

2021 WISER/MURE/FURP Undergraduate Research Symposium

November 17, 2021, 7 PM – 9:20 PM

<https://psu.zoom.us/j/91037885691>

Approximate schedule

7:00 – 7:05: Welcome and Introductions

7:05 – 7:20: Keynote presentation by Alexis Miller

7:20 ~ 9:20: Student lightning talks (see below)

| Approx. time | Student name | Department | Advisor | Lightning talk title |
|--|-------------------------|---|-----------------------------|---|
| 7:20 - 7:40 8 lightning talks followed by a short break for Q&A | Maria Bressan | Physics | Suvrath Mahadevan | Predicting the Color of Chlorophyll on a Different Planet |
| | Meg Cross | Biological Engineering | Estelle Couradeau | Profiling terrestrial cyanobacteria |
| | Valeria Ventura | | Miguel Mostafa | Searching for new very-high energy gamma-ray sources (The Background) |
| | Kenya Mitchell | Physics | Miguel Mostafa | Searching for new very-high energy gamma-ray sources (The Details) |
| | Jonathon Hope | Aerospace Engineering | Rebekah Dawson | Planet migration for super-earth planets |
| | Anushka Durg | | Stephanie Wissel | Comparison of Elevated Ultra - High Energy Tau Neutrino Detectors |
| | Erica Selsley | Biological Engineering | Konstantinos Alexopoulos | Computational Catalysis For Biogas Upgrading |
| | Abby Mensch | Geosciences | Peter La Femina | Precursors to Phreatic Eruptions |
| 7:40 - 8:00 7 lightning talks followed by a short break for Q&A | Jacob Ian Santos | Anthropology | Joan Richtsmeier | Molar development in the Fgfr2c342Y/+ Crouzon syndrome mouse |
| | Hannah Dykes | Biology | David Conroy | Participant response and feedback to behavioral and self-reporting prompts based on physical activity levels |
| | Kennedy Jackson | Kinesiology | David Conroy, Deborah Reese | The Impact of Behavioral Feedback and Self-Monitoring Prompts on Physical Activity Levels in Inactive Young Adults |
| | Emily McNaughton | Biochemistry and Molecular Biology | Melissa Rolls | Mechanisms used in regenerating peripheral nervous system axons after injury |
| | Joseph Bagala | Environmental Resource Management and Geography | Ruud Schilder | Impact Aerobic Exercise has on Drosophila Ability to Fight Chronic Illness and Common Difficulties Found in Beginning/Completing Research |
| | Alexis Holsinger | Biochemistry and Molecular Biology | Timothy Ryan | Variation in Cortical Bone Structure of the Human Upper and Lower Limb. |
| | Molly Huang | | Laura Falton | Visual attention memory |
| 8:00 - 8:20 7 lightning talks followed by a short break for Q&A | Jenna Zhang | Mechanical Engineering | Amir Sheikhi | A Bottom-Up Approach to Develop Synthetic Plant Cell Walls |
| | Leeann Runkle | Biomedical Engineering | Justin Brown | The affect of environmental factors on stem cell growth |
| | Jaron Wharton-Mohammed | Biochemistry and Molecular Biology | Lu Bai | Application of Methyltransferase Targeting-based Chromosome Architecture Capture(MTAC) |
| | Adriana S. Ramos-Medero | Biology | Aimin Liu | Inturned Mutant Lung Development |
| | Jenna Patel | Biology | Ying Gu | T-DNA Mutants Effect on Cellulose Synthesis and Primary Cell Wall Growth |
| | Zoe Goldblum | Immunology and Infectious Disease | Ed Dudley | Heavy Metal Resistance in Salmonella Isolates |
| | Sydney Assalita | Engineering Science | Christopher House | Unlocking the Potential of Microbes to Grow Good for Astronauts |
| 8:20 - 8:40 6 lightning talks followed by a short break for Q&A | Rory Murphy | | Chaleece Sandberg | Importance of Reliability and Fidelity in Single Subject Studies |
| | Marabelle DeLaurentis | Civil and Environmental Engineering | Elizabeth Traut | Analyzing Equity of Public Electric Vehicle Charging Infrastructure in Pennsylvania |
| | Clare Robson | Information Sciences and Technology | Frank Ritter | Effects of prototype fidelity on training effectiveness |
| | Nora O'Toole | Cybersecurity | Rebecca Thurman-Irons | A Data-Driven Examination of Privacy Laws and Regulations Around the World |
| | Alexandra Lister | | Roman DiBiase | An Accuracy Assessment of Bedrock Mapping Tools |
| | Claire DiPerna | Astronomy and Astrophysics | Rebekah Dawson | Modeling the Orbital Resonance of the TRAPPIST-1 Planetary System |
| 8:40 - 9:00 6 lightning talks followed by a short break for Q&A | Madeline Feeney | Food Science | Christopher Sigler | The Human Gut Microbiome |
| | Hunter Porcano | Biological Engineering | Josephine Wee | Isolation And Identification of Environment and Food Associated Fungi |
| | Lindsay Bell | Biological Engineering | Curt McConnell | Effects of Riparian Buffer Management on Nitrogen Leeching |
| | Madison Kodis | Veterinary and Biomedical Sciences | Joshua Lambert | The Hidden Potential of Cocoa |
| | Gabbi Hoffmann | | Luis Duque | Elucidating the root phenotypic plasticity of Potato (Solanum tuberosum) to nitrogen and phosphorus stress |
| | Erica Selsley | Biological Engineering | Konstantinos Alexopoulos | Computational Catalysis For Biogas Upgrading |
| 9:00 - 9:20 9 lightning talks followed by a short break for Q&A | Taya Knappenberger | Mechanical Engineering | Allison Beese | Microstructural characterization of binder jetted metal alloys. |
| | Gianna Angelina Caputo | Chemical Engineering | Ezgi Toraman | Methane Activation on a Solid Oxide Catalyst |
| | Alisha Naik | Materials Science and Engineering | Robert Hickey | Bromination of SBS |
| | Ava Zoba | Biomedical Engineering and Mechanical Engineering | Seong Kim | Water adsorption on glass surfaces—thickness and hydrogen bonding of adsorbed water layer |
| | Zane Burris | | Chris Boxe | Parameterizations of Mars 1-D Photochemical Models |
| | Parker Sell | Electrical Engineering and Computer Science | James Z Wang | Applications of Deep Learning Computer Vision in Emotion Prediction and Virtual Therapy |
| | Rylie Adams | | | Integrating GIS systems within Virtual Reality Systems |
| | Kayla Myers | | Justin Brown | Growing cells on silk fibroin |
| | Sharleen Banatte | Biobehavioral Health | Ana Maria Butler | Sex Differences in Addiction |



Questions: Allison Beese (amb961@psu.edu)

