

# Young Researcher Conference

## Schedule of Events

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|---------------|---|
| 8:30-10:00    | Registration and Breakfast  |
| 10:00 - 10:10 | Opening Address   |
| 10:15 – 10:45 | <b>Keynote Speaker: Rigoberto Hernandez, PhD</b> Johns Hopkins University<br>Dynamical Consistency in Sustainable Nanoparticles   |
| 10:50 – 11:10 | <b>Student Speaker: Caitlyn Singam</b> University of Maryland<br>2018: A Space Odyssey - Studying the Biological Profile of Near-space  |
| 11:15 – 11:45 | <b>Student Speaker: Avery Baumann</b> Johns Hopkins University<br>Incorporation of Lithium Thiophosphates within Metal-Organic Frameworks for Improved Lithium-Sulfur Batteries                       |
| 12:00 – 1:00  | Lunch and Code Workshop   |
| 1:00 – 1:30   | <b>Invited Speaker: Christina Woo, PhD</b> Harvard University<br>Small molecule interactome mapping by photo-affinity labeling  |
| 1:35 – 1:55   | <b>Student Speaker: Anna Grafov</b> University of Maryland<br>Optical Activity in Optically Anomalous Crystals  |
| 2:00 – 2:20   | <b>Student Speaker: Samuel Scinto</b> University of Delaware<br>Dual-Reactivity <i>trans</i> -Cyclooctenol Probes for Sulfenylation in Live Cells Enable Temporal Control via Bioorthogonal Quenching |
| 2:25 – 2:45   | Coffee Break  |
| 2:50 – 3:20   | <b>Invited Speaker: Seena Ajit, PhD</b> Drexel University<br>Circulating miRNAs as biomarkers for pain  |
| 3:25 – 3:45   | <b>Student Speaker: Christian Diaz</b> Howard University<br>Circular Planar Spiral Coils in Wireless Power Transfer System for Electric Vehicles  |
| 3:50 – 4:10   | <b>Student Speaker: Ray-Shimry Garatsa</b> University of Maryland<br>Implementation of Fast Collision Avoidance Algorithm for Multi-rotor UAV   |
| 4:15 – 4:45   | <b>Invited Speaker: Gloria Washington, PhD</b> Howard University<br>Affective Biometrics: Creation of the HowardU_ABL Dataset & Use of Hard & Soft Biometrics for Recognition                         |
| 4:50 – 5:10   | <b>Student Speaker: Dallas Banks</b> University of Maryland<br>Mycobacterium tuberculosis inhibits type I interferon signaling to increase intracellular survival                                     |
| 5:15 – 6:30   | Poster Session and Networking   |
| 6:30 – 6:45   | Poster and Speaker Awards   |

## Our Invited Speakers



### **Rigoberto Hernandez, PhD**

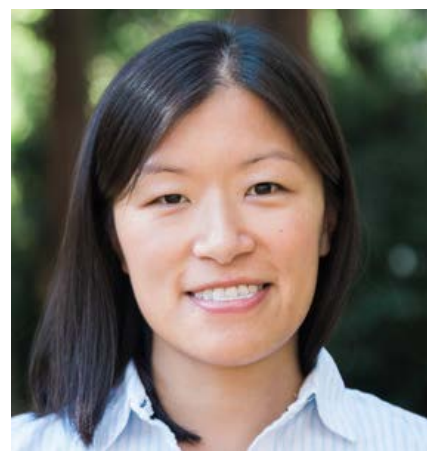
Professor of Chemistry, Johns Hopkins University

Dr. Hernandez's research interests include exact transition state theory, nonequilibrium chemical dynamics and sustainable nanoparticles. He also serves as the Director of the Open Chemistry Collaborative in Diversity Equity (OXIDE).

### **Christina Woo, PhD**

Assistant Professor of Chemistry, Harvard

The Woo lab studies small molecule–protein interactions using a mass spectrometry-based method to structurally characterize where these small molecules are acting and shed light on how small molecules influence protein networks



### **Seena Ajit, PhD**

Assistant Professor of Pharmacology and Physiology, Drexel University

The Ajit Lab is interested in pursuing various aspects of epigenetics including DNA methylation, histone modifications, and RNA-mediated gene silencing, all aimed at understanding the molecular mechanisms underlying pain.



### **Gloria Washington, PhD**

Assistant Professor of Computer Science, Howard University

The Affective Biometrics Lab and performs research on affective computing, biometrics and human-centered computing. Before coming to Howard University, Dr. Washington was an Intelligence Community Postdoctoral Research Fellow in the Department of Computing Science at Clemson University.



# Lunch and Code Workshop

Lunch and Code is an interactive 45 minute workshop introducing the basics of python coding for STEM researchers wishing to perform data analysis more efficiently, create visually engaging plots and figures, as well as showing how to acquire some of the foundational coding skills often useful in difficult and uncertain job markets.

This fast-paced workshop will lay out the basics and guide you in the right directions for further developing these skills.

Online teaching and exercise materials will be made available that covers various levels of python, MATLAB and TensorFlow / Keras (a machine learning/Artificial Intelligence software).

If you are interested in further coding workshops, this is a pilot for a Lunch and Code Workshop series to be offered on UMD campus.

Contact Professor Tiwary or ADSE@UMD if interested:

Pratyush Tiwary, PhD

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Twitter: @adse\_umd

FB: <https://www.facebook.com/ADSEatUMD>

**Make sure to remember to bring your laptops!**