

NSF EPSCoR Research Infrastructure Improvement (RII) Award

The 5th CIMM Technical Conference

April 17, 2020

Zoom Meeting Link (to be sent later)

Agenda

8:00 – 8:15	Welcoming Remarks and Overview (Michael Khonsari)
Project Overview	
8:15 – 8:35	Wen Jin Meng (LSU) , Summary of CIMM STT1 research: small scale plasticity and metal forming, mechanical integrity of solid/solid interfaces, ICME, and technological applications
8:35 – 8:40	Q&A
8:40 – 9:00 9:00 – 9:05	Shengmin Guo (LSU) , Summary of CIMM STT2 research: laser powder bed printing, structure, defect, and property characterization, ICME, and technological applications
9:05 – 9:20	Guoqiang Li (SU) , Summary of CIMM education and outreach activities Ramu Ramachandran (LaTech) , Summary of CIMM program elements
9:20-9:30	Break
Technical Session	
Multiscale metal forming and pattern replication (STT1): Chair: Wen Jin Meng	
9:30 – 9:45	Abu Shama Mohammad Miraz (LaTech) , DFT Studies of metal/ceramic interfaces and the development of modified embedded atom potentials
9:45 – 9:50	Q&A
9:55– 10:10 10:10 – 10:15	Xiaoman Zhang (LSU) , Epitaxial growth of Cu thin films on TiN(001) thin film templates: discovery of a new Cu/TiN epitaxial relationship
10:15 – 10:30 10:30 – 10:35	Bin Zhang/Wen Jin Meng (LSU) , Update on direct micron scale friction force measurements and toward understanding mechanical scaling anomaly with quantitative EBSD data analysis
10:35 – 10:50 10:50 – 10:55	Arden Moore (LaTech) , Subcooled pool boiling performance of as-rolled and nanostructure-modified 1D micro-fin arrays fabricated by high throughput roll molding
10:55 – 11:05	Break
Laser based metal 3D printing (STT2): Chair: Shengmin Guo	
11:05 – 11:20 11:20 – 11:25	Louis Haber (LSU) , Ultrafast Laser-Induced Heating and Melting Dynamics of Metallic Nanomaterials
11:25 – 11:40 11:40 – 11:45	Nigel Amoako-Yeboah, Selami Emanet, Stephen Akwaboa, Samuel Ibekwe, Guoqiang Li and Patrick F. Mensah (SUBR) , Study of Thermo-physical and Morphological Properties of Selective Laser Melting Processed Materials: Aluminum, 316L Stainless Steel and Titanium Alloys

11:45 – 12:00	Uttam K Chakravarty (UNO) , An Investigation on Melt Pool and Solidification of Ti-64 in Laser Powder-Bed Fusion Process
12:00-12:05	Q&A
12:05 – 12:20	Congyuan Zeng, Bin Zhang, and Hao Wen (LSU) , Thermal and Mechanical Properties of Cu Alloy Prepared by Selective Laser Melting
12:20 – 12:25	Q&A
12:25 – 12:40	Kasra Momeni (LaTech) , Melting of Aluminum particles: Effect of size and mechanics
12:40 – 12:45	Q&A
12:45 – 1:45	Lunch break
Seed Grantees: Chair: Ramu Ramachandran	
1:45 – 3:15	<i>2019 Seed Grant Awardees Presentations: (10 min each + 5 min Q&A)</i> <ul style="list-style-type: none"> • <i>Pesika (Tulane)</i> • <i>Taylor (ULL)</i> • <i>Chen (Tech)</i> • <i>Jang (ULL)</i> • <i>Murray (Tech)</i> • <i>Bardaweel (Tech)</i>
3:15 – 4:00	<i>Concluding remarks:</i> Michael Khonsari