

Physics Department

3 Minute Power Point Presentations:

9:00 am to 10:30 am

Location – OH107

Poster Sessions:

Group 1: 10:45 am to 12:30 pm (1-8)

Group 2: 1:30 pm to 3:00 pm (9-17)

Location - OH208 & OH211

1. Accelerating Radiative Transfer Through AI

Srisaranya Pujari

Advisors: Rudra Kafle (PH), Fatemah Emdad (DS)

Sponsor: National Radio Astronomy

Observatory (NRAO)

2. Magnetic Field Sensitivity Characterization of Nitrogen-Vacancy Centers in Diamond

Paola Frunzio

Advisors: Raisa Trubko (PH), Hanmeng Zhan (CS)

3. Optical Chip Design for Matrix Vector Multiplication

Abhi Chillara

Advisors: Douglas Petkie (PH), Hanmeng Zhan(CS)

4. Development of a Symplectic RKF Scheme for Integration of the Geodesic Equations on a Manifold with Applications to General Relativity

Bernard Ymeri

Advisor: William Sanguinet (MA)

5. Gravitational Radiation from Binary Pulsars and Black Hole Mergers

Nguyen Pham

Advisor: Padmanabhan Aravind (PH)

6. Application-Rich High School Physics: Fostering Interest and Identity through Contextualized Instruction

Brooke Adams

Advisor: Thomas Noviello (PH)

7. Physics, Bauhaus, Scientific Education, and Engineering

Shea Divoll

Advisor: Francesca Bernardi (MA)

8. Optical and Electronic Properties of Metal-Intercalated 2D Semiconductors

Brady Litton

Advisors: Lyubov Titova (PH),

Kateryna Friedman(PH)

9. Astronomy-Contextualized Physics Problems for High School

Alice Gaehring

Advisor: Thomas Noviello (PH)

10. Characterization and Optimization of a Modular Raman Spectrometer

Amelia Collard, Joshua Petkie, Patrick Ryan

Advisor: Douglas Petkie (PH)

11. Blind Quantum Computing for Secure Quantum Chemistry

Sunny Kang

Advisors: Raisa Trubko (PH), Carlo Pinciroli (RBE)

Sponsor: Harvard University

12. Evaluating Physics Teacher Perceptions of an AI-Focused Professional Development

Jacob Kinkead, Jake Pelletier

Advisor: Thomas Noviello (PH)

13. Integrated Photonics to Reduce Vergence-Accommodation Conflict in Extended Reality

Veronica Copeland

Advisor: Douglas Petkie (PH)

14. Effects of Infrared Laser Irradiation on Polycaprolactone-MXene Thin Films

Tom Kohen

Advisor: Lyubov Titova (PH)

15. Computational NanoScience

Celeste Ma

Advisors: L. Ramdas Ram-Mohan (PH), Dmitry

Korkin (CS)

16. Plasma Processing of Polyethylene

Donnie Bowley

Advisors: William McCarthy (PH),

Ronald Grimm (CBC)

Sponsor: Nuclear Regulatory Commission (NRC)

17. Development of a Portable Triggering System for Particle Physics

Noah Omordia

Advisors: David Medich (PH), Shahin Tajik (ECE)

Sponsor: Brookhaven National Lab