



ADVANCED CASTING  
RESEARCH CENTER

**ACRC FALL/WINTER MEETING (in person)  
December 12 (Tues) and 13 (Wed), 2023**

**Location: CALIT2 Auditorium – University of California, Irvine**

**Tuesday December 12, 2023** *(all in pacific times)*

8:30 - 9:00 a.m. Registration & Continental Breakfast - [CALIT2/Atrium](#)

9:00 – 10:30 a.m. **Welcome and Opening Presentations** – [CALIT2/Atrium](#)

- Welcoming comments, *Lorenzo Valdevit (10 mins)*
- Update from Board Chair, *Sonia Alreja (VJT) (8 mins)*
- ACRC Updates, *Diran Apelian (UCI), Carl Söderhjelm (UCI) and Alan Luo (OSU) (15 mins)*

**Welcome our New and Prospective Members**

- SUNMETALON – *Kazu Nishioka, Mark Cook (10 mins)*
- FORD – *Mei Li (10 mins)*
- ALTEK-HARSCO – *James Herbert (10 mins)*
- LANL – *Kara Luitjohan, Matthew Kerr (10 mins)*
- EMC – *Mark Henson (10 mins)*

10:30 - 10:45 a.m. **Break**

10:45 - 11:30 a.m. **Featured Keynote** - [CALIT2/Atrium](#)

**Ravi Tilak, CEO of ALMEX USA**  
*Quality Journey for Wrought Aluminum Alloys  
from Furnace to Finish*

**Recipient of the 2023 Ray H. Witt Award**

11:30 - 12:00 p.m. **Physics of Ultrasonic Treatment of Metals and Applications**  
Research status presentation, *Raquel Jaime (UCI)*.

12:00 – 12:30 p.m. **Focus Group (FG) discussion** moderated by *Martijn Vos - FG Chair*. FG members: Stuart Weisner (Al Rheinfelden); Aakash Doshi (Almex USA); Ravi Tilak (Almex USA); Brian Began (AFS); Mick Nallen (Thermatool); and Satyen Prabhu (Inductotherm).

12:30 - 1:30 p.m. **Lunch** - [CALIT2/Atrium](#)

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- 1:30 - 2:00 p.m.     **Green Alloy Project**  
Research status presentation, *Shri Shankar (UCI)*.
- 2:00 - 2:30 p.m.     **Focus Group (FG) discussion** moderated by *Stuart Wiesner (Al Rheinfelden)* – *FG Chair*. FG members: Martjin Vos (Al Rheinfelden); Jose Talamantes (Nemak); Qigui Wang (GM); Serge Quantin (Linamar Light Metals); and John Newman (Al Association).
- 2:30 - 3:00 p.m.     **Thermal Management of Molds**  
Research status presentation, *Cheolmin Ahn (UCI)*.
- 3:00 - 3:30 p.m.     **Focus Group (FG) discussion** moderated by *Carl Söderhjelm* for *Brian Began (AFS)* - *FG Chair*. FG members: Victor Khristov, Gordon Peters (CPC); Jose Talamantes (Nemak); Serge Quantin (Linamar Light Metals); and Aakash Doshi (Almex USA).
- 3:30 – 4:00 p.m.     **Break**
- 4:00 - 4:20 p.m.     **Diffusion Solidification**  
Final presentation, *Sam Small (UCI)*.
- 4:20 - 4:50 p.m.     **Alloy Development Project (Thermal Conductivity)**  
Research status presentation, *Kentaro Lunn (UCI)*.
- 4:50 - 5:20 p.m.     **Focus Group (FG) discussion** moderated by *Jason Sebastian (QuesTek)* and *John Jiang (Harley Davidson)* - *FG Chairs*. FG members: M. Vos and S. Wiesner (Al Rheinfelden); and K. Anderson (Mercury Marine).
- 5:20 p.m.            **Adjourn Day 1**
- 6:00 p.m.

**Reception and Dinner** (Reception 6-7; Dinner 7-9+)  
*Sponsored by QuesTek Innovations and Materion*

Il Fornaio Restaurant  
<https://www.ilfornaio.com/location/il-fornaio-irvine/>  
18051 Von Karman Avenue,  
Irvine, CA 92612  
(949) 261-1444



ADVANCED CASTING  
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**Wednesday December 13, 2023** *(all in pacific times)*

8:00 - 9:00 a.m. Continental Breakfast - [CALIT2/Atrium](#)

9:00 - 9:45 a.m. **Featured Keynote** - [CALIT2/Auditorium](#)

**Prof. Iryna Zenyuk**

Director of the Natl Fuel Cell Research Center

<https://faculty.sites.uci.edu/zenyuklab/>

University of California, Irvine

***Hydrogen Economy: Material Needs for Gigawatt Scale Deployment***

9:45 - 10:00 a.m. **Break**

10:00 - 10:30 a.m. **ACRC Complementary Projects** (at OSU)

- **Die Casting Research and ICME Development at OSU**  
*Alan Luo (20)*
- **Center for Design and Manufacturing Excellence at OSU**  
*Jason Walker (10)*

10:30 - 11:30 a.m. **ACRC Complementary Projects** (at UCI) [CALIT2/Auditorium](#)

- **Wire Arc Additive Manufacturing** (15)  
*Carl Söderhjelm (UCI)*
- **Cold Spray Research at UCI** (15)  
*Dan Mumm (UCI)*
- **Processing Science of MetaMaterials for Remarkable Engineering Properties/Performance** (15)  
*Lorenzo Valdevit and Julian Romeli (UCI)*
- **Processing of Refractory High Entropy Alloys (HEAs)** (15)  
*Calvin Belcher (UCI)*

11:30 - 12:00 p.m. **Closing Comments and New Projects for 2024**  
*Diran Apelian, Carl Soderhjelm (UCI) and Alan Luo (OSU)*

12:00 - 1:00 p.m. **Lunch** - [CALIT2/Atrium](#)

1:00 - 2:00 p.m. **Tour of Laboratories and Facilities** *(for interested members)*

**Adjourn Day 2**