ACRC Spring/Summer Meeting
June 20 (Th), June 21 (Fri), 2024

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

Thursday June 20 (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, Mike Mills (OSU MSE Chair) (5 mins)
- Update from Board Chair, Sonia Alreja (VJT) and Jason Sebastian (Questek) (10 mins)
- ACRC Updates, Diran Apelian (UCI), Carl Söderhjelm (UCI) and Alan Luo (OSU) (15 mins)

Welcome our New and Prospective Members
- Audubon Metals – Matthew Gavin (8 mins)
- ORNL – Sumit Bahl (8 mins)
- SANDIA Camino – Josh Yee (8 mins)
- Altek-Harsco – James Herbert (8 mins)

10:15 – 10:30 Metal Casting Research Funding Opportunities
Brian Began, AFS (15 mins)

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

10:45 - 11:30 a.m. Featured Keynote - Fontana 1000

Chips and Science Act - Investment Opportunities for Manufacturing Industries

Steven A. Ringel
Associate Vice President for Research, Office of Research
Executive Director, Institute for Materials and Manufacturing Research

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); Mark Henson (EMC); James Herbert (Altek)

12:30 - 1:30 p.m. Lunch – Fontana Atrium

444 Engineering Tower (949) 824-2538 Office
Irvine, CA 92697-2575
acrc.manufacturing.uci.edu
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 Brian Began (AFS) - FG Chair. FG members: Victor Khristov (CPC); Jose Talamantes (Nemak); Serge Quantin (Linamar Light Metals); and Aakash Doshi (Almex USA).

3:30 – 4:00 p.m. **Break**

4:00 - 4:30 p.m. **Alloy Development Project (Thermal Conductivity)**  
Research status presentation, Kentaro Lunn (UCI).

4:30 - 5:00 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).

5:00 p.m. **Adjourn Day 1**

6:00 p.m.

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**Reception and Dinner (Reception 6-7 pm; Dinner 7-9 pm)**  
*Sponsored by Audubon Metals*

J. Liu Restaurant  
6880 N High St  
Worthington, OH 43085  
(614) 888-1818  
www.jliurestaurant.com
Friday June 21, 2024 (all in Eastern Standard Time EST)

8:00 - 9:00 a.m.  Continental Breakfast - Fontana Atrium
9:00 - 9:30 a.m.  Featured Keynote - Fontana 1000

The nexus of artificial intelligence and material science – MatGPT

*Achim Tappe, Chief Digital Officer at Fehrmann MaterialsX*

9:30 - 10:00 a.m.  Eutectic solidification of multicomponent aluminum alloys: impact on hot-tearing and castability
Research status presentation, Jianyue Zhang (OSU)

10:00 - 10:30 am Focus Group (FG) discussion moderated by Qigui Wang (GM)
FG members: Ryan Breneman (Pratt & Whitney); Xinyan Yan (Alcoa); John Jiang (Harley-Davidson); Larry Godlewski (Ford).

10:30 -10:45  Break

10:45 - 11:15 a.m.  Optimization-based design for casting development
Research status presentation, Alan Luo (OSU)

11:15- 11:45 am Focus Group (FG) discussion moderated by Joshua Robbins (Sandia) – *FG Chair*. FG members: Randy Beals (Magna); Xinyan Yan (Alcoa); Jose Talamantes (Nemak); John Jiang (Harley-Davidson); Qigui Wang (GM); Larry Godlewski (Ford).

11:45 – 12:30 pm ACRC Complementary Projects
- Thermal Management Projects (ATI and DOE) *(15)*
  Carl Söderhjelm (UCI)
- Achieving 100% Recycled Aluminum in Die Casting Applications (REMADE) *(15)*
  Gaberiel García (OSU)
- Simulation and validation of externally solidified crystal formation in aluminum high pressure die casting (NADCA) *(15)*
  Nicole Tromter (OSU)

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

12:30  Lunch - Fontana Atrium

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

Adjourn Day 2

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