech**
- 10:50 a.m. - 11:20 a.m. An Introduction to Self-Monitoring, Adaptive Recalculating Treatment Technology (SMARTT) in Degassing Aluminum  
**Brian Began, Foseco**
- 11:20 a.m. - 11:50 a.m. Using Computer Simulation to Drive the Design of Feeding Systems for Investment Castings  
**David Schmidt, Finite Solutions, Inc.**