

Welcome Dinner, March 25, 2024		
18:30	Welcome Dinner	Jack Roth Stadium Club House, Michigan Stadium, 1201 S Main St, Ann Arbor, MI 48109
Workshop Day 1, March 26, 2024, Michigan League Ballroom		
8:00	Breakfast, Registration, and Poster Set-up	2nd Floor, Michigan League, 911 N. University Ave. Ann Arbor, MI 48109
9:00	Welcome & Logistics	Shaun Clarke, MTV Associate Director, Sara Pozzi, MTV Director, University of Michigan
9:10	NNSA Goals for MTV	Jon Baker, Deputy Director, Office of Proliferation Detection, NNSA
9:25	MTV Accomplishments	Sara Pozzi, MTV Director, University of Michigan
9:40	Ex fission ad astra: extending nuclear phenomenology to the fission fragment region	Kyle Beyer, University of Michigan
9:55	Robust Adversarial Reinforcement Learning for Antineutrino-based Safeguards	Matthew Dunbrack, Georgia Institute of Technology
10:10	Measurement of $9\text{Be}(\alpha, n)$ Cross Section for Safeguards Applications	Colton Graham, University of Michigan
10:25	BREAK - 20 mins	
10:45	LASE characterizations of neutrino detector media optical properties	Emily Gunger, University of Florida
11:00	Subcritical Prompt Neutron Decay Constant Estimates in CROCUS	Flynn Darby, University of Michigan
11:15	PSD Performance using CLYC Scintillation Detector for Special Nuclear Materials Measurement	Cathleen Barker, University of Florida
11:30	Leakage Multiplication and Spontaneous Fission Source Strength Estimation Using Non-Point Model Factorial Moments	Jawad Moussa, University of New Mexico
11:45	Group Photo	Michigan League
12:00	Consortia students and national laboratory scientist meet-and-greet luncheon	Michigan and Kalamazoo Rooms, Michigan League
13:15	Transition to National Lab Careers, Moderated by Shaun Clarke	Panelists
14:10	Characterizing Early Organic Glass Scintillator Beta Cell Prototypes for Radioxenon Monitoring	Tessa Maurer, University of Michigan
14:25	Explosion Detection using Ensemble Learning	Samuel Kei Takazawa, University of Hawai'i
14:40	Elucidation of Plutonium Combustion Chemistry and Laser-Particle Interactions from Laser Produced Plasmas for Nonproliferation and Nuclear Forensic Missions	Justin Borrero, University of Florida
14:55	BREAK - 20 mins	
15:15	Trade-off between statistics and systematics for a PROSPECT-I absolute flux measurement	Paige Kunkle, Boston University
15:30	Event Topological Reconstruction using an Opaque Water-based Liquid Scintillator	Andrew Wilhelm, University of Michigan
15:45	First observation of Coherent Elastic Neutrino Nucleus Scattering on germanium by COHERENT	Ryan Bouabid, Duke University

16:00	Understanding Early Reactor Programs: Nuclear Archaeology of the Heisenberg Reactor	Patrick Park, Princeton University
16:15	Neutron Signatures for Nondestructive Assay in Thorium Fuel Cycles	Oskar Searfus, University of Michigan
16:30	Poster Overview Presentations (1-minute each)	Odd-numbered poster presenters
16:50	Poster Reception: Session A (odd-numbered posters)	Hussey and Vandenberg Rooms, Michigan League
17:50	Adjourn Day 1	
Workshop Day 2, March 27, 2024, Michigan League Ballroom		
8:00	Breakfast	Concourse, Michigan League
9:00	Application of the Cohn- α Method on Bare Highly Enriched Uranium Using Organic Scintillators	Schuyler Tyler, University of Michigan
9:15	Design of a Prompt Gamma Activation Analysis Experiment for Nuclear Forensic Characterization	Brad Nethercutt, Penn State University
9:30	Gamma Background Suppression and Custom Algorithmic Development for a Portable Neutron-Resonance Transmission Analysis Device	Shayaan Subzwari, Massachusetts Institute of Technology
9:45	Comparing Timing Resolution Improvements using the Tapered-Sinc Interpolation Algorithm for Various Readout Methods	Kim Meagher, University of Michigan
10:00	BREAK - 20 mins	
10:20	Women in Nuclear Panel, Moderated by Jill Rahon	
11:15	Characterization and restoration of Mini-Muon Tracker imaging system	Jesus Valencia, University of New Mexico
11:30	HITMAN: Bridging Analytic and Deep Learning Inference Techniques for Optical Neutrino Detectors	Garrett Wendel, Penn State University
11:45	Preliminary Findings from RIMS Analysis of Spent Fuel	Henry Burns, Georgia Institute of Technology
12:00	Poster Overview Presentations (1-minute each)	Even-numbered poster presenters
12:20	Consortia students and national laboratory scientist meet-and-greet luncheon	Michigan and Kalamazoo Rooms, Michigan League
13:35	Poster Reception: Session B (even-numbered posters)	Hussey and Vandenberg Rooms, Michigan League
14:35	The First Search for Neutrino-Induced Nuclear Fission	Tyler Johnson, Duke University
14:50	Visualizing Particle Imaging using the HoloLens 2	Ricardo Lopez, University of Michigan
15:05	Pushing the Bounds of Minimal-Access Robotic Inspections with Privacy-Preserving Absence Confirmation	Eric Lepowsky, Princeton University
15:20	Closing Remarks and Student Awards	Sara Pozzi, MTV Director, University of Michigan
16:00	Adjourn Day 2	

Poster Presentations: Day 1 (Odd Numbers) and Day 2 (Even Numbers)		
#	Research Title (links to poster pdf)	Presenter Names
1	Probabilistic Sequencing for Compton Imaging Using the General Klein-Nishina Cross-Section	Prabhjot Kaur, University of Michigan
2	Development of a Novel Random Coded Aperture Mask	Alexander Rice, University of Michigan
3	2D Cylindrical Time-Encoded Imager Design	John Kuchta, University of Michigan
4	Measurement of 254 eV Nuclear Recoils in High Purity Germanium Detector	Alex Kavner, University of Michigan
5	Measurement of D-T Neutron Source Flux by Self-Neutron Activation Analysis with a LaBr3 Detector	Caryanne Wilson, University of Michigan
6	Fiber-optic fluorescence measurements for PALOECCENE	Keegan Walkup, Virginia Tech
7	Windowed Multipole Cross sections in MCNP	Matthew Lazaric, University of New Mexico
8	Development of a High-Energy Two-Component Gamma Calibration Source	Junwoo Bae, University of Michigan
9	Measuring spin-energy correlations in fission with Gammasphere	Nathan Giha, University of Michigan
10	Improved Time Behavior and Inventory Management to Support Nuclear Material Accounting in Cyclus	Katie Mummah, University of Wisconsin
11	Validation of Neutron Simulation Framework for Scintillator-based Imaging Systems	Katie Ballard, University of Michigan
12	Characterizing filament-induced breakdown spectroscopy through highly scattering media	Leandro Frigerio, University of Michigan
13	Neutron Resonance Capture Analysis in a Field Portable System	Jill Rahon, Massachusetts Institute of Technology
14	Reactor Neutrino Calculations with CONFLUX	Anosh Irani, Illinois Institute of Technology
15	Assessing the Impact of Nuclear Contamination on Soil Microbial Communities	Heather MacGregor, University of California Berkeley
16	How Well Do You Know Your Neutron Source? Neutron Yield of Thermo Scientific P385 D-T Neutron Generator vs. Current and Voltage	Jihye Jeon, Princeton University
17	Identifying genetic markers of radiation exposure through microbial genome-wide association study (mGWAS)	Anne Shen, Massachusetts Institute of Technology
18	Potential Applications of Microbial Genomics in Nuclear Non-Proliferation	Isis Fukai, University of Tennessee Knoxville
19	Chlorophyll extract measurements using Laser-Induced Fluorescence (LIF) of moss (<i>Thuidium plicatile</i>) in response to copper contamination	Ciara Bonogolan-Aquino, University of Hawai'i
20	Atmospheric properties influence on propagating Lamb waves from Tonga eruption	Shirin Wyckoff, University of Hawai'i
21	Resource-Efficient Particle Filter Localization Algorithm for Radioactive Source Localization	Abhishek Dahad, University of Michigan
22	Listening for Radiation Spectra: A Flexible Radiation Surveying System Based upon Sound Card Spectrometry and Open-source Coding on a Single-Board Computer	Caleb Bush, University of Michigan

23	Preventing Radiation Drone Crashes: Avoiding Collisions and Following Terrain	Meredith Doan, University of Michigan
24	A WiFi-based Radiation Emulation System Designed for Testing Intelligent Radiation Surveying	Hythem Beydoun, University of Michigan
25	Computer Vision-Guided Reinforcement Learning Approach to Source Localization	Christopher Davis, University of Michigan
26	Fused Filament Fabrication in a Radiation Detection and Protection Makerspace	Callissa Clarkson, University of Michigan
27	Basic Radiation Physics Preparation for Beginning Players of the DoseBusters Virtual Reality Radiation Detection Game	Jackson Eggerd, University of Michigan
28	Aerial Mapping of Ionizing and Non-Ionizing Radiation Using Open-Source Software	Clay Hudson, University of Michigan
29	Final Design and Testing of a Low-Cost Radiation Weather Station	Ryan Kim, University of Michigan
30	Preliminary Design of a 3D-Printed Airframe for an Intelligent Radiation Awareness Drone	Kabir Khwaja, University of Michigan
31	Achieving and Maintaining Airborne: Avionics for an Affordable Student-Designed Radiation Detection Drone	Liam O'Driscoll, University of Michigan
32	Force Impulse Inversions of Multi-MT Atmospheric Nuclear Explosions	Jocely Lopez Luna, Columbia University
33	Assessing Age Effects on Pulse Shape Discrimination Capabilities of Organic Glass Scintillators	Ethan Schneider, University of Michigan
34	Propagation of Acoustic Waves from the OSIRIS-REx Sample Return Capsule during Re-entry	Sarah Popenhagen, University of Hawai'i
35	Characterizing Activated Materials for Free Release at a Low-Energy Heavy-Ion Accelerator Facility	Jordan Noey, University of Michigan
36	Three-Dimensional Printing for Radiation Applications using Tungsten-filled Polyethylene Terephthalate Glycol	Yehansa Dissanayake, University of Michigan
37	Reconstruction of Mock Fuel Pins in a Fast Neutron Emission Tomography Imager for Spent Nuclear Fuel Verification	Mairead Montague, University of Michigan