Syracuse University Physics Department

Undergraduate Research Day

November 4th, 2017

PROGRAM
9:00  Registration, Breakfast, and Poster Session

10:30  Welcome: Prof. Jack Laiho

SYRACUSE FACULTY/POSTDOC TALKS

10:45  Prof. Lisa Manning

11:15  Prof. Denver Whittington
       *Experimental particle physics at Syracuse University*

11:45  Prof. Duncan Brown
       *New results from LIGO/VIRGO*

12:15pm  LAB TOURS

  o  LIGO and Gravity Wave Detection
  o  Superconducting Device Research Lab – Plourde group
  o  LHCb High Energy Particle Physics
  o  Soft Condensed Matter Experiment – Paulson group

1:15pm – 2pm LUNCH

POSTERS

**Alex Davie (University of Buffalo)**
*Phase Transition Characterization of Molecular Crystal Phonons*

**Malakia Takane (St. Lawrence University)**
*High Resolution Polarization Imaging of Nacre in Iridescent Shells*

**Lauren Mayse (Syracuse University)**
*Osmotic Stress-mediated Partitioning of Polypeptides into a Protein Nanopore*

**Christopher Kane (Syracuse University)**
*Studying the Puzzle of the Pion Nucleon Sigma Term*
STUDENT TALKS

2:00  Meghan Lentz (Syracuse University) – Floquet Formalism and Perturbation Theory in the Low-Frequency Limit

2:15  Gregory Walsh (Syracuse University) – Searching for single pulses using Heimdall

2:30  Claire Albrecht (St. Lawrence University) – Detection of magnetic biomarkers using a single giant magneto-impedance microwire

2:45  Nolan Smith (Colgate University) – Fuzzy cold dark matter

3:00  Patrick Miles (Syracuse University) – Simulating Saturn’s Rings: The N-Body Problem in Computational Physics

3:15 – 3:45  Coffee Break

3:45  Tri Nguyen  (University of Rochester) – Baryon Acoustic Oscillations – The Study of Large-scale Structure of the Universe

4:00  Jordan Barrett (Syracuse University) – The Dynamics of Thin Elastic Sheets on Liquid Interfaces

4:15  Jack Gugel (Syracuse University) – Energetics and Kinetics at the Protein-Detergent Interface

4:30 – 5:00  Biophysics Lab Tour – Movileanu Lab