NSF I/UCRC CR: Industry Advisory Board Meeting
October 8-9, 2019
Worcester Polytechnic Institute
Rubin Campus Center

Monday, October 7, 2019
12:30 p.m. Company visit to Rebuilders Automotive Supply (RAS) Registration required

Monday, October 7, 2019 (EIAB Members Only)
6:00 p.m. EIAB Meeting – Sports & Recreation Center, Kazin Conference Room, (2nd floor, one level down from main lobby)
8:00 p.m. Dinner – The Fix Burger Bar, 108 Grove Street, Worcester (774) 823-3327

Tuesday, October 8, 2019
8:00 a.m. Registration and Breakfast – Odeum A & B
Getting On-Line - Life Forms
8:45 a.m. Welcome – Odeum A & B
B. Mishra
Opening Remarks: IAB
M. Bauer
CR: NSF Assessment Coordinator’s Update
S. Shipp
CR: Updates
B. Mishra

9:15 a.m. Funded Project Updates – Odeum A & B
9:15 a.m. A: Optimization of Concrete Mixtures for 3D Printing (KUL)
G. Beersaerts, Y. Pontikes
9:35 a.m. B: Near Real Time Sub-ppm Detection of Elements in Metals (WPI)
S. Bong, Y. Wang
9:55 a.m. Coffee Break

10:10 a.m. Focus Group Sessions for A & B – Two parallel sessions
A: Optimization of Concrete Mixtures in 3D Printing (Umicore)
Hagglund Room
B: Near Real Time Sub-ppm Detection of Elements in Metals (East Penn)
Mid-Century Room

11:10 a.m. Funded Project Updates – Odeum A & B
11:10 a.m. C: Copper Separation from Steel (WPI)
H. Jin, B. Mishra
11:30 a.m. D: Moisture Analysis of Heterogeneous Solid Material Flows (KUL)
R. Chukka, B. Blanpain

11:50 a.m. Lunch – Odeum C
Presentation by Assistant Prof. Berk Calli on New NSF “Future of Work at the Human-Technology Frontier” Program Award Regarding Use of Robots in Material Recycling Facilities

1:00 p.m.  
**Focus Group Sessions for C & D – Two parallel sessions**  
C: Copper Separation from Steel (SMS)  
_Haggland Room_  
D: Moisture Analysis of Heterogeneous Solid Material Flows (Gopher)  
_Mid-Century Room_

2:00 p.m.  
**Funded Projects Updates – Odeum A & B**

2:00 p.m.  
E: Alternative Fluxes for Lead Bullion Refining (CSM) - **NEW**  
_T. Boundy, P. Taylor_

2:20 p.m.  
F: Optimized Sorting and Separation Technologies for Remanufacturing with Product Centric Recycled/Reclaimed Scrap (WPI)  
_A. Gupta, B. Mishra_

2:40 p.m.  
G: Vacuum Distillation of Complex Lead Bullion – **FINAL** (CSM)  
_E. Tshijik Karumb, P. Taylor_

3:00 p.m.  
**Coffee Break**

3:15 p.m.  
**Focus Group Sessions for E & F – Two parallel sessions**

E: Alternative Fluxes for Lead Bullion Refining (Metallo Belgium)  
_Chairman’s Room_

F: Optimized Sorting and Separation Technologies for Remanufacturing with Product Centric Recycled/Reclaimed Scrap (US ARL)  
_Haggland Room_

4:15 p.m.  
**Funded Projects Update – Odeum A & B**

4:15 p.m.  
H: Paint Sludge (CSM)  
_V. Vaccarezza, C. Anderson_

4:35 p.m.  
I: Electro-Oxidation of Metals & Inorganics in Metal Ops (KUL)  
_P. Subramanian, J. Fransaer_

4:55 p.m.  
**Focus Group Session for H & I – Two parallel sessions**

H: Paint Sludge (GM)  
_Mid-Century Room_

I: Electro-Oxidation of Metals & Inorganics in Metal Ops (Umicore)  
_Haggland Room_

5:55 p.m.  
**Adjourn**

6:15 p.m.  
**Reception and Dinner, Higgins House, WPI**

**Wednesday, October 9, 2019**

7:30 a.m.  
**Breakfast – Odeum A & B**

8:00 a.m.  
**Funded Project Update – Odeum A & B**

J: Online Slag and Bullion Analysis by LIBS (KUL) - **FINAL**  
_E. François, B. Blanpain_

8:20 a.m.  
**Focus Group Session for J**

J: Online Slag and Bullion Analysis by LIBS (Umicore)  
_Haggland Room_
9:00 a.m.  Final Review of 2020 Project Proposals prior to vote– *Odeum A & B*
20-00 Contactless Flow Measurement of Molten Materials (Gopher)
20-01E* Paint Sludge Recycling Project 1 Year Extension (GM/CSM)
20-02R* Recuperation of Energy from Molten Slags (Metallo)
20-03R* Effect of Cooling Speed on the Microstructure of Solid Slag (Metallo)

* E – Extension; R – Resubmission

9:40 a.m.  Coffee Break

9:55 a.m.  CR* Renewal – Options and Strategic Planning Part I – *Odeum A & B*
  B. Mishra – Chair

10:30 a.m.  IAB Meeting – Closed Session – *Odeum A & B*
  M. Bauer – Chair

10:30 a.m.  Center Directors Meet with CR* IAB Guests and Potential Members
  Mid-Century Room

12:00 p.m.  Lunch – *Odeum C*
Company Presentation by Anantha Desikan – Israel Chemical Ltd.

1:00 p.m.  CR* Renewal – Strategic Planning Part II – *Odeum A & B*
  B. Mishra – Chair

2:00 p.m.  Leveraged Project Presentations – *Odeum A & B*
  2:00 p.m.  GMR funded Red Mud Project based on licensed CR* patent (WPI)
  B. Mishra
  2:20 p.m.  Disintegration of Composite Materials for Recycling (U Tokyo)
  G. Dodibia

2:40 p.m.  IAB Debrief with Directors – *Odeum A & B*

3:20 p.m.  Meeting Adjourns

Optional Activities – *Wednesday, October 9, 2019*

3:30 p.m.  Student/Industry Q&A Session
Informal setting for students to ask industry members questions / seek advice
  *Mid-Century Room*

5:00 p.m.  Tour of WPI R&D facilities led by WPI researchers
meet in front of *Mid-Century Room*

6:30 p.m.  Informal Get Together
Beer Garden
  64 Franklin Street, Worcester, MA 01608
  (774) 530-9000