AGENDA

Tuesday, June 12, 2018

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

1:00 p.m.   Opening of Spring Meeting
            Welcome, 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

3:45 p.m.   Focus Group Workshops – Rooms identified below

**PLEASE NOTE:** Combined Meetings are in black
**Items in blue refer to ACRC meetings**
**Items in green refer to CHTE meetings**
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. 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. Asadikiya, 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
**ACRC - Odeum A & B**

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)

3. **Secondary Al Production – Enabling Technologies and Challenges** 15 minutes (S. Kelly, D. Apelian)

**CHTE – Hagglund & Mid-Century Rooms**

10:45 a.m. **Project Selection Committee Meeting** – *H. Guthy, Chair*
*Hagglund Room*

10:45 a.m. **Industrial Working Group – Gas Quench Hardenability Test Rig** - *M. Pershing, FG Chair*
*Mid-Century Room*

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

- 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**