AGENDA

Tuesday, June 12, 2018

12:30 p.m.  Registration
            Odeum A & B, Campus Center

1:00 p.m.  Opening of Spring Meeting
            Welcome, Jamal Yagoobi and Diran Apelian
            Opening Remarks from ACRC Chair, K. Anderson
            Opening Remarks from CHTE Chair, S. Ferdon

1:30 p.m.  Overview of MPI Activities – B. Mishra

2:00 – 5:00 p.m.  Funded Project Updates and Focus Group (FG) Workshops

   ACRC – Odeum A & B

2:00 p.m.  A: Green & Clean Al-Cu Alloys, C. Soderhjelm, Q. Pan, D. Apelian

2:25 p.m.  B: Assessment and Enhancement of Metal Casting Process via Statistical Learning N. Sun, A. Kopper, R. Karkare, R. Paffenroth, D. Apelian

2:50 p.m.  C: Residual Stress in Al Castings
            E. Lee, B. Mishra

3:15 p.m.  D: Mg LPSO Ce Alloy for High Temperature Applications
            Y. Zhong, D. Apelian

3:30 p.m.  Break

PLEASE NOTE: Combined Meetings are in black
            Items in blue refer to ACRC meetings
            Items in green refer to CHTE meetings
3:45 p.m.  
**Focus Group Workshops** — *Rooms identified below*

**FG (A):** Green & Clean Al-Cu Alloys, **B. Began**, FG Chair  
*Mid-Century Room*

**FG (B):** Assessment and Enhancement of Metal Casting Process via Statistical Learning, **D. Furrer**, FG Chair – *Odeum A*

**FG (C):** Residual Stress in Al Casting  
**V. Pikhovich**, FG Chair – *Taylor Room*

**FG (D):** Mg LPSO Ce Alloy for High Temperature Applications,  
**N. Farkas**, FG Chair – *Chairman’s Room*

5:30 p.m.  
**Poster Session and Reception**  
*Alden Hall, WPI Campus*  
(see attachment with poster presenters and titles)

6:30 p.m.  
**Reception and Dinner**  
*Alden Hall, WPI Campus*

**CHTE – Project Updates and FG Discussions**

2:00 p.m.  
A. Heat Treatment of Additively Manufactured Parts  
**M. Yang, R.D. Sisson, H. Guthy**, FG Chair  
*Hagglund Room*

2:45 p.m.  
B. Distortion and Residual Stress  
**H. Yu, R. D. Sisson, D. Furrer**, FG Chair  
*Hagglund Room*

3:30 p.m.  
**Break**

3:45 p.m.  
C. Austempering to Form Bainite  
**M. Yang, R.D. Sisson, M. Pershing**, FG Chair  
*Hagglund Room*

4:30 p.m.  
Update from Project Selection Committee  
**H. Guthy**  
*Hagglund Room*

5:30 p.m.  
**Poster Session and Reception**  
*Alden Hall, WPI Campus*  
(see attachment with poster presenters and titles)

6:30 p.m.  
**Reception and Dinner**  
*Alden Hall, WPI Campus*
Wednesday, June 13, 2018

8:00 a.m.  Breakfast
            Lobby area outside of Odeum A & B

ACRC Funded Project Updates and Focus Groups Continued – Odeum A & B

8:30 a.m.  E: High Entropy Al Alloys, M. Asidikaya, S. Yang, L. Wang, Y. Zhong, D. Apelian

8:55 a.m.  F: Improvement of Impact Strength and Fracture Toughness of Castings through Chemically Induced Residual Stress, A. Te, B. Mishra

9:20 a.m.  Focus Group Workshops - Rooms identified below

FG (E): High Entropy Al Alloys, R. Hathaway, FG Chair – Mid-Century Room

FG(F): Improvement of Impact Strength and Fracture Toughness of Castings through Chemically Induced Residual Stress, D. Weiss, FG Chair – Odeum A

CHTE Focus Group Workshops Continued

8:30 a.m.  D. Nitriding and Ferritic Nitrocarburizing – New Project Ideas
            M. Yang, R.D. Sisson
            Hagglund Room

9:15 a.m.  E. Continuation of Life Improvements to Alloys and Fixtures
            A. Wang, R.D. Sisson, B.J. Bernard, FG Chair
            Hagglund Room

10:00 a.m. Leveraged Project
            F. Innovative Methods to Aluminize Stainless Steels for Carburizing Furnace Applications
            F. Farhadi, R.D. Sisson
            Hagglund Room

10:20 a.m. Break
10:45 a.m. **Research Overviews of Complimentary Projects at MPI**  
*Odeum A & B*

1. **LIFT Project Overviews** *(15 minutes)*  
   - Thin Walled High Integrity Al Die Casting *(D. Apelian)*  
   - Nanocomposite Manufacturing *(B. Mishra)*

2. **ARL Projects** *(15 minutes)*  
   - Additive Manufacturing via SSM Processing *(R. Eberheim, C. Soderhjelm, D. Apelian)*


11:30 a.m. **Panel on Machine Learning** – *Moderated by D. Apelian*

- Randy Paffenroth: *Machine Learning (ML) and Manufacturing*
- Aaron Birt: *Competitive Process Cognition via ML*
- Amra Peles: *Big Data and the Changing Landscape of Metal Processing*

1:00 p.m. **Lunch and M. C. Flemings Award Presentation**  
*Odeum C*

2:30 p.m. **Adjourn or Optional Tours**