

NUCLEAR SCIENCE AND SECURITY CONSORTIUM LAB & FACULTY COORDINATION MEETING

October 7, 2019

hosted by Lawrence Livermore National Laboratory

LOCATION: Lawrence Livermore National Laboratory (LLNL), Building 453 (B453),
Armadillo Room, unless otherwise noted below

TIME	TOPIC/EVENT	PRESENTER
9:00 - 10:00 am	Badging and Breakfast <i>Stop by the Westgate Badge Office to receive your site access badge and then proceed to B453 for breakfast (Full details on LLNL event website. Parking available in the lot across from B453)</i>	
10:00 - 10:10	Introduction to the Day: <ul style="list-style-type: none">• Safety and Security Reminders• Logistics• Goals• Introduction of Tour Offerings	Dr. Vladimir Mozin (LLNL)
10:10 - 10:25	Nonproliferation R&D at LLNL	Dr. Scot Olivier (LLNL)
10:25 - 10:45	The Nuclear Science and Security Consortium	Dr. Jasmina Vujic (UCB)
10:45 - 12:15 pm	R&D Interests Roundtable Flash presentations on current research, infrastructure, programs, etc.	NSSC Faculty and Lab Scientists (See Printed Directory for presenters)
12:15 - 1:45	Lunch featuring Q&A session with NSSC Leadership Work in small groups by research interests <i>Lunch to be held in the Black Diamond Room</i>	Dr. Vladimir Mozin (LLNL)
Afternoon Optional	Personalized technical tours <i>Adjourn</i>	

NUCLEAR SCIENCE AND SECURITY CONSORTIUM FALL WORKSHOP & ADVISORY BOARD MEETING

October 8 - 9, 2019

hosted by Lawrence Livermore National Laboratory

TUESDAY, OCTOBER 8TH, 2019

LOCATION: Lawrence Livermore National Laboratory, Building 453 (B453),
Armadillo Room, unless otherwise noted below

TIME	TOPIC/EVENT	PRESENTER
8:30 - 9:00	Badging, Check In, and Breakfast <i>Stop by the Westgate Badge Office to receive your site access badge and then proceed to B453 for breakfast (Full details on event website and parking available in the lot across from B453)</i> (Poster presenters should set up posters in B453 Courtyard in the marked tent)	
9:00 - 9:05	Safety & Security Reminders	Dr. Vladimir Mozin (LLNL)
9:05 - 9:15	Welcome and LLNL Overview	Dr. Cynthia Atkins-Duffin (LLNL)
9:15 - 9:25	DNN R&D University Program	Dr. Victoria Franques (NNSA)
9:25 - 9:45	Overview of the Nuclear Science and Security Consortium	Prof. Jasmina Vujic (UCB)
9:45 - 10:10	Introduction to the Nuclear & Particle Physics (NPP) Focus Area	Prof. Barbara Jacak (UCB)
10:10 - 10:30	NPP: sPHENIX Jet Energy Scale Correction	Fernando Torres-Acosta (UCB)
10:30 - 10:50	NPP: Precision Lifetime Measurements of Rare Isotopes and Implementation of a Radiation-hard Diamond Active Target	Mara Grindler (MSU)
10:50 - 11:10	NPP: ACED and ARTIE: Improving Neutron Cross Section Databases on Argon	Vincent Fischer (UCD)
11:10 - 11:30	Break	-
11:30 - 11:55	Introduction to the Modeling & Simulation (MSIM) Crosscutting Area	Prof. Jasmina Vujic (UCB)
11:55 - 12:15	MSIM: Modelling and Validation of Integral Experiments at NIF	Sandra Bogetic (UCB)
12:15 - 12:35	Group Photo, B453 Courtyard	-
12:35 - 1:35	Lunch (Please review lunch locations)	-
	NSSC Advisory Board Members and NSSC Students/Postdocs <i>Lunch Location: Black Diamond Room, located off the B453 Atrium</i>	
	Other Workshop Participants <i>Lunch Location: Courtyard of B453</i>	
1:35 - 2:00	Introduction to the Nuclear Data (DATA) Crosscutting Area	Prof. Lee Bernstein (UCB)
2:00 - 2:20	DATA: Improving Nuclear Cross Section Measurement Techniques in the A=90 Mass Region	Alicia Palmisano (MSU)
2:20 - 2:45	Introduction to the Radiation Detection & Instrumentation (RDI) Focus Area	Prof. Kai Vetter (UCB)
2:45 - 3:05	RDI: Compositional Engineering of Novel Inorganic Scintillators for Gamma Spectroscopy Applications	Daniel Rutstrom (UTK)
3:05 - 3:20	Break	-
3:20 - 3:40	RDI: Measurement of Ultra-Low Energy Nuclear Recoils in Liquid Xenon	Daniel Naim (UCD)
3:40 - 4:00	RDI: High-resolution, Gamma-ray Imaging of Nuclear Materials	Emily Frame (UCB)
4:00 - 6:00	Poster Session & Reception <i>B453 Courtyard in the Marked Tent</i>	See Next Page for Poster Presenters
6:30	Closed Dinner - By Invitation Only	

NUCLEAR SCIENCE AND SECURITY CONSORTIUM FALL WORKSHOP & ADVISORY BOARD MEETING

October 8 - 9, 2019

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OCTOBER 8TH, 2019 POSTER SESSION

LOCATION: Lawrence Livermore National Laboratory, Building 453 (B453) Courtyard

POSTER #	POSTER TITLE	PRESENTER
1	A Relational Coincidence-Decay Database for Fission Products and Radionuclides	Dr. Aaron Hurst, UCB
2	Additive Manufacturing of Technical Ceramics	Ethan Boado, UCB
3	Analysis of Uranium and Samarium Isotopic Ratios by Thermal Ionization Mass Spectrometry (TIMS) for Nuclear Forensic Analysis	James Louis-Jean, UNLV
4	ANNIE: Nuclear Effects in Neutrino Interactions	Teal Pershing, UCD
5	Calibration of a HPGe Detector for Gallium Cross Section Measurement	Katherine Luebke, UNLV
6	Characterization of WATCHMAN PMT Singles Rate	Austin Mullen, UCB
7	Chemical Synthesis of Uranium Dioxide Nanomaterials with New Architectures for Nuclear Forensics Applications	Mark Straub, UCB
8	Constraining Neutron-Capture Cross Sections for Basic Research and Applications	Andrea Richard, MSU
9	Design Improvement of Linear Paul Trap for the Study of Rare Beta Decays	John Ash, MSU
10	Determining Pulse Length in Laser-Plasma Accelerators	Max Wallace, UCB
11	Engaging Students through a Hands-on Introduction to Radiation Detection	Dr. Ali Hanks, UCB
12	Experimentally Constrained $^{92}\text{Sr}(n,\gamma)^{93}\text{Sr}$ Reaction Rate	Adriana Sweet, UCB
13	In-Beam Gamma Spectroscopy of Neutron-Rich Phosphorous Isotopes	Matthew Hill, MSU
14	Modelling Electron Recoil Interactions in Liquid Xenon	Jon Balajthy, UCD
15	Optical Light Transport in Scintillator Detector Response Simulations with DRIFT	Tyler Jordan, UCB
16	Optimization of Binning Parameters in the Feynman Variance-to-Mean Method for Delayed Neutron Reinterrogation	Keenan Harvis, UCB
17	Plutonium Discrimination Forensics at Texas A&M University	Kevin Glennon, TAMU
18	Thorium Separation from Uranium Ore	Kelly Kmak, UCB
19	Towards Precision Gamma-Ray Intensity Measurements of Long-Lived Fission Products	Roy Ready, MSU
20	Two-Neutron Knockout as a Probe of the Composition of States in ^{22}Mg , ^{23}Al and ^{24}Si	Brendon Longfellow, MSU
21	Validation of the b-Oslo Method: An Indirect Method for Constraining Neutron-Capture Cross Sections	Katie Childers, MSU

Even numbered posters must be manned by students from 4:00 – 5:00
Odd numbered posters must be manned by students from 5:00 – 6:00

NUCLEAR SCIENCE AND SECURITY CONSORTIUM FALL WORKSHOP & ADVISORY BOARD MEETING

October 8 - 9, 2019

hosted by Lawrence Livermore National Laboratory

WEDNESDAY, OCTOBER 9TH, 2019, MORNING

LOCATION: Lawrence Livermore National Laboratory, Building 453 (B453), Armadillo Room, unless otherwise noted below

TIME	TOPIC/EVENT	PRESENTER
8:30 - 9:00	Badging, Check In, and Breakfast <i>Stop by the Westgate Badge Office to receive your site access badge if you did not attend the other days of the workshop and then proceed to B453 for breakfast (Full details on event website and parking available in the lot across from B453)</i>	
9:00 - 9:25	Introduction to the Education Crosscutting Area	Dr. Bethany Goldblum (UCB)
9:25 - 9:50	Introduction to the Radiochemistry (CHEM) Focus Area	Dr. Frederic Poineau (UNLV)
9:50 - 10:10	CHEM: The First Americium Containing Metal-Organic Framework: A Platform for Studying Transplutonium Elements	August Ridenour (GWU)
10:10 - 10:30	CHEM: Safeguards Development for Neptunium-237	Mariah Ramirez (TAMU)
10:30 - 10:50	CHEM: The Retrospective Analysis of Plutonium in Banded Coral from the Bikini Atoll	Athena Gallardo (UNLV)
10:50 - 11:10	Break	-
11:10 - 11:35	Introduction to the Nuclear Engineering (NE) Focus Area	Prof. Max Fratoni (UCB)
11:35 - 11:55	NE: Modeling of Material Transfers in Reactor Fuel Burnup Simulations	Daniel Wooten (UCB)
11:55 - 12:20	Introduction to the Nuclear Security Policy (POL) Crosscutting Area	Prof. Allison Macfarlane (GWU)
12:20 - 12:40	POL: A New Tool in the Toolkit: Experimental Wargaming as a Data Generating Process	Dr. Andrew W. Reddie (UCB)
12:40 - 1:40	Lunch, B453 courtyard	

WEDNESDAY, OCTOBER 9TH, 2019, AFTERNOON

PARALLEL TRACKS FOR DIFFERENT AUDIENCES AS FOLLOWS

	Afternoon Agenda for the External Advisory Board	Afternoon Agenda for NSSC Faculty and Lab Main Points of Contact	Afternoon Agenda for NSSC Students and Postdocs, Laboratory Personnel	Afternoon Agenda for NNSA Representatives
1:40 - 3:00	Closed Session: External Advisory Board ONLY <i>Location: B453, Dry Creek Conference Room</i>	Strategic Planning Meeting <i>Location: B453 Black Diamond Conference Room</i>	Tours <i>Location: All tours will leave from the B453 atrium. Please see the back of your meeting badge for your pre-selected tour times. All tours will return back to B453.</i>	Tour <i>Location: All tours will leave from the B453 atrium. Please see the back of your meeting badge for your pre-selected tour times. All tours will return back to B453.</i>
3:00 - 4:00	External Advisory Board Outbrief (NSSC Executive Team, Faculty, Lab POCs, and NNSA Sponsors) <i>Location: B453 Armadillo Room</i>	External Advisory Board Outbrief (NSSC Executive Team, Faculty, Lab POCs, and NNSA Sponsors) <i>Location: B453 Armadillo Room</i>		External Advisory Board Outbrief (NSSC Executive Team, Faculty, Lab POCs, and NNSA Sponsors) <i>Location: B453 Armadillo Room</i>
4:00	Adjourn	Adjourn	Adjourn	Adjourn