METAL PROCESSING INSTITUTE  
ACRC+CHTE FALL MEETING AGENDA  
December 5-6, 2017

AGENDA

Tuesday, December 5, 2017

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

1:00 p.m.  
Opening of Spring Meeting  
Welcome, Dean Wole Soboyejo 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: 60/40/10 Cast Al Alloy, Y. Fan, D. Apelian, Y. Zhong (FINAL)

2:30 p.m.  
B: Big Data for Assessment and Enhancement of Casting Processes, N. Sun, A. Kopper, D. Apelian, R. Karkare, R. Paffenroth

3:00 p.m.  
C: Improvement of Impact Strength and Fracture Toughness of Castings through Chemically Induced Residual Stress, A. Te, B. Mishra

3:30 p.m.  
Break

3:45 p.m.  
Focus Group Workshops - Odeum A & B

FG (B): Big Data for Assessment and Enhancement of Casting Processes, D. Furrer, FG Chair – Odeum A

PLEASE NOTE: Combined Meetings are in black  
Items in blue refer to ACRC meetings  
Items in green refer to CHTE meetings
**FG(C): Improvement of Impact Strength and Fracture Toughness of Castings through Chemically Induced Residual Stress, D. Weiss, FG Chair – Odeum B**

5:00 p.m.  
Emerging Trends in Manufacturing - Panel  
D. Weiss, K. Anderson, T. Klix, J. Lagrant, J. Sebastian

6:30 p.m.  
**Reception and Dinner**  
**Worcester Art Museum**  
**55 Salisbury Street, Worcester, MA**

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**CHTE – Focus Group Workshops**

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

2:00 p.m.  
B. Distortion and Residual Stress  
*H. Yu, R. D. Sisson, D. Furrer, FG Chair*  
Chairman’s Room

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

3:45 p.m.  
**Final Reports** – *Hagglund Room*

C. Life Improvements to Alloys and Fixtures  
A. Wang, R.D. Sisson, B.J. Bernard, FG Chair

D. Induction Tempering vs. Furnace Tempering  
X. Cai, R.D. Sisson, L. Frame, FG Chair

5:00 p.m.  
Emerging Trends in Manufacturing - Panel  
D. Weiss, K. Anderson, T. Klix, J. Lagrant, J. Sebastian

6:30 p.m.  
**Reception and Dinner**  
**Worcester Art Museum**  
**55 Salisbury Street, Worcester, MA**
Wednesday, December 6, 2017

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.  **D**: Green & Clean Al-Cu Alloys, C. Soderhjelm, Q. Pan, D. Apelian

9:00 a.m.  **E**: Residual Stress in Al Casting
           E. Lee, B. Mishra

9:30 a.m.  **Focus Group Workshops**

   **FG (D)**: Green & Clean Al-Cu Alloys, B. Began, FG Chair – Odeum A

   **FG (E)**: Residual Stress in Al Casting
              V. Pikovich, FG Chair – Odeum B

**CHTE Focus Group Workshops Continued**

8:30 a.m.  Austempering Bainite
           M. Yang, R.D. Sisson, M. Persching, FG Chair
           Hagglund Room

8:30 a.m.  Continuation of Life Improvements to Alloys and Fixtures
           A. Wang, R.D. Sisson, B.J. Bernard, FG Chair
           Mid-Century Room

10:30 a.m.  **Break**

11:00 a.m.  **Research Overviews of Complimentary Projects at MPI**
           Odeum A & B

   1.  **LIFT Project Overviews** (12 minutes)
       - Thin Walled Hi Integrity Al Die Casting (D. Apelian)
       - Nanocomposite Manufacturing (B. Mishra)
2. **ARL Projects (15 minutes)**
   - Nanocomposites via Nanoscale Powder Route *(C. Soderhjelm)*
   - Additive Manufacturing via SSM Processing *(C. Soderhjelm)*
   - Cold Spray Overview *(D. Cote)*

3. **Secondary Al Production — Enabling Technologies and Challenges – 10 minutes (S. Kelly)**

4. **CarbTool Enhancements and Demonstration – 10 minutes (L. Zhang)**

5. **Novel Aluminide Coating Methods – 10 minutes (F. Farhadi)**

12:00 – 12:45 p.m. **Keynote Speaker: Dale Gerard, General Motors**

    "Emerging Mobility Technology at General Motors"

12:45 -1:00 p.m. **Memorial for Ray Donahue (K. Anderson and A. Kopper)**

1:00 p.m. **Lunch – Odeum C**

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