Learning electronics—from the bottom up
Electronics from the Bottom Up Summer School will return to the Purdue University campus July 18-22.
Sponsored by Intel Foundation, the NSF-funded Network for Computational Nanotechnology, and Purdue University, "Electronics from the Bottom Up" is an intensive and collaborative learning program that brings the knowledge of new developments in nanoelectronic research into the educational experience of students and practicing engineers.

Interview
The career of Deb Newberry, M.Sc., is as fascinating as it is inspiring.
Trained as a nuclear physicist, Ms. Newberry ("call me Deb") spent 23 years in the corporate world as a researcher and in executive management. Her career in nanotechnology began in 1991 when working with NASA and other organizations, where she studied radiation effects on micro- and nano-scale satellites. They were, she recalled, fascinating days.

nanoHUB.org tool of the month
FIONA (Fluorescence Imaging with One Nanometer Accuracy), by Paul R Selvin, Raheem Syed, Nahl Sobh, University of Illinois at Urbana-Champaign.
With the standard diffraction limit of light at about 250 nm, one cannot "resolve" objects closer than this distance. Despite this, nanoHUB.org authors have come up with a method to measure 1.5 nm in x-y plane, with 1-500 msec, using a technique known as Fluorescence Imaging with One-Nanometer Accuracy (FIONA). This technique allows for localization of a single dye, or a single group of dyes, to within approximately 1-nm accuracy. This high degree of precision is achieved using total internal reflection fluorescence microscopy, deoxygenation agents, and a high quantum yield, low-noise detector.

Career opportunities
The University of Illinois at Chicago is accepting applications for Ph.D. positions in computational chemistry.
The Molecular Foundry at the Lawrence Berkeley National Lab is seeking candidates for a staff scientist position for its Theory of Nanostructured Materials Facility.
The University of California-San Diego is seeking candidates for a postdoctoral position in computational nanotechnology.
Hitachi Global Storage Technologies seeks a nanoscale thin films research scientist.

Upcoming Events
Apr. 26-28: Materials Research Society Spring Meeting, San Francisco
Challenges in nanomanufacturing, fabrication, and production scale-up are discussed, as well as energy solutions, and nanotech-enabled devices.

May 1-3: Greener Nano 2011, Cupertino, CA
Incorporating green green nanotechnology into new products and processes are discussed.

May 23 - June 3, Urbana-Champaign, IL
3rd NanoBiophotonics Summer School. Explore nanobiophotonics technology and methods of investigation with leading speakers from across the U.S. Free registration and housing. Participation limited to 50 attendees.

Aug. 15-18: IEEE NANO 2011, Portland
IEEE's flagship conference in nanotechnology is a must for students, educators, researchers, scientists and engineers.

In Brief
Justin Riley has joined the Network for Computational Nanotechnology as MIT site lead. He may be contacted at jtriley@mit.edu.

Intel plans to invest $100 million over the next five years into university research. The projects will be at Stanford, Harvard, Cornell, Princeton, the University of Washington and three institutions in the University of California system — Davis, Berkeley and Irvine.

A limited supply of nanoHUB t-shirts are available in dark blue or grey through the nanoHUB store. Members’ nanopoints can be redeemed for purchase.

New on nanoHUB
First Time User Guide for Quantum Dot Lab, by SungGeun Kim, Lynn Zentner, Purdue University, West Lafayette, IN. An introduction to quantum dot lab tool, explaining the relationship between inputs and outputs of the quantum dot lab.

Stretching Simulation of FCC
Crystal Tool, by Markus Buehler, Justin Riley, Joo-Hyoung Lee, Jeffrey C Grossman, Massachusetts Institute of Technology. This tool simulates a continuous expansion of an FCC crystal while measuring energy, stresses, and more. Users can study the elastic properties of an FCC lattice modeled using a Lennard-Jones potential. Read More...

SILVACO Simulation of Solar Cells, by Dragica Vasileska, Arizona State University, Phoenix, Arizona. Lecture notes provide a description of the SILVACO simulation of solar cells. Particular emphasis is placed on the module LUMINOUS. Read More..

OMEN Nanowire: Solve the Challenge, By SungGeun Kim, Purdue University. Challenging problems for OMEN Nanowire users are presented. Users are encouraged to establish a nanowire transistor structure so that it satisfies the ITRS 2010 requirements.

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About Us
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