CMEDE | CENTER FOR MATERIALS IN EXTREME DYNAMIC ENVIRONMENTS

Materials in Extreme Dynamic Environments (MEDE) Fall Meeting
Thursday, October 15, 2020 (virtual using Microsoft Teams platform)

Poster Session Guidance (for Consortium PIs)

Due to COVID-19, the MEDE Fall Meeting has been adjusted to accommodate a virtual meeting format. For our traditional poster session, we have modified the format to better facilitate a poster session-like experience and in fulfillment of the collaboration requirements of the MEDE CRA.

We would ask that each MEDE consortium principal investigator assign an individual (most likely a graduate student or postdoc) to present their research task. The research tasks are based on the BPP FY20-21 and Congressional adds, and are listed in Appendix A.

1. Poster Presentation Instructions

Since a large poster file is not readable on a computer screen, each presenter will be required to prepare a brief set of slides. The presentation template is included with this email and is located at https://hemi.jhu.edu/cmede/home/news-and-events/cmede-fall-meeting/

A. Please follow the instructions in the template.
B. Each presenter will have an individual Microsoft (MS) Teams channel where they will have 5 minutes to present, followed by a question/answer period by individuals who visit their MS Teams room.
C. Each presenter will be expected to be available in their channel during their scheduled 20 minute timeframe.

The poster presentation file should be uploaded into Craedl at:
https://craedl.org/group/3?d=4020265

D. In the file name, ensure you include Task # which is available in Appendix A. The deadline to upload the file is **Monday, October 5, 2020**.
E. The poster presentation file will be transferred into the designated MS Teams channel.
F. An email will be sent to all poster presenters a few days before the Fall Meeting. The email will include a link to the Fall Meeting MS Team.
G. Presenters will have the ability to upload additional files (i.e. publications, additional information, etc.) to their respective MS Teams channel so that visitors can reference them.

2. Poster Presenter Video Instructions

A. In order to promote the poster session, we are asking each presenter to create a short video. Within each video, the presenter should introduce themselves and promote their research with a goal of attracting Fall Meeting attendees to visit their MS Team poster channel.
B. The video should be no more than 30 seconds in length.
C. The video file should be in .mov format. Please send a "clean" version, the beginning or end will not be trimmed.

D. The videos will be consolidated and played during the plenary session of the Fall Meeting before the poster session.
E. Presenters are encouraged to be creative!
F. Video files should be uploaded into Craedl at: https://craedl.org/group/3?d=4020265
G. The deadline to upload a video file is **Monday, October 5, 2020**.

3. Registration for the Fall Meeting

All attendees should register for the Fall Meeting at: https://www.eventbrite.com/e/mede-virtual-2020-fall-meeting-tickets-120083720641
It is imperative that all attendees register as MS Teams link will be distributed based on the email address provided in the Eventbrite registration.

The deadline to register is **Monday, October 5, 2020**.

4. Key Points of Contact

If you have any questions, feel free to contact the following individuals:

- Katie Vaught (kvaught1@jhu.edu), MEDE Fall Meeting Coordinator
- Adam Sierakowski (help@craedl.org), Craedl Manager

Appendix A: MEDE Tasks

Metals CMRG

TASK #	CMRG	GROUP OR TASK TITLE	INSTITUTION	LEAD PI(s)
MetExHufnagel	Metals	Microstructural influences on spall void nucleation	JHU	Hufnagel
MetExKimberley	Metals	Effects of solute atoms and precipitates on deformation and twinning response in MgAl alloys	NMT	Kimberley
MetExRamesh	Metals	High Strain Rate Characterization, Thermal Softening and Spallation of Mg and the new CMRG alloys	JHU	Ramesh
MetModStuart	Metals	Physically-Informed Machine Learning For Material Deformations	Caltech	Stuart, Bhattacharya
MetModKochmann	Metals	The Interplay of Recrystallization and Precipitation during Mg Alloy Processing	ETH Zurich	Kochmann
MetModWilkerson	Metals	Optimal size, shape, spacing, and orientation of grains, twins, and second-phase particles for enhanced Mg spall resistance and ballistic performance	Texas AM	Wilkerson
MetProWeihs	Metals	Processing and Characterization of Novel Mg Alloys	JHU	Weihs, Hufnagel, Kecskes
MetModFalk	Metals	The role of vacancy generation during deformation induced nanoprecipitation in Mg alloys	JHU	Falk
MetModJoshi	Metals	A Reduced-order Basis for High-throughput Microstructure-Property Screening of Magnesium Alloys	Houston	Joshi
MetModBhattacharya	Metals	Mesoscale model of dynamic deformation of magnesium	Caltech	Bhattacharya
MetExRavichandran	Metals	Pressure-shear plate impact experiments of pure Magnesium and Magnesium Aluminum Alloys	Caltech	Ravichandran
MetModOrtiz	Metals	Uncertainty quantification	Caltech	Ortiz
PRISankar	Metals	Partnered Research Initiative	NCAT	Sankar, Xu, Yarmolenko

Composites CMRG

TASK #	CMRG	GROUP OR TASK TITLE	INSTITUTION	LEAD PI(s)
ComEx2	Composites	Meso-Mechanical Modeling of Canonical Perforation Experiments	Delaware	Haque, Gillespie
ComMod4	Composites	Multi-scale Modeling of Damage and Failure in Composites	JHU	Ghosh
ComMod5	Composites	Micromechanical FE Modeling of Tensile Failure of Unidirectional Composites	Delaware	Gillespie
ComMod6	Composites	Micro-Mechanical Modeling of Progressive Punch-Shear, Punch-Crush & Tensile Behavior of Unidirectional Composites	Delaware	Haque, Gillespie
ComMod2	Composites	Multi-Scale Modeling of Fiber-Matrix Interphase	Delaware	Gilllespie, Chowdhury
ComPro3	Composites	Synthesis of epoxy networks and interphases with controlled topology	Drexel	Palmese
ComMod1	Composites	Molecular Simulations of Sizing Deposition and Interphase Structure in S-Glass/Epoxy Composites	Drexel	Abrams
ComEx4	Composites	Real-time Damage Visualization in Composites Under Transverse Impact	Purdue	Chen
ComMod7	Composites	Sensitivities and uncertainty quantification in the composites integrative model using surrogate-based approaches	JHU	Graham-Brady
ComMod8	Composites	Development of a Rate-Dependent Progressive Damage Model for 2D and 3D Composites in LS-DYNA	Delaware	Haque, Gillespie

Ceramics CMRG

TASK #	CMRG	GROUP OR TASK TITLE	INSTITUTION	LEAD PI(s)
CerModBrady	Ceramics	Granular flow transitions and parameter sensitivities in the integrative model to guide materials by design	JHU	Graham-Brady
CerExHaber	Ceramics	Investigation of Amorphization and Quasi-Plasticity Mechanisms in Boron Carbide	Rutgers	Haber
CerProHaber	Ceramics	Materials Synthesis and Processing Integrative Task	Rutgers	Haber
CerExHarmer	Ceramics	Atomic-Resolution Characterization of Boron Icosahedra Ceramics	Lehigh	Harmer, Marvel
CerExHemker	Ceramics	TEM Characterization of Quasiplasticy in Boron Carbide	JHU	Hemker
CerExRamesh1	Ceramics	Canonical Experiments for the Ceramics CMRG using HyFIRE	JHU	Ramesh
CerExRamesh2	Ceramics	Experiments on High-Rate Granular Flow in Boron Carbide	JHU	Ramesh
CerExRamesh3	Ceramics	High-Strain-Rate Experiments on CMRG Boron Carbide Materials and BC crystals	JHU	Ramesh
CerModRamesh1	Ceramics	Integrative Modeling subtask (distributed over all 3 mechanisms)	JHU	Ramesh
CerModGoddard	Ceramics	ReaxFF Modeling of Boron Carbide and Grain Boundaries	Caltech	Goddard
CerProSpencer	Ceramics	Boron Carbide Single Crystals	MSU	Spencer, Chandrashekhar
Cer Hurley	Ceramics	Calibrating and validating granular flow model parameters to aid in integrative model predictions and materials by design efforts	JHU	Hurley
CerModRamesh2	Ceramics	Particle based modeling of fragmentation transition and granular flow	JHU	Ramesh

Integrative Tasks

TASK #	CMRG	GROUP OR TASK TITLE	INSTITUTION	LEAD PI(s)
MDSC	Integrative	MEDE Data Science Cloud	JHU	Elbert
Craedl	Integrative	Collaborative Research Administrative Environment and Data Library	JHU	Sierakowski