

HEMI/MSEE Impact Research Workshop Detailed Schedule
July 17 – 19, 2023
Johns Hopkins University, Baltimore, MD

Day 1 – July 17, 2023

Focus: Why we do impact experiments. Governing equations and fundamentals.

Note: Specific topics and timing subject to change. Specific locations will be provided in a future schedule.

Time	Instructor or Speaker	Topic	Location
8:30 – 9:00 am	Continental breakfast		Levering Hall
9:00 – 9:15 am	HEMI/MSEE Organizers	Transition and Introduction	Hackerman Hall
9:15 – 10:15 am	Naresh Thadhani (Georgia Tech)	Keynote: state-of-the-art in experiments.	Hackerman Hall
10:15 – 10:30 am	Coffee break		Hackerman Hall
10:30 – 11:30 am	David Lambert (AFOSR)	DoD research needs, interests, opportunities.	Hackerman Hall
11:30 am – 12:30 pm	Lunch		Levering Hall
12:30 – 2:00 pm	KT Ramesh (JHU)	Lecture: Impact; stress waves; mathematical foundations.	Hackerman Hall
2:00 – 2:15 pm	Coffee break		Hackerman Hall
2:15 – 3:30 pm	KT Ramesh (JHU)	Shock waves, Hugoniot relations, release waves, elastic-plastic shocks.	Hackerman Hall
3:30 – 3:45 pm	Coffee break		Hackerman Hall
3:45 – 5:00 pm	KT Ramesh (JHU)	Equations of state. Design of planar shock experiments.	Hackerman Hall
5:00 – 6:30 pm	Poster session, reception, networking, HyFIRE tours		Malone Hall
6:30 pm	Adjourn, dinner on own		

Day 2 – July 18, 2023**Focus:** State-of-the-art in material response to impact and shock.

Time	Instructor or Speaker	Topic	Location
8:30 – 9:00 am	Continental breakfast		Levering Hall
9:00 – 9:15 am	HEMI/MSEE Organizers	Transition and Introduction. Possible review of previous day.	Hackerman Hall
9:15 – 10:15 am	Saryu Fensin (LANL)	Keynote: state-of-the-art in experiments, equations of state.	Hackerman Hall
10:15 – 10:30 am	Coffee break		Hackerman Hall
10:30 – 11:30 am	Scott Schoenfeld (ARL)	DoD research needs, interests, opportunities.	Hackerman Hall
11:30 am – 12:30 pm	Lunch		Levering Hall
12:30 – 1:15 pm	Ghatu Subhash (UF)	Lecture: Introduction, examples of dynamic behavior, basics of wave propagation.	Hackerman Hall
1:15 – 1:30 pm	Coffee break		Hackerman Hall
1:30 – 2:45 pm	Ghatu Subhash (UF)	Lecture: Impact and shock response of brittle materials. Rankine-Hugoniot relations and equations of state.	Hackerman Hall
2:45 – 3:00 pm	Coffee break		Hackerman Hall
3:00 – 4:00 pm	Ghatu Subhash (UF)	Lecture: Impact and shock response of transparent solids, visualization of wave propagation and damage in glasses.	Hackerman Hall
4:00 – 4:15 pm	Coffee break		Hackerman Hall
4:15 – 5:15 pm	Ghatu Subhash (UF)	Lecture: Dynamic response of metals, strain rate and temperature dependence, thermally activated dislocation motion.	Hackerman Hall
5:15 – 6:30 pm	Poster session, reception, networking, HyFIRE tours		Malone Hall
6:30 pm	Adjourn, dinner on own		

Day 3 – July 19, 2023

Focus: State-of-the-art in constitutive modeling.

Time	Instructor or Speaker	Topic	Location
8:30 – 9:00 am	Continental breakfast		Levering Hall
9:00 – 9:15 am	HEMI/MSEE Organizers	Transition and Introduction. Possible review of previous day.	Hackerman Hall
9:15 – 10:15 am	Nathan Barton (LLNL)	Keynote: High-rate strength and constitutive modeling for impact- loading scenarios.	Hackerman Hall
10:15 – 10:30 am	Coffee break		Hackerman Hall
10:30 – 11:30 am	TBD	DoD research needs, interests, opportunities.	Hackerman Hall
11:30 am – 12:30 pm	Lunch		Levering Hall
12:30 – 1:30 pm	Eric Herbold (LLNL)	Lecture: Constitutive and numerical modeling.	Hackerman Hall
1:30 – 1:45 pm	Coffee break		Hackerman Hall
1:45 – 3:00 pm	Eric Herbold (LLNL)	Lecture: Constitutive and numerical modeling.	Hackerman Hall
3:00 – 3:15 pm	Coffee break		Hackerman Hall
3:15 – 5:00 pm	Eric Herbold (LLNL)	Lecture: Constitutive and numerical modeling.	Hackerman Hall
5:00 pm	End of Workshop, adjourn		