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)
  ▪ 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
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: Martijn 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
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/](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 Julián Rimoli (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**