

CoMFRE Annual Meeting

OCTOBER 28-29, 2019

IOWA STATE UNIVERSITY ALUMNI CENTER, AMES, IA

Monday, October 28, 2019

- 3:00-5:00 pm** **Members-only meeting to provide overviews and updates on member-supported research (Open only to member company employees and CoMFRE faculty and students) (*UELNER BOARDROOM*)**
- 3:00-3:10 Welcome/Introductions
- 3:10-3:30 Operating procedures discussion and vote
- 3:30-3:50 AbbVie update
- 3:50-4:10 BP Update
- 4:10-4:30 BASF Update
- 4:30-4:50 Roeslein AE Update
- 4:50-5:00 Any new business
- 5:00 Adjourn
- 5:00-6:00 pm** **Registration (*CY'S LOUNGE*) and student poster set up (*REIMAN BALLROOM*)**
- 6:00-7:00 pm** **Student poster session and cash bar, networking (Open to all)**
- 7:00-9:00 pm** **Dinner (Open to all) (*REIMAN BALLROOM*)**
- Opening remarks: Arun Somani, Associate Dean, ISU Engineering

Tuesday, October 29, 2019 – REIMAN BALLROOM

- 7:30-8:30 am** **Registration and full breakfast/networking**
- 8:30-9:15 am** **[Welcome and CoMFRE overview](#)**
- Ted Heindel, CoMFRE Director
- 9:15-10:00 am** **Multiphase Flow Research at NSF**
- Bill Olbricht, Program Director, NSF
- 10:00-10:15 am** **Break/networking**
- 10:15-11:00 am** **Powder Sprays for Additive Manufacturing**
- Iver Anderson, Senior Metallurgist, Ames Laboratory
- 11:00-11:45 am** **Selected 5-minute, 2-slide summaries from CoMFRE faculty**
- 11:00 [Song-Charng Kong.....Drop/Wall Interactions at Extreme Conditions](#)
- 11:05 [Soumik Sarkar.....Machine Learning for Thermo-fluid Systems Design, Simulations and Monitoring](#)

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- 11:10 [Hui Hu..... Overview of Icing Physics and Anti-/De-Icing Research Activities at ISU](#)
- 11:15 [Adarsh Krishnamurthy...Immersogeometric Analysis Method](#)
- 11:20 [Ming-Chen Hsu..... Heart Valve Fluid-Structure Interaction](#) (Adarsh to present on behalf of Ming-Chen)
- 11:25 [James Michael..... Laser and Optical Diagnostics for Multiphase Vaporization and Combustion](#)
- 11:30 [Paul Durbin..... Hybrid Turbulence Modeling](#)
- 11:35 [Jonghyun Lee..... Multiphysics Study on Levitated Liquid Drops on Earth and in Space](#)
- 11:40 [Mike Olsen..... Investigating Emulsions Using Taylor-Couette Reactors](#)
- 11:45am-1:00pm Lunch/networking**
- 1:00-1:45 pm [Artificial Intelligence \(AI\) and Machine Learning \(ML\) for Engineering Design and Simulations](#)**
- Baskar Ganapathysubramanian, Professor, ISU
 - Soumik Sarkar, Associate Professor, ISU
- 1:45-2:30 pm Selected 5-minute, 2-slide summaries from CoMFRE faculty**
- 1:45 [Nicole Hashemi.....On-Chip Materials Processing and Cell Characterization](#)
- 1:50 [Ted Heindel.....X-ray Flow Visualization](#)
- 1:55 [Daniel Attinger.....Fluid Dynamics for Forensics](#)
- 2:00 [Jaime Juarez.....Acoustic Field Assembly](#)
- 2:05 [Travis Sippel.....Energetic Material Multiphase Flows](#)
- 2:10 [Thomas Ward.....Microscale Fluid Interface Physics](#)
- 2:15 [Leif Leifsson.....Multifidelity Modeling and Design](#)
- 2:20 [Alberto Passalacqua.....Computational Models for Polydisperse Multiphase Flows](#)
- 2:25-2:45 pm Summary and adjourn**
- 3:00-5:00 pm Selected lab tours and individual discussions as needed**