The Purdue Institute of Inflammation, Immunology and Infectious Disease

Presents:



THE PURDUE LECTURE HALL SERIES

Thursday, February 21st, 2019 @ 7pm Purdue University, LYNN 1136

(625 Harrison St, West Lafayette, IN 47907)

Featuring: Exploring phage structure from head to tail with cryoEM + introducing VR tools for EM training Guest Speaker: Brenda Gonzalez, PhD Candidate



Have you ever wondered what the smallest thing we can detect with a microscope is? With the electron microscope (EM), we can visualize objects nearly 85,000 times smaller than a grain of table salt. This powerful technology allows us to investigate biological samples, such as viruses. I use image processing techniques to convert 2D images of viruses taken on the microscope into high resolution 3D models. These models give us details about the structure down to almost atomic level!

In addition to my work in the lab, I am part of the Purdue CryoVR team. In collaboration with the Computer Graphics Department, PI4D, and the College of Education, I am creating Virtual Reality training tools for cryo-EM. This project is the first of its kind, and the process has been full of new and exciting experiences.

Background: Brenda graduated from Lafayette Jefferson High School in 2011 and went on to receive her Bachelor's in Biochemistry from Purdue in 2015. She worked as a research associate at the University of Iowa for a year and she returned to the Dept. of Biological Sciences at Purdue as a PhD student in 2016. She is currently working under Prof. Wen Jiang in the Department of Biological Sciences.



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