

APS EGLS/A-AAPT/SPS Zone 7 Fall Meeting Schedule October 18-19, 2024, Marietta College

<u>Friday 10/18/24</u>	
1:15 p.m. – 4:00 p.m.	Meeting Check In (<i>McDonough Center Lobby</i>)
Start of APS EGLS Meeting (A-AAPT and SPS Attendees Welcome)	
1:45 p.m. – 2:00 p.m.	Welcoming Remarks (<i>McDonough Center Auditorium</i>)
2:00 p.m. – 2:55 p.m.	1 st plenary talk (<i>McDonough Center Auditorium</i>) "From Blue Sky to Bleeding Edge: What's Becoming Possible with Ultra-High Power Laser Technology " Chris Orban, Ohio State University & STEMcoding Project
2:55 – 3:05 p.m.	Break
3:05 p.m. – 4:00 p.m.	2 nd plenary talk (<i>McDonough Center Auditorium</i>) "The Effective Practices for Physics Programs (EP3) Initiative: Successful Department Initiatives and their Connection to the EP3 Guide" Gay Stewart, West Virginia University
3:05 p.m. – 4:00 p.m.	SPS Zone 7 Kickoff Meeting (<i>McDonough Gallery</i>)
4:15 p.m. – 5:30 p.m.	Poster session (<i>Gathering Place</i>), light refreshments
6:00 p.m. – 8:00 p.m.	Banquet (<i>Valley Gem Sternwheeler</i>)
8:30 p.m. – 9:30 p.m.	Planetarium Show (<i>Anderson Hancock Planetarium</i>) "Supermassive Black Holes: Uncovering the Invisible" - Ann Bragg
9:30 p.m. – 10:30 p.m.	SPS Observing Night (<i>Gurley Observatory, Roof of Mills Hall</i>) Craig Howald (Game night if poor observing weather)
<u>Saturday 10/19/24</u>	
7:45 a.m. – 9:30 a.m.	Meeting Check In and Refreshments (<i>Rickey Science Center lobby</i>)
8:15 a.m. – 9:15 a.m.	Welcome & 3 rd plenary talk (<i>Rickey Science Center 150</i>) "Lasers, Shock Physics, Explosives, Oh My!" Elliott Wainwright, DEVCOM Army Research Laboratory
9:30 a.m. – 11:06 a.m.	EGLS/A-AAPT Contributed oral pres. (<i>RSC 166, 162, 150, 148, AHP, 131</i>) See Back For Saturday Contributed Session Information
11:15 a.m. – 12:10 p.m.	4 th plenary talk (<i>Rickey Science Center 150</i>) "Open to Options: Exploring Science Careers Outside the Laboratory" Lisa McDonald, American Ceramic Society, SPS Speakers Bureau
12:10 p.m. – 12:25 p.m.	EGLS Chair Remarks
End of APS EGLS Meeting (EGLS attendees welcome to stay for A-AAPT talks/workshop)	
12:30 – 1:00 p.m.	SPS Pizza Lunch (Free, Students and SPS Advisors Only, RSC 148) A-AAPT luncheon (Fee required through A-AAPT, Andrews Great Room)
1:00 p.m. – 1:45 p.m.	A-AAPT business meeting (Andrews Great Room)
1:00 p.m. – 1:45 p.m.	SPS Physics 'Jeopardy', End of SPS Meeting (<i>RSC 148</i>)
2:00 p.m. – 3:00 p.m.	A-AAPT contributed talks (<i>Anderson Hancock Planetarium</i>)
3:15 p.m. – 4:30 p.m.	A-AAPT workshop, "STEMcoding Project," Chris Orban (<i>RSC 107</i>)

Astrophysics, Space Science and Medical Physics, Anderson Hancock Planetarium

- **9:30am**, Z. Yang, Three-dimensional Flow Quantification in Arteries from Simulated Multi-Angle Angiography
- **9:42**, H. Yi, Develop a High-fidelity Paradigm to Investigate Hemodynamic Risks in Cerebral Aneurysms
- **9:54**, J. Rose, First indications of a non-round star with stellar intensity interferometry
- **10:06**, J. Scott, Preliminary measurement of Eta UMa and future catalog with stellar intensity interferometry
- **10:18**, D. Horne, Measuring Atmospheric Changes During the April 8th, 2024 Total Solar Eclipse Using...
- **10:30**, P. Cameron, Geometric Algebra: Natural Language of both Quantum Mechanics and Gravitation
- **10:42**, G. Saleh, A New Explanation for the Frequency of Electromagnetic Waves and the Explanation...

Physics Education Research: Rickey Science Center Room 148

- **9:30am**, J. Stewart, Redesigning Legacy Conceptual Inventories: Initial Results from the One-Dimensional...
- **9:42**, S. Nelson, Identifying Community Cultural Capital Wealth Utilized by Physics Graduate Students in...
- **9:54**, K Imroz, Examining students' quantitative literacy in undergraduate introductory physics course
- **10:06**, E. Christman, The Role of Cognitive Interviews in Redesigning Legacy Conceptual Inventories
- **10:18**, J. Willison, Exploring instructors' approaches to Universal Design for Learning through...
- **10:30**, J. Smith, Computational Activities for a Sophomore-Level Mathematical Methods Course
- **10:42**, D. Sharkey, Physics Graduate Teaching Assistant Use of Error Framing in Recitations and Laboratories
- **10:54**, A. Nemeth, Extending Curricular Analytics to Analyze Undergraduate Physics Programs

Condensed Matter: Rickey Science Center Room 150

- **9:30am**, J. Killmeyer, The Creation and Analysis of Boron-Containing Thin Films
- **9:42**, D. Priour, Geometrically Exact Calculation of Percolation Threshold through Voids around Impermeable...
- **9:54**, H. Huang, Discovery of a new type of fractional quantum Hall state associated with six-flux composite...
- **10:06**, A. Mojarro, Majorana fermions in the s-wave kagome superconductor
- **10:18**, C. Collins, Characterizing Translational and Rotational Dynamical Heterogeneity in a Supercooled...
- **10:30**, W. Hussain, Dependence on Density and Disorder of the Collective Localization along the $v=1$...
- **10:42**, D. Dotson, New tool for analyzing MuSR data for semiconductors
- **10:54**, A. Bozzone, Capacitance Measurements of a Quantum Anomalous Hall Insulator

Applied Physics: Rickey Science Center Room 131

- **9:30am**, M. Crescimanno, Theory of Low Magnetic Field Photoluminescence Spectra of Nitrogen-Vacancy...
- **9:42**, R. Desai, Enhanced Target Normal Sheath Acceleration via Interfering Laser Pulses
- **9:54**, N. Tamminga, Towards Intelligent Control of MeV Energy Electrons and Protons from kHz Repetition...
- **10:06**, S. McBride, Anionic Azo Dye Functionalization of Polycarbonate Membranes for Water Purification
- **10:18**, A. Shah, Plasma Features and Surface Reactions in cryogenic etching using Ar/HF Plasma
- **10:30**, C. Walters, Utilizing Highly Concentrated Asymmetric Salts to Enhance Lithium-ion Battery...

Quantum Information: Rickey Science Center Room 162

- **9:30am**, I. Mirza, Single-Photon Quantum Optics with Giant Atoms
- **9:42**, A. Faiaz, Optimizing Phi-bits for Quantum-Inspired Computing
- **9:54**, M. Baker, A Kac-Weyl Character Identity
- **10:06**, R. Stipanovich, Broken symmetry and chirp: A view from quantum optics phase space
- **10:18**, J. Butler, Using Bayesian Machine Learning to Extend the Range of Ab Initio Many-Body Calculations...
- **10:30**, K. Mahmood, Realization of Berry Phase in Classical Nonlinear Granular Network Using Quantum...

Nuclear and Particle Physics: Rickey Science Center Room 166

- **9:30am**, J. Bustamante, Effective interactions for nucleon scattering off isospin-asymmetric targets
- **9:42**, A. Giri, A projection-based emulator for nuclear two-body scattering in momentum space
- **9:54**, L. Kubushishi, Exploring core excitation in halo nuclei using halo effective field theory
- **10:06**, J. Foy, Non-local One-Body Densities for Positive Parity Lithium Isotopes
- **10:18**, Y. Lee, Quantifying theoretical uncertainties in the microscopic nuclear equation of state using...
- **10:30**, M. Kesler, Investigating novel ways of improving nuclear imaging through exclusive vector...
- **10:42**, M Conaway, The Dual Data Acquisition Systems for MOLLER at JLab
- **10:54**, P. Vasani, Testing Lorentz and CPT Symmetries with Neutrons

Appalachian AAPT, Anderson Hancock Planetarium

- **2:00pm**, T. DeLaney, When Good Toys Go Bad
- **2:12**, M. Krasnansky, West Virginia Space Flight Design Challenge 2024
- **2:24**, S. Sundaraneedi, WVWC RockSat-X Sounding Rocket Payload
- **2:36**, A. Thompson, Ionized Elemental Isotopes with Mass Spectrometry and Breaking Molecular Bonds
- **2:48**, J. Wiest, Advanced Research in Physics at West Virginia Wesleyan College