

**5<sup>th</sup> Annual Washington DC  
FIB SEM Users Group Meeting/Workshop**

**February 24<sup>th</sup>, 2012**

**Carnegie Institution of Washington  
1530 P St. NW, Washington DC 20005**

**Friday, February 24th, 2012**

8:30 AM **Breakfast & Coffee**

9:00 AM Welcome (Yingwei Fei and Nabil Bassim)

Morning Nabil Bassim & Yingwei Fei

9:10 AM **Leonidas Ocola**, Argonne National Laboratory  
*Ion Beam Micro-Machining used for Microfluidic Device Fabrication*

9:30 AM **Brent Gila**, University of Florida  
*Ion Beam Lithography Employing a Multi-Species Focused Ion Beam System for Materials Processing and Graphene Formation*

9:50 AM **Mike Uchic**, Air Force Research Laboratory  
*Stencil Masks & Broad Ion Beam Milling for the Rapid Production of Meso-scale Test Samples*

10:10 AM **Kedar Narayan**, National Institutes of Health  
*Targeted high speed high resolution FIB-SEM imaging within large biological samples*

10:30 AM **Coffee Break**

10:50 AM **Lucille Giannuzzi**, L.A. Giannuzzi & Assoc.  
*Ex-situ Lift-Out Revisited*

11:10 AM **Ed Vicenzi**, Smithsonian Institution  
*An Examination of 19th Century Silver-Mercury Nanofilms in Early Photographs using FIB-SEM*

11:30 AM **Yingwei Fei**, Carnegie Institution of Washington  
*View planetary differentiation process through high-resolution 3D imaging*

11:50 AM **Konrad Rykaczewski**, National Institute of Standards and Technology  
*FIB applications in nanoscale wetting research*

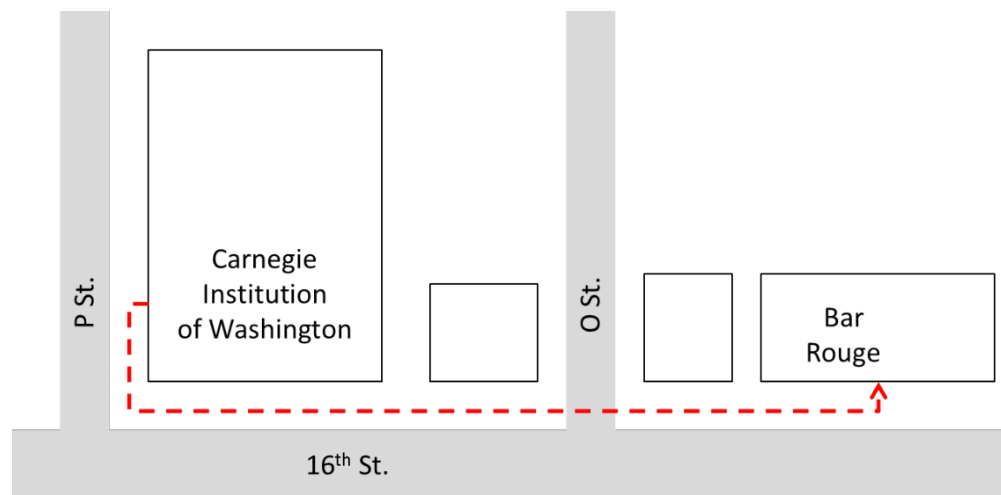
Lunch

12:10 PM **Lunch**

Poster Session

- 1:00 PM **Rocco Cerchiara**, Fischione, Inc.  
*Applications of an Adjustable Broad Beam Ion Source for FIB/SEM and EBSD*
- Alex Chou**, Stevens Institute of Technology  
*Using Cryo-FIB as a Planing Tool to Study Frozen Hydrated Samples*
- Catalin Florea**, Naval Research Laboratory  
*Using a FIB to measure sub-micron, 3D surface structures in infrared materials*
- Karen Henry**, National Institute of Standards and Technology  
*Sample preparation for atom probe tomography*
- Joseph Klingfus**, Raith USA, Inc.  
*Closed-Loop SEM Dimensional Feedback of FIB Milling Process on a FIB-SEM*
- Jonathan Ligda**, Army Research Laboratory  
*Micromechanical Testing of Nanocrystalline BCC Metals*
- Gavin Murphy**, National Institutes of Health  
*Large Volume Reconstruction of Mammalian Cells*
- Zan Peeters**, Carnegie Institution of Washington  
*Coordinated analysis of in situ organic material in the CR chondrite QUE99177*
- Eswar Prasad**, Johns Hopkins University  
*Influence of specimen size and orientation on the hardening behavior in Mg single crystals*
- Valery Ray**, PBS&T, MEO Engineering Co., Inc.  
*Development of GAE Recipes: Practical Application of Unknown Theory*
- Lolita Rotkina**, University of Pennsylvania  
*“Wedge-on-the-edge” - a combination of mechanical polishing and focused ion beam milling techniques for complex structures*
- Keana Scott**, National Institute of Standards and Technology  
*Analysis of nanoparticles in sunscreen using cryo-FIB*
- Ron Tonucci**, Naval Research Laboratory  
*Focused Ion Beam Patterned Plasmonic Metamaterials Using Tapered Nanowell Arrays*
- Kurt Langworthy\***, **Jeffrey Ditto\***, **John Miller\*\*** & **Janet Teshima\*\***, \*CAMCOR at University of Oregon & \*\*Dune Sciences, Inc.  
*Innovative Substrates for FIB Sample Preparation*
- Ke Wang**, University of Pittsburgh  
*Cryo-FIB processing and cryo-electron tomography of native cells*
- Minhua Zhao**, National Institute of Standards and Technology  
*Effect of Ga implantation during FIB on SEM subsurface imaging*

Afternoon	Ken Livi & Keana Scott
2:00 PM	<b>Shawn Zhang &amp; Michelle Husain, VSG</b> <i>Modeling and Simulation Based on 3D Micro- to Nano-Scale Imaging</i>
2:20 PM	<b>Larry Scipioni, Carl Zeiss Microscopy</b> <i>Nanofabrication of Plasmonic Devices in the Helium Ion Microscope</i>
2:40 PM	<b>Jason Huang, Carl Zeiss Microscopy</b> <i>Applications of Cryo-FIB in Materials Science</i>
3:00 PM	<b>Andrew Smith, Kleindiek</b> <i>New Tools for Preparing Ultra-Thin TEM Samples</i>
3:20 PM	<b>Coffee Break</b>
3:40 PM	<b>Roger Alvis, FEI Company</b> <i>Nano-to-Milli: Extended Field-of-View Sample Prep, Imaging, and Analysis</i>
4:20 PM	<b>Jiri Dluhos, Tescan USA</b> <i>Advanced Developments and Analytical Solutions for FIB-SEM Workstations</i>
4:40 PM	<b>Cheryl Hartfield, Oxford Instruments</b> <i>Review of Omniprobe Customer Best Practices and Applications</i>
5:00 PM	Wrap-up (Nabil Bassim)
5:30 PM	<b>Happy Hour at Bar Rouge</b>



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