



ADVANCED CASTING
RESEARCH CENTER



THE OHIO STATE UNIVERSITY
COLLEGE OF ENGINEERING

ACRC Spring/Summer Meeting

June 4 (Wednesday) & June 5 (Thursday), 2025

Location: Room 1000, Fontana Labs (140 W 19th Ave, Columbus, OH)

Wednesday June 4 (all in Eastern Standard Time EST)

- 8:30 - 9:00 a.m. **Registration & Continental Breakfast** – [Fontana Atrium](#)
- 9:00 – 10:15 a.m. **Welcome and Opening Presentations** – [Fontana 1000](#)
- Welcoming comments, *Seth Weinberg (Associate Dean, College of Engineering, OSU), Alan Luo (OSU) (5 mins)*
 - Update from Board Chair, *Jason Sebastian (Questek) (5 mins)*
 - ACRC Updates, *Diran Apelian (UCI), Carl Söderhjelm (UCI) and Alan Luo (OSU) (5 mins)*
 - ML and AI Algorithm for Aluminum Casting Defect Characterization and Diagnosis, *Brian Began (AFS), Carl Söderhjelm (UCI) (15 mins)*
- Welcome our New Members**
- Lawrence Livermore National Laboratory *(10 mins)*
 - Honda - *Brian Sieger (10 mins)*
 - Keysight - ESI - *Michael Ewing (10 mins)*
- 10:15 - 10:30 a.m. **Break and Group Photo**
- 10:30 - 11:15 a.m. **Featured Keynote** - [Fontana 1000](#)

Bridging Scientific Innovations to Realize Sustainable Mobility Futures

Duane Detwiler

*Vice President of Research, Director
Honda Research Institute USA, Inc.*

- 11:30 - 12:00 p.m. **Physics of Ultrasonic Treatment of Metals and Applications** –
Raquel Fierro Jaime (UCI)
- 12:00 – 12:30 p.m. **Focus Group Discussion**
Moderated by *Martijn Vos (Al Rheinfelden)*
FG members: S. Weisner (Al Rheinfelden); B. Began (AFS);
R. Tilak (Almex USA); M. Henson (EMC); J. Herbert (Altek);
A. Monroe (SpaceX)
- 12:30 - 1:30 p.m. **Lunch** – [Fontana Atrium](#)



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- 1:30 - 2:00 p.m. **Optimization-based Design for Casting Development** –
Gabriel Garcia (OSU)
- 2:00 - 2:30 p.m. **Focus Group Discussion**
Moderated by *Joshua Robbins/Josh Yee (Sandia)*
FG members: R. Beals (Magna); X. Yan (Alcoa); Q. Wang (GM);
J. Jiang (Harley-Davidson); J. Talamantes (Nemak); L. Godlewski
(Ford).
- 2:30 - 3:00 p.m. **Alloy Development Project (Thermal Conductivity)** –
Kentaro Lunn (UCI)
- 3:00 - 3:30 p.m. **Focus Group Discussion**
Moderated by *Jason Sebastian (QuesTek)* and *John Jiang (Harley Davidson)*
FG members: M. Vos and S. Wiesner (Al Rheinfelden);
K. Anderson (Mercury Marine).
- 3:30 – 4:00 p.m. **Break and Group Photo**
- 4:00 - 4:30 p.m. **Robotic X-ray inspection of gigacasting parts/Scrap reduction through process feedback using AI**
Dr. Steven Oeckl, Head of Production Monitoring Department
Fraunhofer EZRT
- 4:30 - 5:30 p.m. **Tour of Laboratories and Facilities** *(for interested members)*

Reception and Dinner (Reception 6-7 pm; Dinner 7-9 pm)

Sponsored by VJT and Sun Metalon

J. Liu Restaurant

6880 N High St, Worthington, OH 43085

(614) 888-1818, www.jliurestaurant.com

End of First Day

Thursday, June 5, 2025 (*all in EST*)

8:00 - 8:30 a.m. **Continental Breakfast** - [Fontana Atrium](#)

8:30 - 9:00 a.m. **Featured Keynote** - [Fontana 1000](#)

Carbon Footprint and AI Chatbot in the World of Aluminum Alloys
Dr. Stuart Wiesner, Aluminium Rheinfelden Alloys GmbH

9:00 - 9:30 a.m. **Eutectic Solidification of Multicomponent Aluminum Alloys:
Impact on Hot-Tearing and Castability** –
Jianyue Zhang (OSU)

9:30 - 10:00 am **Focus Group Discussion**
Moderated by *Qigui Wang (GM)*
FG members: R. Breneman (Pratt & Whitney); X. Yan (Alcoa);
J. Jiang (Harley-Davidson); L. Godlewski (Ford).

10:00 -10:15 **Break**

10:15 - 11:00 a.m. **Green Alloy Project** –
Shrivatsav Shankar (UCI) - Final Presentation

Focus Group Discussion
Moderated by *Stuart Wiesner (Al Rheinfelden)*
FG members: M. Vos (Al Rheinfelden); J. Talamantes (Nemak);
Q. Wang (GM); S. Quantin (Linamar Light Metals);
T. Leary (Al Association).

11:00 – 12:30 pm **ACRC Complementary Projects**

- **Thermal Management Projects (ATI)** (*20 mins*)
Cheolmin Ahn (UCI)
- **WA-DED Tool Steel Development (DOE)** (*20 mins*)
Carl Söderhjelm (UCI)
- **Accelerating Alloy Design: Predictive Numerical Models for
Thermophysical Properties in ProCAST**
Dr. Swapnil Salokhe, Keysight (*20 mins*)
- **Simulation of Externally Solidified Crystal Formation in Al
HPDC (NADCA)** (*15 mins*)
Emmanuel Chen (OSU)

12:30 p.m. **Closing Comments**
Diran Apelian (UCI), Carl Söderhjelm (UCI) and Alan Luo (OSU)

12:45 p.m. **Box Lunch** - [Fontana Atrium](#)

Adjourn ... *Safe Travels*