

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, Office of Proliferation Detection, NNSA
9:25	MTV Accomplishments	Sara Pozzi, MTV Director, University of Michigan
Session Chair: Shaun Clarke, University of Michigan		
9:40	Ex fission ad astra: extending nuclear phenomenology to the fission fragment region	Kyle Beyer, MTV Graduate Fellow, University of Michigan (Program Start: 2020)
9:55	Robust Adversarial Reinforcement Learning for Antineutrino-based Safeguards	Matthew Dunbrack, MTV Graduate Associate, Georgia Institute of Technology (Program Start: 2020)
10:10	Measurement of $^9\text{Be}(\alpha, n)$ Cross Section for Safeguards Applications	Colton Graham, MTV Graduate Fellow, University of Michigan (Program Start: 2021)
10:25	BREAK - 20 mins	
Session Chair: Tony Shin, Los Alamos National Laboratory		
10:45	LASE characterizations of neutrino detector media optical properties	Emily Gunger, MTV Graduate Fellow, University of Florida (Program Start: 2023)
11:00	Subcritical Prompt Neutron Decay Constant Estimates in CROCUS	Flynn Darby, MTV Graduate Fellow, University of Michigan (Program Start: 2020)
11:15	PSD Performance using CLYC Scintillation Detector for Special Nuclear Materials Measurement	Cathleen Barker, MTV Graduate Associate, University of Florida (Program Start: 2022)
11:30	Leakage Multiplication and Spontaneous Fission Source Strength Estimation Using Non-Point Model Factorial Moments	Jawad Moussa, MTV Graduate Fellow, University of New Mexico (Program Start: 2018)
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, University of Michigan	Panelists: Steven Demers, Savannah River National Laboratory; Michael Hamel, Sandia National Laboratory; Marc Ruch, Los Alamos National Laboratory; Oskar Searfus, University of Michigan; Sarah Thomas, Nevada National Security Site
Session Chair: Michael Hamel, Sandia National Laboratory		
14:10	Characterizing Early Organic Glass Scintillator Beta Cell Prototypes for Radioxenon Monitoring	Tessa Maurer, MTV Graduate Fellow, University of Michigan (Program Start: 2022)
14:25	Explosion Detection using Ensemble Learning	Samuel Kei Takazawa, MTV Graduate Fellow, University of Hawai'i (Program Start: 2019)
14:40	Elucidation of Plutonium Combustion Chemistry and Laser-Particle Interactions from Laser Produced Plasmas for Nonproliferation and Nuclear Forensic Missions	Justin Borrero, MTV Graduate Associate, University of Florida (Program Start: 2022)
14:55	BREAK - 20 mins	
Session Chair: Igor Jovanovic, University of Michigan		

15:15	Trade-off between statistics and systematics for a PROSPECT-I absolute flux measurement	Paige Kunkle, MTV Graduate Fellow, Boston University (Program Start: 2020)
15:30	Event Topological Reconstruction using an Opaque Water-based Liquid Scintillator	Andrew Wilhelm, MTV Graduate Associate, University of Michigan (Program Start: 2021)
15:45	HITMAN: Bridging Analytic and Deep Learning Inference Techniques for Optical Neutrino Detectors	Garrett Wendel, MTV Graduate Fellow, Penn State University (Program Start: 2021)
16:00	Understanding Early Reactor Programs: Nuclear Archaeology of the Heisenberg Reactor	Patrick Park, MTV Graduate Associate, Princeton University (Program Start: 2023)
16:15	Neutron Signatures for Nondestructive Assay in Thorium Fuel Cycles	Oskar Searfus, MTV Graduate Associate, University of Michigan (Program Start: 2020)
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
Session Chair: Sara Pozzi, University of Michigan		
9:00	Application of the Cohn- α Method on Bare Highly Enriched Uranium Using Organic Scintillators	Schuyler Tyler, MTV Graduate Fellow, University of Michigan (Program Start: 2023)
9:15	Design of a Prompt Gamma Activation Analysis Experiment for Nuclear Forensic Characterization	Brad Nethercutt, MTV Graduate Fellow, Penn State University (Program Start: 2021)
9:30	Gamma Background Suppression and Custom Algorithmic Development for a Portable Neutron-Resonance Transmission Analysis Device	Shayaan Subzwari, MTV Graduate Associate, Massachusetts Institute of Technology (Program Start: 2023)
9:45	Comparing Timing Resolution Improvements using the Tapered-Sinc Interpolation Algorithm for Various Readout Methods	Kim Meagher, MTV Undergraduate Fellow, University of Michigan (Program Start: 2023)
10:00	BREAK - 20 mins	
10:20	Women in Nuclear Panel, Moderated by Jill Rahon, Massachusetts Institute of Technology	Panelist: Sara Pozzi, University of Michigan; Ciara Sivels, Johns Hopkins University Applied Physics Laboratory; Kelly Truax, Pacific Northwest National Laboratory; Amy Waters, Lawrence Livermore National Laboratory; Jessica White-Horton, Oak Ridge National Laboratory
Session Chair: Jason Crye, Y-12 National Security Complex		
11:15	Characterization and restoration of Mini-Muon Tracker imaging system	Jesus Valencia, MTV Graduate Fellow, University of New Mexico (Program Start: 2019)
11:30	First observation of Coherent Elastic Neutrino Nucleus Scattering on germanium by COHERENT	Ryan Bouabid, MTV Graduate Fellow, Duke University (Program Start: 2020)
11:45	Preliminary Findings from RIMS Analysis of Spent Fuel	Henry Burns, MTV Graduate Fellow, Georgia Institute of Technology (Program Start: 2019)
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
Session Chair: Shaun Clarke, University of Michigan		
14:35	The First Search for Neutrino-Induced Nuclear Fission	Tyler Johnson, MTV Graduate Fellow, Duke University (Program Start: 2018)
14:50	Visualizing Particle Imaging using the HoloLens 2	Ricardo Lopez, MTV Graduate Fellow, University of Michigan (Program Start: 2021)
15:05	Pushing the Bounds of Minimal-Access Robotic Inspections with Privacy-Preserving Absence Confirmation	Eric Lepowsky, MTV Graduate Fellow, Princeton University (Program Start: 2019)
15:20	Closing Remarks and Student Awards	Sara Pozzi, MTV Director, University of Michigan and Amy Waters, MTV Advisory Board Member, Lawrence Livermore National Laboratory
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, MTV Graduate Fellow, University of Michigan (Program Start: 2019)
2	Development of a Novel Random Coded Aperture Mask	Alexander Rice, MTV Graduate Fellow, University of Michigan (Program Start: 2019)
3	2D Cylindrical Time-Encoded Imager Design	John Kuchta, MTV Graduate Fellow, University of Michigan (Program Start: 2019)
4	Measurement of 254 eV Nuclear Recoils in High Purity Germanium Detector	Alex Kavner, MTV Graduate Fellow, University of Michigan (Program Start: 2019)
5	Measurement of D-T Neutron Source Flux by Self-Neutron Activation Analysis with a LaBr3 Detector	Caryanne Wilson, MTV Graduate Fellow, University of Michigan (Program Start: 2023)
6	Fiber-optic fluorescence measurements for PALOECCENE	Keegan Walkup, MTV Graduate Fellow, Virginia Tech (Program Start: 2023)
7	Windowed Multipole Cross sections in MCNP	Matthew Lazaric, MTV Graduate Fellow, University of New Mexico (Program Start: 2019)
8	Development of a High-Energy Two-Component Gamma Calibration Source	Junwoo Bae, MTV Postdoctoral Associate, University of Michigan (Program Start: 2021)
9	Measuring spin-energy correlations in fission with Gammasphere	Nathan Giha, MTV Graduate Fellow, University of Michigan (Program Start: 2019)
10	Improved Time Behavior and Inventory Management to Support Nuclear Material Accounting in Cyclus	Katie Mummah, MTV Graduate Associate, University of Wisconsin (Program Start: 2017)
11	Validation of Neutron Simulation Framework for Scintillator-based Imaging Systems	Katie Ballard, MTV Undergraduate Fellow, University of Michigan (Program Start: 2020)
12	Characterizing filament-induced breakdown spectroscopy through highly scattering media	Leandro Frigerio, MTV Graduate Associate, University of Michigan (Program Start: 2022)
13	Neutron Resonance Capture Analysis in a Field Portable System	Jill Rahon, MTV Graduate Associate, Massachusetts Institute of Technology (Program Start: 2021)
14	Reactor Neutrino Calculations with CONFLUX	Anosh Irani, MTV Graduate Fellow, Illinois Institute of Technology (Program Start: 2020)
15	Assessing the Impact of Nuclear Contamination on Soil Microbial Communities	Heather MacGregor, University of California Berkeley (Program Start: 2020)
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, MTV Graduate Associate, Princeton University (Program Start: 2019)

17	Identifying genetic markers of radiation exposure through microbial genome-wide association study (mGWAS)	Anne Shen, MTV Graduate Fellow, Massachusetts Institute of Technology (Program Start: 2020)
18	Potential Applications of Microbial Genomics in Nuclear Non-Proliferation	Isis Fukai, MTV Graduate Fellow, University of Tennessee Knoxville (Program Start: 2019)
19	Chlorophyll extract measurements using Laser-Induced Fluorescence (LIF) of moss (<i>Thuidium plicatile</i>) in response to copper contamination	Ciara Bongolan-Aquino, MTV Undergraduate Fellow, University of Hawai'i (Program Start: 2020)
20	Atmospheric properties influence on propagating Lamb waves from Tonga eruption	Shirin Wyckoff, MTV Graduate Fellow, University of Hawai'i (Program Start: 2022)
21	Resource-Efficient Particle Filter Localization Algorithm for Radioactive Source Localization	Abhishek Dahad, MTV Undergraduate Associate, University of Michigan (Program Start: 2023)
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, MTV Undergraduate Fellow, University of Michigan (Program Start: 2020)
23	Preventing Radiation Drone Crashes: Avoiding Collisions and Following Terrain	Meredith Doan, MTV Undergraduate Fellow, University of Michigan (Program Start: 2021)
24	A WiFi-based Radiation Emulation System Designed for Testing Intelligent Radiation Surveying	Hythem Beydoun, MTV Undergraduate Fellow, University of Michigan (Program Start: 2022)
25	Computer Vision-Guided Reinforcement Learning Approach to Source Localization	Christopher Davis, MTV Undergraduate Fellow, University of Michigan (Program Start: 2021)
26	Fused Filament Fabrication in a Radiation Detection and Protection Makerspace	Callissa Clarkson, MTV Undergraduate Associate, University of Michigan (Program Start: 2023)
27	Basic Radiation Physics Preparation for Beginning Players of the DoseBusters Virtual Reality Radiation Detection Game	Jackson Eggerd, MTV Undergraduate Fellow, University of Michigan (Program Start: 2022)
28	Aerial Mapping of Ionizing and Non-Ionizing Radiation Using Open-Source Software	Clay Hudson, MTV Undergrad Fellow, University of Michigan (Program Start: 2022)
29	Final Design and Testing of a Low-Cost Radiation Weather Station	Ryan Kim, MTV Undergraduate Fellow, University of Michigan (Program Start: 2020)
30	Preliminary Design of a 3D-Printed Airframe for an Intelligent Radiation Awareness Drone	Kabir Khwaja, MTV Undergraduate Fellow, University of Michigan Program Start: 2023)
31	Achieving and Maintaining Airborne: Avionics for an Affordable Student-Designed Radiation Detection Drone	Liam O'Driscoll, MTV Undergraduate Fellow, University of Michigan (Program Start: 2021)
32	Reconstruction of Mock Fuel Pins in a Fast Neutron Emission Tomography Imager for Spent Nuclear Fuel Verification	Mairead Montague, MTV Postdoctoral Fellow, University of Michigan (Program Start: 2024)
33	Assessing Age Effects on Pulse Shape Discrimination Capabilities of Organic Glass Scintillators	Ethan Schneider, MTV Graduate Fellow, University of Michigan (Program Start: 2023)
34	Propagation of Acoustic Waves from the OSIRIS-REx Sample Return Capsule during Re-entry	Sarah Popenhagen, MTV Graduate Fellow, University of Hawai'i (Program Start: 2020)
35	Characterizing Activated Materials for Free Release at a Low-Energy Heavy-Ion Accelerator Facility	Jordan Noey, MTV Graduate Fellow, University of Michigan (Program Start: 2020)
36	Three-Dimensional Printing for Radiation Applications using Tungsten-filled Polyethylene Terephthalate Glycol	Yehansa Dissanayake, MTV Undergraduate Fellow, University of Michigan (Program Start: 2023)
37	The effect of Laser Pulse Width on the Behavior of UF6 Plasma in LISA-UE	Londrea Garrett, MTV Graduate Associate, University of Michigan (Program Start: 2020)

38	Nuclear Forensics Sample Identification with Magnetic Microcalorimeters	Ryan Wood, MTV Graduate Associate, University of Michigan (Program Start: 2020)
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