



August 2018 - Lab News

Contributors: Amy Wilkerson, Olga Trofimova, Song Vick, Richard Proper, Harry Eller, and Kaya Mikhailova

8/16/18

Exciting Events: **William & Mary's New President, Katherine Rowe, visited the lab**

Interesting Visitors



Pictured here working on the HIROX optical microscope are Dr. Jinmyun Jo, a professor from VSU, and Katya Mikhailova, the lab's assistant for the summer. Dr. Jinmyun Jo is looking at different material's surfaces with the HIROX's 3D functions.

From VIMS, Brianna Stanley, a physical sciences grad student, Stephanie Wilson, a biological sciences grad student, and Bongkeun Song, an associate professor, are assisted by Olga with the Phenom Scanning Electron Microscope. They are looking at particles from core samples taken from different depths.

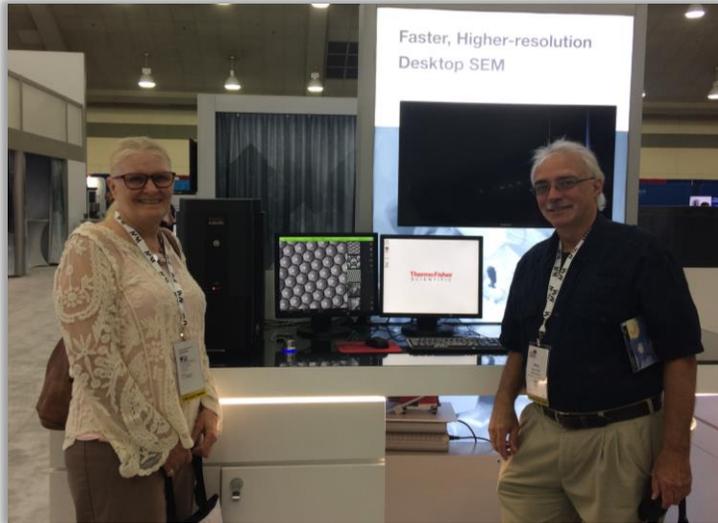


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The Microscopy & Microanalysis Conference

The M&M Conference provides microscope development and applications enthusiasts with the opportunity to meet together.



In front of the ThermoFisher Scientific booth, Amy and Harry look at the new Phenom Pharos Desktop SEM which has magnification up to 1,000,000x.



Amy is pictured with Steve Buck at the HIROX booth. On the screen, the 3D surface imaging feature is being showed off.



Showing Harry the Phenom XL is Mathew Jobbins, an Applications Scientist from Nanoscience. The Phenom XL has magnification up to 100,000x and the sample stage can hold samples up to 100 mm by 100 mm or 36 x 12 mm pin stubs.



Here, Amy is pictured in front of the new Phenom Pharos Desktop SEM with the ThermoFisher Scientific scientists.

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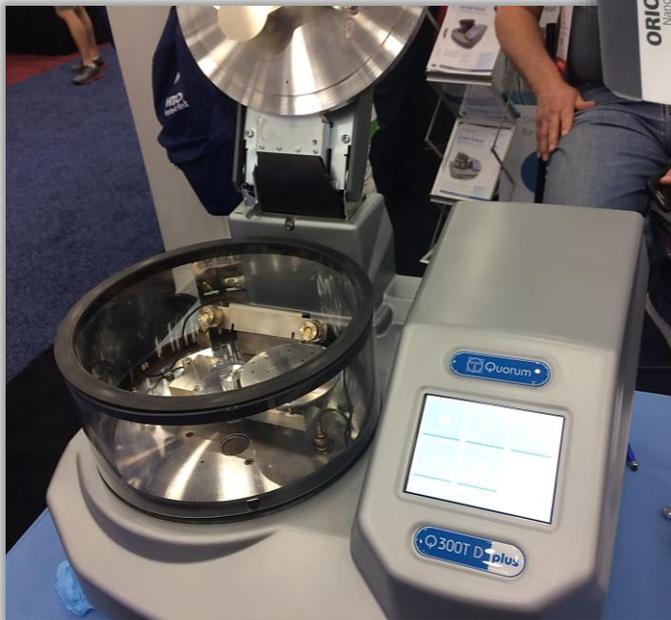
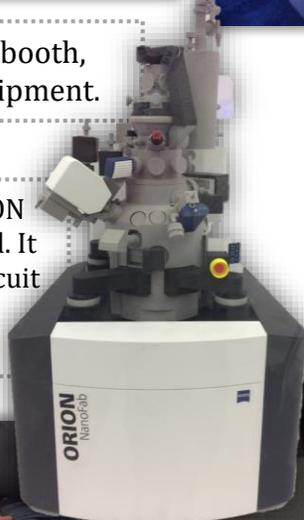
More M&M Conference Equipment



Pictured above at the Pace Technologies booth, Harry gets to see the metallographic equipment.

Pictured above is the Aztec Live real-time chemical imaging equipment at the Oxford Instruments booth. One of the probes allows for the movement of the sample when in a vacuum.

To the right is a 3D model of the ORION NanoFab which is a Multi-Ion FIB tool. It enables 3D analysis, rapid device/circuit prototyping and sub-10nm node characterization capabilities.



Pictured above are miniature 3D models of the Nanomechanics Inc. equipment.

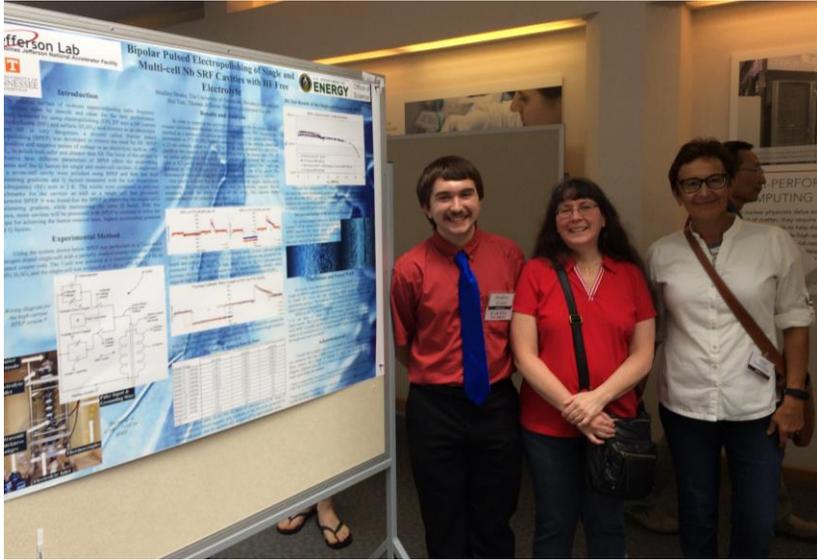
Pictured above from the EMS booth, is the Q300T D Plus dual target sequential sputtering for specimen. This allows for multi-layer sequential sputtering of two materials.

Continue to next page for the SULI Conference →

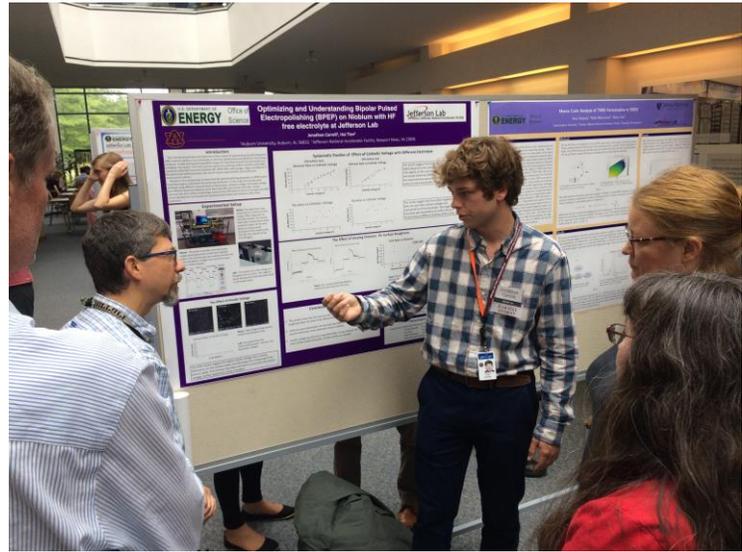


The SULI Conference

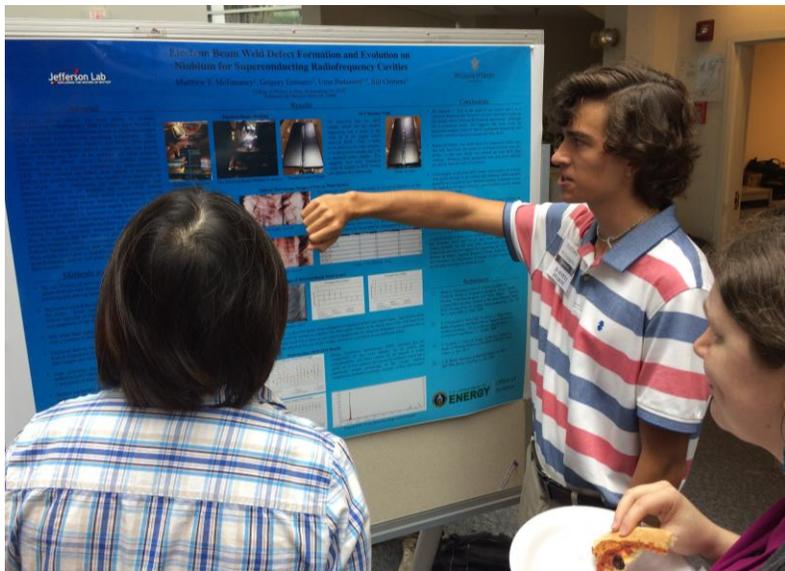
The Science Undergraduate Laboratory Internships (SULI) Conference presented undergraduates' research in a conference setting with a poster session. Both Jonathan and Bradley worked in the lab with various equipment to collect their data, such as the new W&M AFM Machine with assistance from Olga.



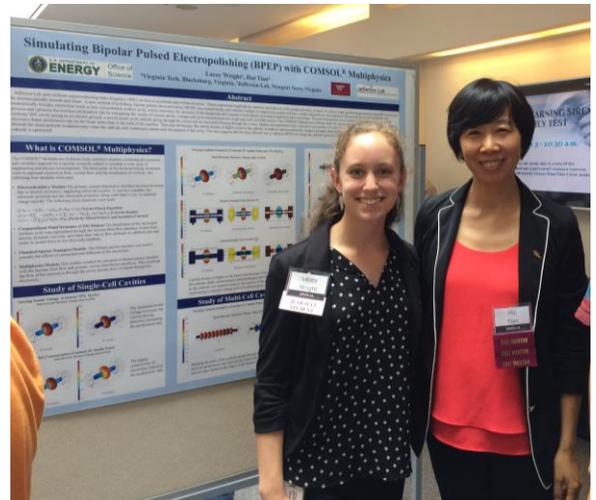
Here, Bradley Straka, an undergrad from the University of Tennessee, his mother, and Olga are pictured in front his poster, "Bipolar Pulsed Electropolishing of Single and Multi-cell Nb SRF Cavities with HF Free Electrolyte".



Pictured here is Jonathan Carroll from Auburn University, discussing his poster, "Optimizing and Understanding Bipolar Pulsed Electropolishing on Niobium with HF Free Electrolyte".



Mathew McEaney from W&M, is discussing his poster, "Electron Beam Weld Defect Formation and Evolution on Niobium for Superconducting Radiofrequency Cavities". Mathew worked extensively with the lab's HIROX microscope.



Here, Lacey Wright from Virginia Tech University is with her mentor Hui Tian, who is a staff scientist at SRF Institute at JLab, and she worked with Jonathan and Bradley. Lacey's poster is "Simulating Bipolar Pulsed Electropolishing with COMSOL Multiphysics".



Thank you for a great start to August in the lab!

