

Final Agenda: CANFSA Spring IAB Meeting, April 3-5, 2019

Center for Advanced Non-Ferrous Structural Alloys An Industry/University Cooperative Research Center

## Iowa State University, Ames, IA

## Wednesday, April 3, 2019

| <ul> <li>12:45 PM Overview and Status of CANFSA</li> <li>1:00 PM NSF/IUCRC Updates and Review of LIFE Form Process – D. Meyer<br/>www.iucrc.com, "Advanced NonFerrous Struct. Alloys (CANFSA)"<br/>Password: ames2019</li> <li>1:30 PM Project 29-L: B. Milligan, Identification of Deformation Mechanisms in<br/>Thermally Stable Cast Al-Cu Alloys Via Neutron Diffraction (Mines)</li> <li>2:00 PM Project 22: J. Jankowski, Development of Novel High Temperature Aluminum<br/>Alloys (Mines)</li> <li>2:30 PM Project 30-L: C. Johnson, Microstructural Evolution of Metallic Alloys During<br/>Rapid Solidification (Mines)</li> <li>3:00 PM Break (15 min)</li> <li>3:15 PM Project 31-L: B. McBride, Accumulative Roll Bonding of Al And Ti Sheets<br/>Toward Low Temperature Superplasticity (Mines)</li> <li>3:45 PM Project 34: B. McArthur, In-Situ Observation of Phase and Texture Evolution<br/>Preceding Abnormal Grain Growth in Ni-Based Aerospace Alloys (Mines)</li> <li>4:15 PM Guest: T. Copland-Johnson, Characterization of Oxidation Layers on Accident<br/>Tolerant Nuclear Fuel Cladding Alloys (ISU)</li> </ul> | 12:30 PM | Welcome, Attendee Introductions, Agenda Changes                               |
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|   |          | Tolerant Nuclear Fuel Cladding Alloys (ISU)                                   |
| 4:45 PM LIFE Form Review Session  | 4:45 PM  | LIFE Form Review Session  |
| 5:15 PM Adjourn   | 5:15 PM  | Adjourn   |
| 5:30 PM Social (drinks and hors d'oeuvres), Reiman Gardens, Speer Room  | 5:30 PM  | Social (drinks and hors d'oeuvres), Reiman Gardens, Speer Room                |

## Thursday, April 3, 2019

| 8:00 AM | Welcome and Agenda Changes (Continental breakfast)                         |
|---------|--|
| 8:05 AM | New Project Discussion   |
| 9:30 AM | Project 33a-L: B. Ellyson, In-Situ Studies of Strain Rate Effects on Phase |
|         | Transformations and Microstructural Evolution in Beta-Titanium Alloys      |
|         | (Mines)  |



| 10:00 AM  | Project 33b-L: J. Copley, In-Situ Studies of Strain Rate Effects on Phase<br>Transformations and Microstructural Evolution in Multi-Principal Element |
|-----------|---|
|           | Alloys (Mines)  |
| 10:30 AM  | Break (15 min)  |
| 10:45 AM  | Postdoc-L: Y. Guo, Electron Microscopy Studies of Phase Transformations and   |
|           | Microstructural Evolution in TRIP/TWIP $\beta$ -Ti and Multi-Principal Element  |
|           | Alloys (Mines)  |
| 11:15 AM  | Project 17: S. Mills, Characterization of Microstructure Evolution in Nickel-   |
|           | Titanium-Hafnium Intermetallics (Mines)   |
| 11:45 PM  | Project 35: M. Mendoza, Characterization of Microstructures and Mechanical  |
|           | Properties in Linear Friction Welded and Electron Beam Additively   |
|           | Manufactured Ti-6Al-4V (ISU)  |
| 12:15 PM  | LIFE Form Review Session  |
| 12:45 PM  | Lunch   |
| 1:30 PM   | Project 36a-L: A. Saville, Rationalization of Liquid/Solid and Solid/Solid  |
|           | Interface Instabilities During Thermal–Mechanical Transients of Metal Additive  |
| 2 00 D) ( | Manufacturing (Mines)   |
| 2:00 PM   | Project 36b-L: M. Kenney, Rationalization of Liquid/Solid and Solid/Solid   |
|           | Interface Instabilities During Thermal–Mechanical Transients of Metal Additive  |
| 2 20 DM   | Manufacturing (ISU)   |
| 2:30 PM   | Postdoc-L: J. Klemm-Toole, New postdoc introduction (Mines)   |
| 2:45 PM   | Project 32-L: G. Becker, Development of Cabinet Based Computed  |
|           | Tomography Methods for Studies of Microstructures and Defects in Metals (Mines)   |
| 3:15 PM   | ISU Undergraduates, Low Cost Bench Top Metal Additive Manufacturing   |
| 3:25 PM   | Break (15 min)  |
| 3:40 PM   | Project 14: C. Campbell, Characterization of Regions in Ti-6Al-4V Forgings  |
| J.40 I WI | with Diminished Ultrasonic Inspectability (Mines)   |
| 4:10 PM   | Postdoc-L: M. Jose Quintana and T. Ales, Spatially Resolved Acoustic  |
|           | Spectroscopy (SRAS) (ISU)   |
| 4:40 PM   | Project 37-L: N. Delfino de Campos Neto, Advanced Engineered Coatings with  |
|           | Extended Die Life for Tooling (Mines)   |
| 5:10 PM   | LIFE Form Review Session  |
|           |   |

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5:40 PM Adjourn

6:00 PM Social at Torrent Brewing and dinner on your own

## Friday, April 4, 2019

| 8:00 AM  | Welcome and Agenda Changes (Continental breakfast)                       |
|----------|--|
| 8:05 AM  | Project 38-L: S. Midson, On-Demand Casting of Net-Shape Titanium         |
|          | Components for Improved Weapon System Reliability (Mines)                |
| 8:20 AM  | Project 28-L: K. Clarke, Laboratory Testing to Identify Permanent PVD    |
|          | Coatings to Minimize Lubricant Use During Forging (Mines)                |
| 8:35 AM  | LIFE Form Review Session   |
| 8:45 AM  | New project selection and member voting                                  |
| 10:30 AM | IAB Workshop (IAB and Directors Only, Closed to Non-Members)             |
| 11:45 AM | NSF Closed Session with Industry (IAB & Center Evaluator, Closed to Non- |
|          | Members)   |
| 12:45 PM | Report out to CANFSA directors (Boxed lunch)                             |
| 1:30 PM  | Adjourn  |
|          |  |

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