



UGIM 2012 Final Program
 Banatao Auditorium, Sutardja Dai Hall
 University of California, Berkeley

Monday 9 July 2012

7:30 – 8:00 AM **Registration – Coffee**

8:00 – 8:15 AM **Welcome**

8:15 – 10:00 AM **I. Keynote Presentations**
 Chair: A. William Flounders, University of California, Berkeley

	Paper Title	Authors/Affiliation
University	<i>Berkeley Engineering Meets the Challenges of University Research</i>	Professor Tsu-Jae King Liu, Associate Chair EECS University of California at Berkeley
Government	<i>Research Connections with Sandia National Laboratories</i>	Dr. Mark Allendorf, Sandia National Laboratories, Livermore, CA
Industry	<i>Open-Access University Labs Are Essential to Commercialization of Micro/Nano Technologies</i>	Dr. Alissa M. Fitzgerald, A. M. Fitzgerald & Associates, LLC, Burlingame, CA

10:00 – 10:15AM **Break**

10:15 – 12:00 PM **II. Clean Class and Laboratory Control Systems**
 Chair: Mary Tang, Stanford University

	Paper Title	Authors/Affiliation
	<i>CLEAN: from Limbo to LIMS</i>	Vincenzo Di Bernardo and Eric Martin, Harvard U.
	<i>Modified Adaptive Control of a 10,000 Square Foot Cleanroom, Using Particle Counters to Maintain Design Specifications and Reduce Energy Consumption</i>	Thomas Tribble, Craig Rochester, and Michael Beauvais, Harvard University
	<i>A Lean and Sustainable User Access System for a University Microfabrication Laboratory</i>	Austin Roth, Neil Peters, and Sang-Joon Lee, San Jose State University
	<i>Implementing a Software Based User Access System in a Core Analytical Lab: Benefits and Challenges.</i>	Brian Van Devener, University of Utah
	<i>Badger Lab Management Software</i>	Michael Bell, Stanford University
	<i>Mercury Lab Management Software</i>	Alexander Proskurowski and Todd Merport, University of California, Berkeley

12:00 – 1:15 PM

Lunch

1:15 – 3:00 PM

III. Safety and Security

Chair: Gregory Cibuzar, University of Minnesota

Paper Title	Authors/Affiliation
<i>Nanofabrication Lab Security Project</i>	Helen Anderson, University of Pennsylvania, David Bunzow, Lawrence Berkeley National Laboratory, Abbie Gregg, Abbie Gregg, Inc., John Hughes, University of Illinois at Urbana-Champaign, Justin Kita, FBI, and Richard Morrison, Draper Laboratory
<i>Fab Security</i>	Pramod C Karulkar, University of Alaska Fairbanks
<i>Micro and Nano R&D Fab Safety, Inert Gas Reduction A Lean Six-Sigma Approach</i>	Ronald Olson, Ronald Frank, Jason Benyeda, John Labrie, and Paul McConnelee, GE Global Research
<i>Re-Engineering the User-Hazard "Coalface" at the Melbourne Centre for Nanofabrication</i>	Paul Spizzirri, Monash University, Australia
<i>The Development of a Formal Emergency Response Team for a Populous University Clean Room in a Dense Urban Setting</i>	John Sweeney, Harvard University (withdrawn)
<i>Safety Considerations in Building Ultra-high Vacuum Plasma Enhanced Chemical Vapor Deposition System for Low Temperature Group IV Epitaxy</i>	Hameed Naseem, Shui-Qing Yu, Samir El-Ghazaly, Zafar Waqar, Husam Abu-Safe, Shannen Adcock, Ben Conley, Aboozar Mosleh, Bryant Hankton, and Asanka Munasinghe, University of Arkansas
<i>Facilities Planning for Safety & Emergency Response: Bridging the Gap between Design Features and Safety Planning</i>	Steven Schultz, HDR Architecture Inc.

3:00 – 3:15 PM

Break

3:15 – 5:00 PM

IV. Laboratory Operations and Equipment Selection

Chair: Vicky Diadiuk, Massachusetts Institute of Technology

Paper Title	Authors/Affiliation
<i>An Overview of Daily Operations at the VINSE Core Laboratories</i>	Anthony Hmelo, Vanderbilt University
<i>Web-Based Content Management System for Equipment Information</i>	Ryan Taylor, University of Utah
<i>Process Definition Spreadsheet for Run Card Creation</i>	Brian Baker, University of Utah
<i>A Practical Comparison of Mask Making Pattern Generation Systems</i>	Kevin Hensley, University of Utah,
<i>A Phosphine Sub Atmospheric Delivery System (SADS) Applied to Low Pressure Chemical Vapor Deposition (LPCVD) of In-situ Doped Polysilicon</i>	Jerry Bowser, William Young, Lei Chen, and Vincent Luciani, National Institute of Standards and Technology
<i>Key Considerations for Selection of Diffusion Furnaces</i>	Tony Olsen, University of Utah

5:00 – 5:15 PM

Break

5:15 – 6:15 PM

Rotating tours of Berkeley Marvell NanoLab, or time on your own

****6:45 PM**

Buses depart from Sutardja Dai Hall to Berkeley Marina

7:15 – 9:45 PM

Champagne Reception and Dinner Cruise on Hornblower yacht

9:45 PM

Buses return to all listed hotels and Sutardja Dai Hall.

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 University of California, Berkeley

Tuesday 10 July 2012

7:30 – 8:00 AM **Registration - Coffee**

8:00 – 10:00 AM **V. Finances**

Chair: Katalin Voros, University of California, Berkeley

Paper Title	Authors/Affiliation
<i>FY11 Financial and Operational Survey of Major University Nanofabrication Facilities</i>	Dennis Grimard and Lisa Jones, University of Michigan
<i>Efforts to Increase Utilization & Reduce the Subsidy for a Mid-Size Cleanroom Facility</i>	Julia Aebersold, Kevin Walsh, and Shamus McNamara, University of Louisville
<i>How do you pay for it? Financing situation at McGill Nanotools Microfab</i>	Matthieu Nannini, McGill University, Canada
<i>Opening the Doors: Converting a University Laboratory into an Open-Access Facility</i>	Linda Macks, NSW Node, Australian National Fabrication Facility, Australia
<i>Re-evaluation of Proposed Microfabrication Process Cost Calculator</i>	J. Provine, Stanford University
<i>Evaluating Laboratory Staff Performance</i>	John Weaver, Purdue University
<i>Financial Analysis of a Successful Multi-User Academic Laboratory (Not Presented)</i>	Katalin Voros, University of California, Berkeley
<i>Berkeley Micro/NanoLab Affiliate Member Program – A Critical Component of Laboratory Growth and Stability (Not Presented)</i>	A. William Flounders, University of California, Berkeley

10:00 – 10:15 AM **Break**

10:15 – 12:00 PM **VI. Education Programs, UGIM History and Future**

Chair: Karl Hirschman, Rochester Institute of Technology

Paper Title	Authors/Affiliation
<i>On the Co-Evolution of Microelectronic Engineering Laboratories and Education at RIT</i>	Robert Pearson, Rochester Institute of Technology
<i>Coordinating Lab Resources for a Project-Based MEMS Course</i>	Ivan Puchades and Lynn Fuller, Rochester Institute of Technology
<i>Hands-on training in the design and fabrication of n-type solar cells</i>	Seth Shumate, Matthew Young, Benjamin Newton, Errol Porter, Shui-Qing Yu, and Hameed Naseem, University of Arkansas
<i>A Happy Workplace - Are We There Yet?</i>	Dwayne Kirk, Melbourne Centre for Nanofabrication, Australia
<i>UGIM and the Institute of Environmental Sciences and Technology: Possible Synergies</i>	John Weaver, Purdue University
<i>History of the University Government Industry Microelectronics Symposium</i>	Robert Pearson, and Lynn Fuller, Rochester Institute of Technology

12:00 – 1:15 PM

Lunch and UGIM Business Meeting (open to all)

1:15 – 3:00 PM

VII. Expanding Laboratory Demands

Chair: Daniel Christensen, University of Wisconsin, Madison

Paper Title	Authors/Affiliation
<i>Micro and Nano Characterization Facility: Operations Methodology and Technical Management</i>	Savitha Purakkat, Vijay Mishra, S.Raghavan, N. Bhat, and Rudra Pratap, Indian Institute of Science, India
<i>Cross-contamination Control at MIT's Microsystems Technology Labs</i>	Vicky Diadiuk, MIT
<i>Preparing an Aging Facility to Meet Expanding Lab Demands: Renovation of the Stanford Nanofabrication Facility</i>	John Shott, John Bumgarner, and Mary Tang, Stanford University
<i>The RIT Semiconductor & Microsystems Fabrication Laboratory: Challenges in supporting a growing research agenda</i>	Karl Hirschman and Scott Blondell, Rochester Institute of Technology
<i>The UofL MNTC and the KY nanoNET - Two Initiatives to Promote Nano-science in the State of Kentucky</i>	Kevin Walsh, Shamus Mcnamara, Julia Aebersold, Don Yeager, Curtis Mckenna, Michael Martin, Wendy MetcalfAna Sanchez, Tommy Roussel, Clinton Vissers, and Brad Westhoff, University of Louisville
<i>Fab Pitfalls with "Green Energy" at University and Government Campuses</i>	Alex McEachern, Power Standards Lab

3:00 – 3:15 PM

Break

3:15 – 5:00 PM

VIII. Planning and Development

Chair: Kevin Walsh, University of Louisville, Kentucky

Paper Title	Authors/Affiliation
<i>Towards a Supermassive Research Center: Scaling Rules for Laboratory Operations</i>	Eric Martin, Harvard University
<i>The Design and Building of the Draper Laboratory Microfabrication Center</i>	Richard H. Morrison, David J. D. Carter, and Livia M. Racz, Draper Laboratory
<i>Sabancı University Nanotechnology Research and Application Center: An experience in building a multi-disciplinary research facility overseas</i>	Emre Heves, Burak Birkan, Bulent Koroglu, Ceyhun Findik, Hikmet Sarisu, Erol Duzgoren, and Volkan Ozguz, Sabanci University, Turkey
<i>National Nanofabrication Centre at IISc Bangalor: A Chronicle of Design, Construction and Management of Cleanroom in Indian context</i>	Savitha Purakkat, T. Murthy, M. N. Vijayaraghavan, Gopal Hegde, Srinivasan Raghavan, P. S. Anil Kumar, Rudra Pratap, and Navakanta Bhat, Indian Institute of Science
<i>A National Facility- Challenges and Progress.</i>	Derek Hiron, ANFFQ, University of Queensland, Australia
<i>In Search of the Perfect "Core" Nano Facility: Trends in Research Cleanroom and Imaging Lab Design</i>	Abbie Gregg, Abbie Gregg, Inc.

5:00 – 5:15 PM

Break

5:15 – 6:15 PM

Bus to Lawrence Berkeley National Laboratory, Molecular Foundry tour, or rotating tours of the Berkeley NanoLab, or time on your own. Tour priority given to conference attendees considering Molecular Foundry proposals. Buses will take tour participants to the Bancroft Hotel for the Banquet Dinner.

****6:15 PM**

Conference attendees not participating in Molecular Foundry Tour walk from Sutardja Dai Hall to Bancroft Hotel

6:30 – 7:30 PM

Wine tasting at the Bancroft Hotel

7:45 PM

Banquet in the Great Hall, Bancroft Hotel

9:30 PM

Symposium Concludes