

Agenda for 2008 SSAA Symposium

Tuesday, February 26th

High Energy Density Physics I

Begin	End	Duration	Speaker	
7:15	8:00	0:45	Registration	
8:00	8:05	0:05	Meserve, Richard	Introduction
8:05	8:10	0:05	Wallin, Bradley	Announcements
8:10	8:40	0:30	Soures, John (LLE)	High-Energy-Density Physics Research at the NLUF Using the OMEGA and OMEGA EP Lasers
8:40	9:10	0:30	Ditmire, Todd (UT)	The Texas Center for High Intensity Laser Science
9:10	9:25	0:15	Hartigan, Patrick	Laboratory Experiments of Astrophysical Jets
9:25	9:40	0:15	Spaulding, Dylan	New Frontiers in Planetary Science: Ultra-High Pressure Physics and Chemistry Using Laser-Driven Shocks
9:40	9:55	0:15	Break	
9:55	10:25	0:30	Moses, Ed (LLNL)	The National Ignition Facility and Fundamental High Energy Density Science
10:25	10:55	0:30	Kusse, Bruce (Cornell)	High Energy Density Plasma Studies with Pulsed Power Machines
10:55	11:25	0:30	Rocca, Jorge	Soft X-ray Laser Interferometry of Dense Colliding Plasmas and Laboratory Plasma Jets
11:25	11:40	0:15	Kapteyn, Henry	Coherent Imaging of Laser-Plasma Interactions Using XUV High Harmonic Radiation
11:40	11:55	0:15	Averback, Robert	Fast Laser Excitation, Ultrafast Quenching and Dynamical Materials Processes
11:55	12:10	0:15	Fisch, Nathaniel	Compact Compression of High Intensity Laser Pulse

12:10	12:25	0:15	Fisch, Nathaniel	Fundamental Issues in the Interaction of Intense Lasers with Plasma
12:25	13:45	1:20	Lunch	
13:45	14:15	0:30	Kindel, Joe (UNR)	Research at the Nevada Terawatt Facility
14:15	14:30	0:15	Safronova, Alla	Theoretical X-ray/EUV Spectroscopy and Imaging Studies of Wire Array and X-pinch Plasmas
14:30	14:45	0:15	Kantsyrev, Victor	Experimental Studies of Implosion Characteristics and Radiation Properties of Planar and Cylindrical Wire Arrays and X-pinches
14:45	15:00	0:15	Chandra, Dhanesh	High Pressure Research on Complex Hydrides and Energy Storage Materials
15:00	15:15	0:15	Petrasso, Richard	Monoenergetic Proton Radiography of Electromagnetic Fields and Areal Density in Laser-Plasma-Interaction Experiments and in ICF Implosions
15:15	15:45	0:30	Break	
15:45	16:15	0:30	Fonck, Ray	TBD
16:15	16:30	0:15	Drake, Paul	Hydrodynamics and Radiation Hydrodynamics with Astrophysical Applications
16:30	16:45	0:15	Jacobsen, Stein	Experimental Studies of High-Energy Processing of Proto Planetary and Planetary Materials in the Early Solar System
16:45	17:00	0:15	Stone, James	Validation of Astrophysical Radiation Magnetohydrodynamic Codes
17:00	17:15	0:15	Mori, Warren	Parallel PIC Simulations of High-Energy Density Science Involving Laser and Beam Transport Related to ICF
17:15	20:15	3:00	Poster Session and Reception	

Wednesday, February 27th

High Energy Density Physics II and Materials under Extreme Conditions I

8:00	8:30	0:30	Breakfast	
8:30	9:00	0:30	Andrews, Malcolm (TAM)	Progress with Experiments and our Understanding of Rayleigh-Taylor Driven Mixing
9:00	9:15	0:15	Jacobs, Jeffrey	An Experimental Study of the Turbulent Development of Rayleigh-Taylor and Richtmyer-Meshkov Instabilities
9:15	9:30	0:15	Glimm, James	Turbulent Mixing at the Macro and Atomic Scales
9:30	9:45	0:15	Oakley, Jason	Investigation of the Rayleigh-Taylor and Richtmyer-Meshkov Instabilities
9:45	10:15	0:30	Break	
10:15	10:45	0:30	Meehan, Tim	Recent Advancements in Dense Plasma Focus Fusion Research at the NTS
10:45	11:15	0:30	Jones, Brent	Z-Pinch-Driven HEDP at Sandia's Center for Pulsed Power Sciences
11:15	11:30	0:15	Mancini, Roberto	Experimental and Modeling Studies of Photoionized Plasmas
11:30	11:45	0:15	Afeyan, Bedros	Advances in Optical Mixing Techniques for the Effective Control of Parametric Instabilities in Laser-Produced Plasmas
11:45	13:15	1:30	Lunch	
13:15	13:45	0:30	Philips, Julia (SNL)	Discovery-Class Scientific Opportunities in Materials Science to Meet NNSA Missions
13:45	14:15	0:30	Cornelius, Andrew	Recent Developments in Understanding Dynamics, Explosives and Diffraction at High Pressures Development of Designer Diamond Technology for High Pressure High Temperature Experiments in Support of Stockpile Stewardship Program
14:15	14:30	0:15	Vohra, Yogesh	

14:30	14:45	0:15	Peralta, Pedro	Correlations Among Plastic Strain Concentrations, Spall Damage Localization and Microstructure in Shock Loaded Copper Multicrystals
14:45	15:00	0:15	Huang, Yonggang	The Cohesive Law for the Particle/Matrix Interfaces in High Explosives
15:00	15:30	0:30	Break	
15:30	16:00	0:30	Crabtree, George	Materials Under Extreme Environments
16:00	16:30	0:30	Hemley, Rus (Carnegie)	Material Properties at Extreme Conditions
16:30	16:45	0:15	Tozer, Stanley	Using Pressure, Temperature, and High Magnetic Fields to Explore f-electron Physics
16:45	17:00	0:15	Li, Baosheng	Thermoelasticity of SSP Materials: An Integrated Acoustic and Diffraction Study at High-P and High-T
17:00	17:15	0:15	Scalettar, Richard	High Pressure Studies of Correlated Electron Systems: Experiment and Theory Structure and Thermodynamic Properties
17:15	17:30	0:15	Abramson, Evan	Viscosities of Dense Fluids

Wednesday, February 27th
HEDSUP Mini-Symposium

13:30	18:30	5:00	Afeyan, Bedros	HEDSUP Mini-Symposium:Recent Progress in the Science Use of NNSA HEDLP facilities
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Thursday, February 28th
Materials Under Extreme Conditions II and Low Energy Nuclear Science

7:30	8:00	0:30	Breakfast	
8:00	8:30	0:30	Horwitz, Jim	Overview of Programs Supported by the Division of Materials Science and Engineering in BES

8:30	9:00	0:30	Yoo, Chong-Shik	The Institute for Shock Physics: Overview Research Objectives, Capabilities and Activities
9:00	9:15	0:15	Robertson, Ian	An Experimental-Numerical Study of the Dynamic Response of Metals and Nanostructured Metallic Multilayers
9:15	9:30	0:15	Falcone, Roger	Dynamics of Materials Under Extreme Conditions
9:30	9:45	0:15	Browning, Nigel	Enhanced Functionality for Materials Analysis in the Dynamic TEM (DTEM)
9:45	10:15	0:30	Break	
10:15	10:45	0:30	Hooks, Dan	Deformation Mechanisms in Shock-Loaded Explosive Single Crystals
10:45	11:00	0:15	Kotliar, Gabriel	First Principles Investigations of Actinides and Compounds using Dynamical Mean Field Theory
11:00	11:15	0:15	Ceperley, David	Coupled Electron-Ion Monte Carlo Simulations of Dense Hydrogen
11:15	11:30	0:15	Butch, Nicholas	Experimental Investigation of Magnetic, Superconducting, and Other Phase Transitions in Novel f-electron Materials at Ultrahigh Pressures
11:30	13:00	1:30	Lunch	
13:00	13:30	0:30	Chadwick, Mark (LANL)	TBD
13:30	14:00	0:30	Cizewski, Jolie (Rutgers)	New Results from Radioactive Ion Beam Studies for Stewardship Science
14:00	14:15	0:15	Mukhamedzhanov, Akram	Benchmark on Neutron Capture Extracted From (d, p) Reactions
14:15	14:30	0:15	Nitsche, Heino	Neutron-Induced Cross Section Measurements on Americium Isotopes

14:30	14:45	0:15	McMahan, Peggy	Reaction Measurements with Radioactive Beams and Targets - An Update
14:45	15:15	0:30	Break	
15:15	15:45	0:30	Burke, Jason	Techniques for Measuring Nuclear Cross Sections of Radioactive Isotopes
15:45	16:00	0:15	Longo, Michael	Proton Radiography: Cross Section Measurements and Detector Development
16:00	16:15	0:15	Dashdorj, Dugersuren	Cross Sections, Level Densities, and Strength Functions
16:15	16:30	0:15	Brune, Carl	Studies in Low-Energy Nuclear Science
16:30	16:45	0:15	Danon, Yaron	Measurements of Nanogram Quantities of Short-lived Isotopes Using a Lead Slowing Down Spectrometer
16:45	17:00	0:15	Allmond, Mitch	The Surrogate Ratio Method: Results from $^{154,156,158}\text{Gd}(p,p')$ and $^{235}\text{U}(d,p)$
17:00	17:15	0:15	Tonchev, Anton	Neutron-Induced Reactions on Actinides Using Pulsed and Monoenergetic Beams at Triangle Universities Nuclear Laboratory