

**SUNDAY, NOVEMBER 7, 2021**

3:00 p.m. - 6:00 p.m. **REGISTRATION – Lobby Outside of Ambassador Room**

6:00 p.m. - 7:30 p.m. **WELCOME RECEPTION - Ambassador Room**

**MONDAY, NOVEMBER 8, 2021 – 7:00 a.m. Registration at DeVos Place**

8:00 a.m. - 8:10 a.m. **WELCOME INTRODUCTION \*\*\*\* 68th Technical Conference & Expo 2021**

8:10 a.m. – 9:00 a.m. **Russ Gallagher, ICI Director**  
*Bescast, Inc.*

**Russ Rosmait, ICI Academic Advisor**  
*Pittsburg State University*

**Annual Awards Ceremonies - Scholarships, Casting Contest, Innovator of the Year & Cast in Steel**

9:00 a.m. – 9:15 a.m. **Benjamin Fahrney, ICI Intern**  
*Pennsylvania State University - Behrend*

**Paper No. 1**  
ICI Intern Project

9:15 a.m. - 10:00 a.m. **Jerrod Weaver**  
*Non-Ferrous Founders' Society*

**Booth 212**

**Paper No. 2**  
The Integrated Casting Order Network (ICON)

10:00 a.m. – 10:20 a.m. **BREAK**

10:20 a.m. – 11:00 a.m. **Chris Whitehouse**  
*3M Technical Ceramics, Inc.*  
**Andy Buchner**  
*Signicast*

**Paper No. 3**  
Shell Drying – Effect of Ambient Conditions Upon Drying & Shell Properties

11:00 a.m. – 11:40 a.m. **Gerald Richard**  
*MAGMA Foundry Technologies, Inc.*  
**Booth 204**

**Paper No. 4**  
An Investigation into Misrun Defects in Investment Cast Stainless Steel Castings

11:40 p.m. - 12:00 p.m. **Gerard Thiel**  
*University of Northern Iowa*

**Paper No. 5**  
AM4IC Report Out

12:00 p.m. - 1:00 p.m. **Lunch**

1:00 p.m. – 1:40 p.m. **Tom Mueller**  
*Mueller Additive Manufacturing Solutions*

**Paper No. 6**  
Optimization of an Aerospace Casting: A Case Study

1:40 p.m. – 2:20 p.m. **Dan Z. Sokol**  
*Renaissance Services – PERFECT – 3D*  
**Booth 318**

**Paper No. 7**  
Rapid, Low-Cost Tooling for Small Engine Castings

2:20 p.m. – 3:00 p.m. **Lee Chamberlain**  
*VA Technology Ltd.*  
**Booth 107**

**Paper No. 8**  
Automated Methods of Slurry Testing, Monitoring & Control

3:00 p.m. – 6:00 p.m. **EXPO**

TUESDAY, NOVEMBER 9, 2021

## 68th Technical Conference &amp; Expo 2021

8:00 a.m. - 8:05 a.m. **Greeting**8:05 a.m. - 8:45 a.m. **Angelika Priese**  
*Imerys Fused Minerals Murg GmbH***Paper No. 9**  
Development of Investment Casting Shells Based on  
Calcia Stabilised Zirconia for Ti-6Al-4V8:45 a.m. - 9:25 a.m. **Nip Singh, ICI Director**  
*S&A Consulting Group***Paper No. 10**  
Process Control Standards (PCS) for Investment  
Castings9:25 a.m. – 10:00 a.m. **Raymond Monroe**  
*Steel Founders' Society of America*  
**Booth 512****Paper No. 11**  
Steel Performance Initiative (SPI) and Digital Innovative  
Design (DID)10:00 a.m. – 10:15 a.m. **BREAK**10:15 a.m. – 10:55 a.m. **Phil Geers**  
*Blasch Precision Ceramics*  
**Booth 316****Paper No. 12**  
Implementing Best Practices & Reducing Process Costs  
For Refractory Use in Investment Casting & Alloy  
Production Foundries10:55 a.m. - 11:35 a.m. **Samuel Holt**  
*Georgia Southern University***Paper No. 13**  
The Effect of Firing Temperature & Time on Silica Based  
Investment Shells Strength11:35 a.m. – 12:15 p.m. **George Bernhard**  
*Consarc Corporation*  
**Booth 308****Paper No. 14**  
Process Cycle Time Analysis & Optimisation for Efficient  
Vacuum Precision Investment Casting Furnaces12:15 p.m. – 1:00 p.m. **LUNCH**1:00 p.m. - 1:40 p.m. **Mark Oles**  
*Pine Tree Castings*  
**Alfred Kaulius**  
*Paramelt*  
**Booth 309****Paper No. 15**  
Pattern Cleaning  
Study of Pattern Formulation Effects on Surface Energy  
Measurements1:40 p.m. - 2:20 p.m. **Dr. Sergejs Spitans**  
*ALD Vacuum Technologies*  
**Booth 202****Paper No. 16**  
Investment Castings with Unique Levitation Melting  
Technology FastCast2:20 p.m. – 3:00 p.m. **Dr. Sam Ramrattan**  
*Western Michigan University***Paper No. 17**  
Analysis of Thermal Distortion Data to Detect Issues in  
Investment Shell Materials3:00 p.m. - 6:00 p.m. **EXPO**6:30 p.m. - 8:00 p.m. **EVENING RECEPTION**

**WEDNESDAY, NOVEMBER 10, 2021**

**68th Technical Conference & Expo 2021**

8:00 a.m. - 8:05 a.m. **Greeting**

8:05 a.m. - 9:05 a.m. **Shayla Rivera – Keynote Speaker**

**Keynote Address: Awareness Brings Change**

9:05 a.m. – 9:45 a.m. **Noel O’Sullivan**  
*University of Limerick*

**Paper No. 18**  
Enhancing Porosity & Permeability of Ceramic Shells  
For Investment Casting through Pre-wetting

9:45 a.m. – 10:25 a.m. **Mark White**  
*IMPRO Industries USA*

**Paper No. 19**  
Tensile Bar Castings

10:25 a.m. – 10:30 a.m. **Joseph Fritz**  
*ICI Executive Director*

**Best Paper Award, Closing Remarks and  
Adjournment**