Protection (Life Sciences) and Defeat WMD

Monday July 18, 2016					w1b
Start - End	dT	Title	Institution	Presenter	TA
8:00 - 8:25	25	Daily Instructions and Computer Intro	DTRA / JHU		3
8:25 - 8:30	5	Program Execution and Funding Expenditures Brief	DTRA	LT Col Rupanovic	
8:30 - 8:45	15	Intro to Life Science and Customer Statement	DTRA	Heather Meeks	
8:45 - 9:05	20	Codon Usage in Morbilliviruses: Evidence for Evolutionary Conservation and Importance for Adaptation to New Hosts	University of Georgia Research Foundation	Elizabeth Uhl	3
9:05 - 9:10	5	Q/A and Computer Feedback			
9:10 - 9:30	20	Flow-Through Capture Filters for Investigating and Enhancing Antibody-Antigen Binding Kinetics	Illinois State University	Jeremy Driskell	3
9:30 - 9:35	5	Q/A and Computer Feedback			
9:35 - 9:50	15	~ Break ~			
9:50 - 10:15	25	Role of Confinement and Material Surface on Protein Dynamics and Function	Pacific Northwest National Laboratory	Thomas Squier	3
10:15 - 10:20	5	Q/A and Computer Feedback			
10:20 - 10:55	35	Molecular-Level Understanding of Enzyme-Surface Interactions on Complex Surfaces and Its Impact on Sensing Uranyl Cations	University of Michigan	Zhan Chen	3
10:55 - 11:00	5	Q/A and Computer Feedback			
11:00 - 11:20	20	Enzyme Cascades	Columbia University	Henry Hess	3
11:20 - 11:25	5	Q/A and Computer Feedback			
11:25 - 11:45	20	Tailoring Protein-Based Nanocontainers as Catalytic Systems for Sensing and Reporting	University of Minnesota	Claudia Schmidt-Dannert	3
11:45 - 11:50	5	Q/A and Computer Feedback			
11:50 - 1:20	90	~ Lunch ~			
1:20 - 1:40	20	Ab-Initio & Semiempirical Investigation of Deinococcus Radiodurans Resistance to Ionizing & UV Radiation	Purdue University	Jorge Rodriguez	3
1:40 - 1:45	5	Q/A and Computer Feedback			
1:45 - 2:10	25	Deinococcus radiodurans Mn2+ Complexes: A Revolutionary Approach to Radioprotection and Vaccine Production	Uniformed Services University	Michael Daly	3
2:10 - 2:15	5	Q/A and Computer Feedback			
2:15 - 2:35	20	Investigating RNA-Mediated Regulatory Mechanisms in Radioresistant Bacteria	University of Texas, Austin	Lydia Contreras	3
2:35 - 2:40	5	Q/A and Computer Feedback			
2:40 - 3:00	20	Acute Radiation Response of Mammalian Stem Cells	University of California, Irvine	Charles Limoli	3
3:00 - 3:05	5	Q/A and Computer Feedback			
3:05 - 3:20	15	~ Break ~			
3:20 - 3:45	25	Investigation of Radiation Resistance Mechanisms in Melanized Fungi	Albert Einstein College of Medicine	Ekaterina Dadechova	3
3:45 - 3:50	5	Q/A and Computer Feedback			
3:50 - 4:10	20	The Role of microRNA (miRNA) Activation in Radioresistance of Melanized Fungi and Mammalian Cells	Uniformed Services University	Mang Xiao	3
4:10 - 4:15	5	Q/A and Computer Feedback			
4:15 - 4:35	20	Investigating Radiation-Induced Damage During Translation in Melanized Fungi	University of Cincinnati	Patrick Limbach	3
4:35 - 4:40	5	Q/A and Computer Feedback			
4:40 - 5:15	35	Epigenetic Mechanisms in the Recovery of the Bacterium Deinococcus radiodurans and Melanized Fungi Exposed to Ionizing Radiation	Uniformed Services University	Michael Daly	3
5:15 - 5:20	5	Q/A and Computer Feedback			
5:20 - 5:40	20	Wartime Radiation Exposure: Epigenetic Regulation of the CNS Response	University of California, Irvine	Janet Baulch	3
5:40 - 5:45	5	Q/A and Computer Feedback			

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Tuesday July 19, 2016					w1b
Start - End	dT	Title	Institution	Presenter	TA
8:30 - 8:55	25	Daily Instructions and Computer Intro	DTRA / JHU		
8:55 - 9:00	5	Program Execution and Funding Expenditures Brief	DTRA	LT Col Rupanovic	
9:00 - 9:05	5	Intro to Geomaterials and Manufactured Materials	DTRA	Allen Dalton	
9:05 - 9:25	20	Real Time X-ray Diffraction and Imaging of Shock-Compressed Geological Materials	Princeton University	Tom Duffy	4
9:25 - 9:30	5	Q/A and Computer Feedback			
9:30 - 9:50	20	The Effects of Dynamic and Pre-Damage on Heterogeneous Materials	Imperial College of Science, Technology, and Medicine	Bill Proud	4
9:50 - 9:55	5	Q/A and Computer Feedback			
9:55 - 10:15	20	In Situ Characterization of Dynamic Failure and Physics-Based Constitutive Model Development for Geological Materials	Johns Hopkins University	Todd Hufnagel	4
10:15 - 10:20	5	Q/A and Computer Feedback			
10:20 - 10:35	15	~ Break ~			
10:35 - 10:55	20	Resolving the Dynamic Behavior of Earth Materials Using a Pressure Shear Configurations	Marquette University	John Borg	4
10:55 - 11:00	5	Q/A and Computer Feedback			
11:00 - 11:05	5	Intro to Agent Defeat Materials and Properties	DTRA	Allen Dalton	
11:05 - 11:30	25	Dust Cloud Combustion for Defeat of Airborne Bio-WMD	McGill University	David Frost (Sam Goroshin)	4
11:30 - 11:35	5	Q/A and Computer Feedback			
11:35 - 12:00	25	Development of Particle Compacts and Sustained and Tunable Heat Production and Gaseous Biocidal Release	Johns Hopkins University	Tim Weihs	4
12:00 - 12:05	5	Q/A and Computer Feedback			
12:05 - 12:30	25	Halogen-Containing Compounds for Neutralizing Biological Agents	University of Idaho	Jean'ne Shreeve	4
12:30 - 12:35	5	Q/A and Computer Feedback			
12:35 - 2:05	90	~Lunch~			
2:05 - 2:10	5	Intro to Agent Defeat Materials and Properties	DTRA	Allen Dalton	
2:10 - 2:30	20	Synthesis and Characterization of Advanced Biocidal Energetic Materials	Texas Tech University	Michelle Pantoya (Becca Wilson)	4
2:30 - 2:35	5	Q/A and Computer Feedback			
2:35 - 2:55	20	Evaluation of Agent Defeat Materials	Naval Surface Warfare Center	Jim Lightstone	4
2:55 - 3:00	5	Q/A and Computer Feedback			
3:00 - 3:25	25	Testing of New Agent Defeat Formulations to Kill Bacterial Spores and Determination of Kill Mechanisms	University of Connecticut	Peter Setlow	4
3:25 - 3:30	5	Q/A and Computer Feedback			
3:30 - 3:45	15	~ Break ~			
3:45 - 4:05	20	Reactive Materials with Staged Release of Energy and Biocidal Products	New Jersey Institute of Technology	Ed Dreizin	4
4:05 - 4:10	5	Q/A and Computer Feedback			
4:10 - 4:35	25	Synthetic and Mechanistic Reactivity Studies of Low Oxidation State Aluminum Clusters and Particles for Energetic and Agent Defeat Applications	University of Maryland	Bryan Eichhorn	4
4:35 - 4:40	5	Q/A and Computer Feedback			
4:40 - 5:00	20	Towards Development of Tailored Explosives Based on Coordination Chemistry for C-WMD	University of Michigan	Adam Matzger	4
5:00 - 5:05	5	Q/A and Computer Feedback			
5:05 - 5:30	25	Unique Polymer Packaging & Delivery of ADW	University of Rhode Island	Jimmie Oxley	4
5:30 - 5:35	5	Q/A and Computer Feedback			

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Wednesday July 20, 2016					w1b
Start - End	dT	Title	Institution	Presenter	TA
8:00 - 8:25	25	Daily Instructions and Computer Intro	DTRA / JHU		
8:25 - 8:30	5	Program Execution and Funding Expenditures Brief	DTRA	LT Col Rupanovic	
8:30 - 8:35	5	Intro to Agent Defeat Binders	DTRA	Allen Dalton	
8:35 - 9:00	25	Chemistry-Assembly-Function Relationships of Reactive Materials for CWMD	University of Maryland	Michael Zachariah	4
9:00 - 9:05	5	Q/A and Computer Feedback			
9:05 - 9:25	20	Printable Polymer Bound Reactives	South Dakota School of Mines and Technology	Lori Groven	4
9:25 - 9:30	5	Q/A and Computer Feedback			
9:30 - 9:55	25	High Throughput Electrospray Formation of Reactive -Energetic Biocidal Polymer Composites	University of Maryland	Michael Zachariah	4
9:55 - 10:00	5	Q/A and Computer Feedback			
10:00 - 10:15	15	~ Break ~			
10:15 - 10:20	5	Intro to Agent-Defeat Reactions and Turbulence	DTRA	Allen Dalton	
10:20 - 10:40	20	Experimental Investigation of Turbulent Mixing in Thermite Explosions	New Mexico Institute of Mining and Technology	Michael Hargather	4
10:40 - 10:45	5	Q/A and Computer Feedback			
10:45 - 11:05	20	Thermochemical Kinetics of Halogenated Materials in Turbulent Flows of Detonation Products	University of Illinois	Nick Glumac	4
11:05 - 11:10	5	Q/A and Computer Feedback			
11:10 - 11:30	20	Multiscale Modeling of Multiphase Turbulent Mixing to Enable Predictive Simulations of Chem/Bio Defeat	University of Florida	Siva Balachandar (Thomas Jackson)	4
11:30 - 11:35	5	Q/A and Computer Feedback			
11:35 - 1:05	90	~ Lunch ~			
1:05 - 1:25	20	Combustion of reactive materials in gas flows with turbulent mixing	New Jersey Institute of Technology	Ed Dreizin	4
1:25 - 1:30	5	Q/A and Computer Feedback			
1:30 - 1:50	20	Simulation of Chemical/Biological Agent Neutralization in Turbulent Multi-Scale, Multi-Phase Reactive Post-Detonation Environment with Model Uncertainty Quantification	Georgia Tech	Suresh Menon	4
1:50 - 1:55	5	Q/A and Computer Feedback			
1:55 - 2:15	20	Molecular Mechanisms of Spore Killing by Corrosive and Detonation Product Gases: Reactive Molecular Dynamics Coupled with Graph-Theoretic Methods	University of Southern California	Priya Vashishta	4
2:15 - 2:20	5	Q/A and Computer Feedback			
2:20 - 12:15	5	Intro to Chemical Agent Reactions and Kinetics	DTRA	Allen Dalton	
12:15 - 2:40	15	High Temperature Decomposition Pathways and Intermediate Concentrations of Simulants using Shock Tube and Time-Resolved Laser Absorption Diagnostics	University of Central Florida	Subith Vasu	4
2:40 - 2:45	5	Q/A and Computer Feedback			
2:45 - 3:00	15	High-speed Measurement of Decomposition and Inactivation Mechanisms of Chemical Warfare Agent Simulants at High Heating Rates	Iowa State University	Travis Sippel	4
3:00 - 3:05	5	Q/A and Computer Feedback			
3:05 - 6:00		Poster Session			

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Thursday July 21, 2016					w1b
Start - End	dT	Title	Institution	Presenter	TA
8:30 - 8:55	25	Daily Instructions and Computer Intro	DTRA / JHU		
8:55 - 9:00	5	Program Execution and Funding Expenditures Brief	DTRA	LT Col Rupanovic	
9:00 - 9:05	5	Continue Chemical Agent Reactions and Kinetics	DTRA	Allen Dalton	
9:05 - 9:20	15	Chemical Reactions and Kinetics of CWA Simulants under Extreme Heating Conditions	Washington State University	Hergen Eilers	4
9:20 - 9:25	5	Q/A and Computer Feedback			
9:25 - 9:40	15	CWA Thermal Defeat in Reactive Atmospheres	Southwest Research Institute	Matthew Blais	4
9:40 - 9:45	5	Q/A and Computer Feedback			
9:45 - 10:00	15	High-Temperature Chemical Kinetics and Combustion of Chemical Agents in a Counter-WMD Environment	Texas Engineering Experiment Station	Eric Petersen	4
10:00 - 10:05	5	Q/A and Computer Feedback			
10:05 - 10:20	15	Interfacial Chemical Kinetics and Mechanisms Involving Chemical Simulants under Dynamic Thermal Conditions	University of Chicago	Steven Sibener	4
10:20 - 10:25	5	Q/A and Computer Feedback			
10:25 - 10:55	30	~ Break ~			
10:55 - 11:00	5	Intro to Meso Diagnostics	DTRA	Allen Dalton	
11:00 - 11:20	20	Irreversible Phase Changes in Nanophae RE-doped M2O3 and Their Optical Signatures	Washington State University	Hergen Eilers	4
11:20 - 11:25	5	Q/A and Computer Feedback			
11:25 - 11:45	20	Ultrafast Diagnostics for High-Speed Impacts with Particulate Composites	University of Illinois	Dana Dlott	4
11:45 - 11:50	5	Q/A and Computer Feedback			
11:50 - 12:15	25	Meso-Scale Time-Resolved Diagnostics Employing Photonic Crystals for Probing Dynamic Events in Inert and Reactive Particulate Materials	Georgia Tech	Naresh Thadhani	4
12:15 - 12:20	5	Q/A and Computer Feedback			
12:20 - 1:50	90	~ Lunch ~			
1:50 - 2:15	25	Inter-Particle Force Inference Under Dynamic Loading: Advanced Experimental Visualization Aided by Multiscale Computations	California Institute of Technology	Jose Andrade	4
2:15 - 2:20	5	Q/A and Computer Feedback			
2:20 - 2:40	20	In-Situ Molecular Diagnostics for Heterogeneous Polymer Composites	Naval Postgraduate School	Joe Hooper (Brian Mason)	4
2:40 - 2:45	5	Q/A and Computer Feedback			
2:45 - 3:10	25	Multi-Scale Penetration Mechanics of Projectiles through Granular Media using Neutron and X-Rays	University of Tennessee	Dayakar Penumadu	4
3:10 - 3:15	5	Q/A and Computer Feedback			
3:15 - 3:30	15	~ Break ~			
3:30 - 3:35	5	Intro to Multi-scale Simulation	DTRA	Allen Dalton	
3:35 - 3:55	20	A Novel Multiscale QM-MD-SPH Computational Method for Heterogeneous Multicomponent Reactive Systems	University of Cincinnati	Gui-Rong Liu	4
3:55 - 4:00	5	Q/A and Computer Feedback			
4:00 - 4:20	20	Multi-Scale Coupling Strategies for Multi-Physics Simulation Tools	University of Florida	Thomas Jackson	4
4:20 - 4:25	5	Q/A and Computer Feedback			
4:25 - 4:45	20	Computational Homogenization Approach for Scale Linking and Multiscale Modeling of Energetic Solid State Composites	University of Michigan	Sundararaghavan Veera	4
4:45 - 4:50	5	Q/A and Computer Feedback			

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Friday July 22, 2016					w1b
Start - End	dT	Title	Institution	Presenter	TA
8:30 - 8:55	25	Daily Instructions and Computer Intro	DTRA / JHU		
8:55 - 9:00	5	Program Execution and Funding Expenditures Brief	DTRA	LT Col Rupanovic	
9:00 - 9:05	5	Continue Multi-scale Simulations	DTRA	Allen Dalton	
9:05 - 9:25	20	Initiation and Post-Detonation Kinetics of Aluminized RDX Composites Using a First-principles Guided Multiscale Approach	University of Illinois	Santanu Chaudhuri	4
9:25 - 9:30	5	Q/A and Computer Feedback			
9:30 - 9:50	20	Nonholonomic Coupling of Hamiltonian Models for Reacting Shock Physics at Multiple Scales	University of Texas, Austin	Eric Fahrenthold	4
9:50 - 9:55	5	Q/A and Computer Feedback			
9:55 - 10:10	15	~ Break ~			
10:10 - 10:30	20	Multiscale Modeling and Simulations of Energetic Composites for Sensitivity, Performance Evaluation, and Design	Georgia Tech	Sunil Dwivedi	4
10:30 - 10:35	5	Q/A and Computer Feedback			
10:35 - 11:00	25	Multi-Resolution Modeling and Experiments of Nanostructured Reactive Materials	Purdue University	Ale Strachan (Steve Son)	4
11:00 - 11:05	5	Q/A and Computer Feedback			
11:05 - 11:30	25	Computational Capability for Designing Composite Energetic Materials under shock and Non-shock Loading	Georgia Tech	Min Zhou	4
11:30 - 11:35	5	Q/A and Computer Feedback			
11:35 - 1:05	90	~ Lunch ~			
1:05 - 1:10	5	Intro to HEDM	DTRA	Allen Dalton	
1:10 - 1:35	25	High-Energy-Density Monolithic Organometallic Solids	Washington State University	Choong-Shik Yoo	4
1:35 - 1:40	5	Q/A and Computer Feedback			
1:40 - 2:05	25	Determining Thermochemical Properties of Halogenated Metals: On enabling rapid and Accurate Assessments of Agent Defeat Formulations	Lawrence Livermore National Laboratory	Joe Zaug	4
2:05 - 2:10	5	Q/A and Computer Feedback			
2:10 - 2:35	25	Synthesis, Characterization and Theory/Modeling of Polynitrogen Energetic Materials	University of South Florida	Ivan Oleynik	4
2:35 - 2:40	5	Q/A and Computer Feedback			
2:40 - 3:00	20	Pathways to N-Rich High Energy Density Materials	University of Ottawa	Serge Desgreniers	4
3:00 - 3:05	5	Q/A and Computer Feedback			