

Workshop for Applied Nuclear Data Activities (WANDA)


from Tuesday, 22 January 2019 at **07:30** to Thursday, 24 January 2019 at **18:01** (US/Eastern)
 at **Elliott School of International affairs at the George Washington University (City View)**
 1957 E Street, NW Washington, DC 20052




























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Description The Workshop for Applied Nuclear Data Activities (WANDA) will be held at the Elliott School of International affairs at the George Washington University from January 22-24, 2019, followed by a one-day invitation-only classified session on January 25, 2019. This workshop will be modeled after the Nuclear Data Roadmapping Enhancement Workshop (NDREW), held at the UCDC center in 2018, that helped guide the last Nuclear Data Interagency Working Group Funding Opportunity Announcement. A technical report of the proceedings from NDREW may be obtained here. The purpose of WANDA is to discuss nuclear data needs and potential solutions for nuclear energy, nonproliferation, isotope production, and stewardship science.

[Go to day](#)










Tuesday, 22 January 2019



07:45 - 08:10	Registration	
08:10 - 08:15	Welcome to GWU 5'	
	Speaker: Prof. Allison Macfarlane (GWU)	
08:15 - 08:30	Welcome & Opening Remarks 15'	
	Speaker: Dr. Timothy Hallman (DOE)	
	Material: Slides 	
08:30 - 08:45	Meeting structure and Goals 15'	
	Speaker: Dr. Lee Bernstein (LBNL/University of California - Berkeley)	
	Material: Slides 	
08:45 - 09:00	Historical Context, NDREW takeaways 15'	
	Speaker: Dr. Catherine Romano (ORNL)	
	Material: Slides 	
09:00 - 09:15	Isotope Program Needs 15'	
	Speaker: Dr. Ethan Balkin (DOE)	
	Material: Slides  	
09:15 - 09:30	Nuclear Energy Program Needs 15'	
	Speaker: Dr. Alice Caponiti (DOE)	
	Material: Slides 	
09:30 - 09:45	NRC Needs 15'	
	Speaker: Dr. Amy Cabbage (NRC)	
	Material: Slides 	
09:45 - 10:00	Modern Nuclear Data Evaluation Methods 15'	
	Speaker: Prof. Arjan Koning (IAEA)	
	Material: Slides 	
10:00 - 10:15	Japanese Collaboration 15'	
	Speakers: Dr. Mitsuo Koizumi (JAEA), Dr. Douglas Rodriguez (JAEA)	
	Material: Slides 	
10:15 - 10:45	Break	
10:45 - 10:55	NA-113 10'	
	Speaker: Dr. Teresa Bailey (LLNL)	
10:55 - 11:05	NA-114 10'	
	Speaker: Dr. Jim Peltz (DOE/NNSA)	

11:05 - 11:20	NA-221 Overview 15' Speaker: Dr. Donald Hornback (DOE/NNSA)	
11:20 - 11:30	NA-222 10' Speaker: Dr. Timothy Ashenfelter (DOE/NNSA)	
11:30 - 11:40	Safeguards Needs 10' Speaker: Dr. Chris Ramos (DOE/NNSA)	
11:40 - 11:50	DTRA Nuclear Data Needs 10' Speaker: Dr. Kevin Mueller (DTRA) Material: Slides 	
11:50 - 12:00	AFTAC Needs 10' Speaker: Dr. William Johnson (AFTAC) Material: Slides 	
12:00 - 12:15	Criticality Safety Program Needs 15' Speaker: Dr. Doug Bowen (ORNL) Material: Slides 	
12:15 - 13:45	Lunch: Break	
13:45 - 14:15	Nuclear Data 101/The Nuclear Data Pipeline 30' Speakers: Dr. David Brown (BNL/NNDC), Dr. Jeremy Conlin (LANL) Material: Slides 	
14:15 - 14:30	NDIAWG FOA Overview 15' Speaker: Dr. Timothy Hallman (DOE/NP)	
14:30 - 14:45	Improving the Nuclear Data on Fission Products Decays at CARIBU 15' Speaker: Dr. Guy Savard (ANL)	
14:45 - 15:00	Novel Approach for Improving Antineutrino Spectral Predictions for Nonproliferation Applications 15' Speaker: Dr. Filip Kondev (ANL)	
15:00 - 15:15	$^{238}\text{U}(\text{p},\text{xn})$ and $^{235}\text{U}(\text{d},\text{xn})$ $^{235}\text{-}^{237}\text{Np}$ Nuclear Reaction Cross Sections Relevant to the Production of ^{236}gNp 15' Speaker: Dr. Michael Fassbender (LANL) Material: Slides  	
15:15 - 15:25	State-of-the-art Gamma-ray Spectroscopy to Enhance the ENSDF 10' Speaker: Dr. Libby McCutchan (BNL/NNDC)	
15:25 - 15:35	Beta-strength function, reactor decay heat, and anti-neutrino properties from total absorption spectroscopy of fission fragments 10' Speaker: Dr. Krzysztof RYKACZEWSKI (ORNL) Material: Slides 	
15:35 - 15:45	Improving the double-differential $^{238}\text{U}(\text{n},\text{n}'\text{g})$ cross section using neutron-gamma coincidences 10' Speaker: Lee Bernstein (LBNL) Material: Slides 	
15:45 - 16:15	Break	
16:15 - 16:25	Integral Measurements of Independent and Cumulative Fission Product Yields Supporting Nuclear Forensics and Other Applications 10' Speaker: Dr. Todd Bredeweg (LANL)	
16:25 - 16:35	Evaluation of Energy Dependent Fission Product Yields 10' Speaker: Dr. Toshihiko Kawano (LANL) Material: Slides 	

16:35 - 16:45	Measurement of Independent Fission Product Yields 10'	▼
	Speaker: Dr. Dana Duke (LANL)	
	Material: Slides 	
16:45 - 16:55	Independent Fission Product Yields from 0.5 to 20 MeV 10'	▼
	Speaker: Dr. Shea Mosby (LANL)	
	Material: Slides 	
16:55 - 17:05	Energy Dependent Fission Product Yields 10'	▼
	Speaker: Dr. Anton Tonchev (LLNL)	
17:05 - 17:15	Discussion/Q&A 10'	▼
17:15 - 17:16	Adjourn Day 1	▼





Wednesday, 23 January 2019





07:45 - 08:30	Registration: Registration & AM Refreshments	▼
08:30 - 10:00	Roadmapping Session 1A: Nuclear Energy	▼
	Conveners: Eric Matthews, Dr. Bradley Rearden (ORNL)	
	Location: Elliott School of International Affairs (Lindner Family Commons)	
08:30	Introduction: Nuclear Data Needs for Nuclear Energy Applications 20'	▼
	Speaker: Dr. Bradley Rearden (ORNL)	
08:50	Nuclear Data Needs for Spent Fuel Dry Storage and Radioactive Materials Transportation 15'	▼
	Speaker: Dr. Drew Barto (NRC)	
	Material: Slides 	
09:05	Recent LWR Systems Analysis Research Projects at the USNRC 20'	▼
	Speaker: Dr. Pete Yarsky (NRC)	
	Material: Slides  	
09:25	Nuclear Data Needs for High Temperature Gas-cooled Reactors 15'	▼
	Speaker: Dr. Eben Mulder (X-energy)	
09:40	Nuclear Data Needs Assessment for Advanced Nuclear System: History and Update 20'	▼
	Speaker: Dr. Giuseppe Palmiotti (INL)	
	Material: Slides 	
08:30 - 10:00	Roadmapping Session 1B: Isotope Production	▼
	Location: Elliott School of International affairs at the George Washington University (State Room)	
08:30	Nuclear Data for Isotope Production: A Program Manager's Perspective 20'	▼
	Speaker: Dr. Ethan Balkin (DoE)	
	Material: Slides  	
08:50	Current status of infrastructure and capabilities for nuclear data measurements at BLIP 20'	▼
	Speaker: Dr. Dmitri Medvedev (BNL)	
	Material: Slides  	
09:10	VERMEULEN - Title Placeholder 15'	▼
	Speaker: Dr. Etienne Vermeulen (LANL)	
	Material: Slides 	
09:25	Capabilities for Nuclear Data Measurements at LBNL 15'	▼
	Speaker: Dr. Andrew Voyles (UCB / LBNL)	
09:40	Nolen - Title Placeholder 20'	▼
	Speaker: Dr. Jerry Nolen (ANL)	
10:00 - 10:20	Break	


10:20 - 12:00	Roadmapping Session 1A (continued): Nuclear Energy Conveners: Eric Matthews, Dr. Bradley Rearden (ORNL) Location: Elliott School of International Affairs (Lindner Family Commons)	▼
10:20	Advanced Reactor Design and Analysis 15' Speaker: Dr. Nicholas Touran (TerraPower)	▼
10:35	Nuclear Data Needs for Current and Future Nuclear Energy Systems 15' Speaker: Dr. Alex Levinsky (Westinghouse)	▼
10:50	Molten Salt and Fluoride Salt Cooled Reactor Design and Analysis 15' Speaker: Dr. Massimiliano Fratoni (UC Berkeley/Kairos Power)	▼
11:05	The Status of Nuclear Data Uncertainty Libraries and the Problem of Too Small Uncertainties on Differential Data and Too Large Uncertainties on Integral Data 15' Speaker: Dr. Vladimir Sobes (ORNL)	▼
11:20	Thermal Scattering Law Data for Advanced Reactor Applications 15' Speaker: Dr. Ayman Hawari (NCSU)	▼
11:35	Discussion 25' Speakers: Eric Matthews, Dr. Bradley Rearden (ORNL)	▼
10:20 - 12:00	Roadmapping Session 1B (continued): Isotope Production Location: State Room	▼
10:20	Engle - Title Placeholder 20' Speaker: Dr. Jonathan Engle (University of Wisconsin - Madison)	▼
10:40	University of Washington Medical Cyclotron Facility (UWMCF) 20' Speaker: Dr. Gregory Moffitt (University of Washington) Material: Slides  	▼
11:00	Howell - Title Placeholder 20' Speaker: Dr. Roger Howell (Rutgers University)	▼
11:20	Hobbs - Title Placeholder 20' Speaker: Dr. Hobbs Robert (Johns Hopkins Medicine)	▼
11:40	Wrap-Up Discussion 20'	▼
12:00 - 13:15	Lunch	
13:15 - 14:55	Roadmapping Session 2B - Safeguards: - Program manager perspective User Input Conveners: Eric Matthews, Dr. Christopher Pickett (ORNL) Location: Lindner Family Commons	▼
13:15 - 14:55	Roadmapping Session 2A - Materials Damage Conveners: Dr. Catherine Romano (ORNL), Amanda Lewis Location: State Room	▼
13:15	Introduction and Guidelines 10' Speaker: Dr. Catherine Romano (ORNL)	▼
13:25	Materials Issues for Non-light Water Reactors 15' Speaker: Dr. Raj Iyengar (NRC)	▼
13:40	Materials Issues for Fusion Systems 15' Speaker: Dr. Daniel Clark (Office of Science, Fusion)	▼
13:55	IAEA work on primary radiation damage cross sections 15' Speaker: Prof. Arjan Koning (IAEA) Material: Slides 	▼
14:10	The Impact of ENDF/B-VIII.0 and FENDL-3.1d on Fusion Neutronics Calculations 15' Speaker: Dr. Tim Bohm (Univ. Wisc.-Madison)	▼
14:25	IAEA CRP on Primary Radiation Damage and SPECTER 15' Speaker: Dr. Larry Greenwood (PNNL) Material: Slides 	▼

14:55 - 15:15	Break Location: Elliott School of International Affairs	▼
15:15 - 17:00	Roadmapping Session 2B - Safeguards Conveners: Eric Matthews, Dr. Christopher Pickett (ORNL) Location: Linder Family Commons	▼
15:15 - 17:00	Roadmapping Session 2A (continued): Materials Damage Conveners: Dr. Catherine Romano (ORNL), Amanda Lewis Location: State Room	▼
15:15	Damage Correlation: Exposure Vs. Material Damage 15'	▼
15:30	Materials Damage Characterization 15' Speaker: Dr. Peter Hosemann (UC Berkeley)	▼
15:45	Neutron Dosimetry with STAYSL for Materials Irradiations and the IAEA CRP on IRDFF 15' Speaker: Dr. Larry Greenwood (PNNL) Material: Slides 	▼
16:00	Materials irradiations in HFIR 15' Speaker: Dr. Catherine Romano (ORNL)	▼
16:15	Activation and Damage Cross Sections in Use for EUROfusion Fusion Nuclear Technology 15' Speaker: Dr. Robert Grove (ORNL)	▼
16:30	Fusion Nuclear Science Facility 15' Speaker: Dr. Charles Kessel (ORNL)	▼
16:45	Using Heavy Ion Beams to Study Radiation Damage in Fuel Elements and Structural Materials for Reactors 15' Speaker: Dr. Jerry Nolen (ANL)	▼
17:00 - 17:01	Adjourn Day 2	▼

Thursday, 24 January 2019

07:45 - 08:30	Registration: Registration & AM Refreshments	▼
08:30 - 10:00	Roadmapping Session 3A: (n,x) reactions Conveners: Dr. Robert Casperson (LLNL), Amanda Lewis (UC Berkeley), Dr. Matthew Devlin (LANL)	▼
08:30	TBD 10' Speaker: Dr. Robert Casperson (LLNL) Material: Slides 	▼
08:40	TBD 5' Speaker: Dr. Teresa Bailey (LLNL)	▼
08:45	Covariance availability for neutron reaction data 5' Speaker: Dr. Ian Thompson (LLNL) Material: Slides  	▼
08:50	TBD 5' Speaker: Dr. Catherine Percher (LLNL)	▼
08:55	TBD 5' Speaker: Dr. Mark Paris (Los Alamos National Laboratory)	▼
09:00	Evaluation Discussion 25'	▼
09:25	TBD 5' Speaker: Dr. Darren Bleuel (LLNL)	▼
09:30	TBD 5' Speaker: Dr. Robert Casperson (LLNL) Material: Slides 	▼

	09:35	TBD 5' Speaker: Dr. Ching-Yen Wu (LLNL)	▼
	09:40	TBD 5' Speaker: Dr. Matthew Devlin (LANL)	▼
	09:45	TBD 5' Speaker: Dr. Matthew Devlin (LANL)	▼
	09:50	TBD 10' Speaker: Dr. Yaron Danon (RPI)	▼
08:30 - 10:00		Roadmapping Session 3B: Atomic, XRF Data Conveners: Dr. David Brown (BNL), Dr. Marie-Anne Descalle (LLNL), Dr. Andrew Voyles (UCB / LBNL) Location: State Room	▼
	08:30	General overview of ENDF atomic data libraries 10' Speaker: Dr. David Brown (BNL) Material: Slides 	▼
	08:40	IAEA support of atomic data 10' Speaker: Dr. Arjan Koning (IAEA) Material: Slides 	▼
	08:50	NIST atomic data capabilities 10' Speaker: Dr. Yuri Ralchenko (NIST)	▼
	09:00	Atomic data support in EXFOR 10' Speaker: Dr. Boris Pritychenko (BNL)	▼
	09:10	GNDS implementation of atomic data 10' Speaker: Dr. Marie-Anne Descalle (LLNL)	▼
	09:20	Atomic data in Monte Carlo transport codes and their validation 10' Speaker: Dr. Maria Grazia Pia (INFN)	▼
	09:30	SNL electron and photon scattering data use at Sandia 10' Speakers: Dr. Clif Drumm (SNL), Dr. Brian Franke (SNL)	▼
	09:40	LLNL capabilities and needs 10' Speakers: Dr. Ian Thompson (LLNL), Dr. Steve Libby (LLNL), Dr. Eric Jurgenson (LLNL), Dr. Michael Kruse (LLNL) Material: Slides  	▼
	09:50	Atomic data needs for ENSDF & decay data 10' Speaker: Dr. Alejandro Sonzogni (BNL)	▼
10:00 - 10:20		Break	▼
10:20 - 12:00		Roadmapping Session 3B (continued): Atomic, XRF Data Conveners: Dr. David Brown (BNL), Dr. Marie-Anne Descalle (LLNL), Dr. Andrew Voyles (UCB / LBNL) Location: State Room	▼
	10:20	Atomic data needs for safeguards 10' Speaker: Dr. Steven Croft (ORNL)	▼
	10:30	PyXRF and related XRF analysis codes at light sources 10' Speakers: Dr. Stewart Campbell (BNL), Dr. Andrew Kiss (BNL)	▼
	10:40	Discussion 1h0'	▼
	11:40	Drafting of Close-out Talk 20'	▼
10:20 - 12:00		Roadmapping Session 3A (continued) : (n,x) reactions Conveners: Dr. Robert Casperson (LLNL), Dr. Matthew Devlin (LANL), Amanda Lewis (UC Berkeley)	▼
	10:20	Scattering Discussion 30'	▼
	10:50	TBD 10' Speaker: Dr. Aaron Couture (LANL)	▼
	11:00	TBD 5'	▼

	Speaker: Dr. Jason Burke (LLNL)	
11:05	TBD 10'	▼
	Speaker: Dr. Jutta Escher (LLNL)	
11:15	TBD 5'	▼
	Speaker: Dr. Luke Snyder (LLNL)	
	Material: Slides 	
11:20	TBD 5'	▼
	Speaker: Dr. Georgios Perdikakis (Central Michigan University)	
11:25	TBD 5'	▼
	Speaker: Dr. Michael Smith (ORNL)	
11:30	Capture, (n,2n), (n,z') Discussion 30'	▼
12:00 - 13:30	Lunch	▼
13:30 - 15:45	Presentation of Key Outcomes 2h15'	▼
	Speakers: Dr. David Brown (BNL/NNDC), Dr. Marie-Anne Descalle (LLNL), Dr. Matthew Devlin (LANL), Dr. Robert Casperson (LLNL), Dr. Etienne Vermeulen (LANL), Dr. Brad Rearden (ORNL), Dr. Catherine Romano (ORNL), Dr. Christopher Pickett (ORNL)	
15:45 - 16:00	Break	▼
16:00 - 17:00	Q&A and Closeout	▼
	<i>We will hear from the breakout session leads who will present summaries of to the general audience.</i>	
	Convener: Dr. Catherine Romano (Oak Ridge National Laboratory)	
16:00	Fission and Nuclear Data 30'	▼
	Speaker: Dr. Alejandro Sonzogni (BNL/NNDC)	
16:30	NDIAWG FOA Q&A 30'	▼
	Speakers: Dr. Donald Hornback (DOE/NNSA), Dr. Timothy Hallman (DOE/NP)	
17:00 - 17:01	Adjourn Final Day 3	▼

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