METAL PROCESSING INSTITUTE
ACRC+CHTE FALL MEETING AGENDA
December 2-3, 2014

PLEASE NOTE:
Combined Meetings are in black
Items in blue refer to ACRC meetings
Items in green refer to CHTE meetings

Tuesday, December 2, 2014

8:30 – 10:30 a.m.  CHTE Board Meeting
Taylor Room, Campus Center

11:00 – 1:00 p.m.  ACRC Steering Committee Meeting
Chairman’s Room, Campus Center
Lunch will be brought in (Working Lunch)

11:00 -12:00 p.m.  CHTE Board Members – Presentation on Alloy Design and ICME Approach in Metal Processing by Dr. Danielle Belsito, Baillie McNally and Aaron Birt
Taylor Room, Campus Center

Followed by lunch from 12:00 to 1:00 p.m.

1:00 p.m.  Registration - Odeum A, Campus Center

1:30 p.m.  
- Welcome and Updates – D. Apelian
- Opening Remarks from ACRC Chair – K. Anderson
- Opening Remarks from CHTE Chair – M. Pershing/ S. Ferdon
- Remarks re 30th (ACRC) and 15th Anniversary (CHTE) Celebration June 2/3, 2015 – D. Weiss and R. Fabian

2:15 p.m.  
- Overview of the ACRC Research Portfolio – M. Makhlouf
- Overview of the CHTE Research Portfolio – R. D. Sisson
- Overview of CR3 Research Portfolio – D. Apelian

3:15 p.m.  Break

3:30 – 5:30 p.m.  Project Presentations for ACRC and CHTE
ACRC Project Presentations – Odeum A

3:30 p.m.  Clean Aluminum Processing
            S. Hudson, D. Apelian

4:00 p.m.  Aluminum Nano-Composites for Elevated Temperature Applications
            I. Anza, M. Makhlof

4:30 p.m.  Alternate Eutectic Systems for Aluminum Casting Alloys
            T. Koutsoukis, M. Makhlof

5:00 p.m.  Dissimilar Metal Casting
            C. Soderhjelm, D. Apelian

CHTE Project Presentations – Hagglund Room

3:30 p.m.  NDT Testing for Hardness & Carburization Case Depth
            L. Zhang, R. D. Sisson

3:50 p.m.  Life Improvements to Alloys and Fixtures
            A. Wang and R. D. Sisson

4:10 p.m.  Induction Tempering vs. Furnace Tempering
            X. Cai, R. D. Sisson

4:30 p.m.  Gas Quench Steel Hardenability Standard
            Y. Lu, R. D. Sisson, K. Rong

4:50 p.m.  The Influence of Temperature on the Austenite Grain Size, Hardness and
            Microstructure of 4140 Steel
            R. Zhang, A. Bhokarikar, R. D. Sisson

5:00 p.m.  X-Ray Diffraction Analysis of the Structure of Martensite and Tempered
            Martensite
            H. Yu, Y. Lu, X. Cai, R. D. Sisson

6:00 p.m.  Reception and Dinner
            Higgins House, WPI Campus
**Wednesday, December 3, 2014**

8:00 a.m.  *Breakfast*  
*Odeum A*

8:15 a.m.  **Industry Presentations**

- NEMAK – *Jose Talamantes-Silva*
- Praxair – *Beth Griegel*
- Viridis3D – *Jim Bredt*

9:15 a.m.  **Al Integrated Mini Mill Project (AIM) – Robert De Saro**

9:30 – 11:00 a.m.  **Focus Groups – Session A**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ACRC</strong></td>
<td><strong>Aluminum Nano Composites for Elevated Temperature Applications</strong></td>
</tr>
<tr>
<td></td>
<td><em>I. Anza and M. Makhlouf</em></td>
</tr>
<tr>
<td></td>
<td><em>Mid-Century Room</em></td>
</tr>
<tr>
<td></td>
<td><strong>Clean Aluminum Processing</strong></td>
</tr>
<tr>
<td></td>
<td><em>S. Hudson and D. Apelian</em></td>
</tr>
<tr>
<td></td>
<td><em>Odeum A</em></td>
</tr>
<tr>
<td><strong>CHTE</strong></td>
<td><strong>NDT Testing for Hardness and Carburization Case Depth</strong></td>
</tr>
<tr>
<td></td>
<td><em>L. Zhang and R. D. Sisson</em></td>
</tr>
<tr>
<td></td>
<td><strong>Improvements to Life of Alloys and Fixtures</strong></td>
</tr>
<tr>
<td></td>
<td><em>A. Wang and R. D. Sisson</em></td>
</tr>
<tr>
<td></td>
<td><em>Hagglund Room</em></td>
</tr>
</tbody>
</table>
11:00 – 12:30 p.m. Focus Groups – Session B

| ACRC          | Alternate Eutectic Systems for Aluminum Casting Alloys  
|               | T. Koutsoukis and M. Makhlouf  
|               | Mid-Century Room  
|               | Dissimilar Metal Casting  
|               | C. Soderhjelm, D. Apelian  
|               | Odeum A  
| CHTE          | Induction Tempering vs. Furnace Tempering  
|               | X. Cai and R. D. Sisson  
|               | Gas Quench Steel Hardenability Standard  
|               | Y. Lu, R.D. Sisson and K. Rong  
|               | Hagglund Room  

12:45 – 2:30 p.m.  Lunch - Odeum C, WPI Campus Center

Luncheon Speaker - Vijay Alreja  
“Manufacturing on a Global Scale: challenges and opportunities”

2:30 – 3:30 p.m.  Debrief made by Chairs of Focus Groups

ACRC in Odeum A

- Aluminum Nano Composites for Elevated Temperature Applications
- Clean Aluminum Processing
- Alternate Eutectic Systems for Aluminum Casting Alloys
- Dissimilar Metal Casting

CHTE in Hagglund Room

- NDT Testing for Hardness and Carburization Case Depth
- Improvements to Life of Alloys and Fixtures
- Induction Tempering vs. Furnace Tempering
- Gas Quench Steel Hardenability Standard

3:30 p.m.  Adjourn