



THE POWER OF PARTNERSHIPS

New Hampshire EPSCoR

Experimental Program to Stimulate Competitive Research



UNH SPACE CENTER OPENS SMALL SATELLITE TEST FACILITY



At the dedication: BAE Systems representatives Aaron Penkacik, VP, Advanced Systems & Technology and Chief Tech Officer Electronics & Integrated Solutions; Maj. Gen. H. Marshal Ward, CP&GM, SS&E; Thomas Arseneault, President Sensor Systems; and Clark Dumont, VP Communications, with Taylor Eighmy, Interim VP of Research at UNH and Roy Torbert, Interim Director, Institute for the Study of Earth, Oceans, and Space (Photo courtesy of Perry Smith, UNH Photographic Services)

On Oct. 9, the UNH Space Science Center officially opened its Space Science Small Satellite Test Laboratory – a new, state-of-the-art facility that will allow quicker, more economical turnaround in testing satellite components. The Nashua, N.H.-based unit of BAE Systems of North America, which works in partnership with UNH's Institute for the Study of Earth, Oceans, and Space, will also use the laboratory for testing instrumentation. BAE funds a Space Systems Fellowship program at UNH.

The Space Science Small Satellite Test Laboratory will provide scientists, students, and industrial partners with onsite thermal-vacuum testing in space-like conditions and clean-room assembly of small satellite payloads. The test laboratory will play a crucial role in testing components for NASA's Solar Terrestrial Probes MMS mission, the GOES-R weather satellite and the Radiation Belt Storm Probe satellites.

Science Foundation's EPSCoR program. "With the funding opportunities provided by EPSCoR, we can strengthen our research infrastructure, improve our ability to generate technological advances and make New Hampshire even more attractive for high technology and other knowledge-based industries to develop and prosper," says NH EPSCoR Statewide Committee Chair John Orcutt.

Funding for the thermal-vacuum chamber was provided by a Research Infrastructure Improvement grant from the National

NH EPSCoR ANNUAL STATE MEETING NOV. 7



Pierce Law Center (Courtesy Photo)

Join NH EPSCoR as we celebrate the "Power of Partnerships" during our first annual state meeting at Pierce Law Center in Concord. We will showcase federal investments in scientific research infrastructure that hold long-term promise to contribute to technology-based economic development in New Hampshire.

You will hear from some of the state's top scientists about the new facilities and equipment that allow us to compete in research on a global stage—from the tiniest nanomolecules to the vast and bewildering realm of outer space—and why it matters to New Hampshire.

The National Science Foundation's Experimental Program to Stimulate Competitive Research (EPSCoR) provides additional funds to states which historically had received fewer federal grants, thereby increasing a state's R&D competitiveness.

Since New Hampshire became an EPSCoR state in 2004, more than \$14.2 million in grants have been awarded to universities, colleges and private companies, to support partnerships for research excellence and technology development.

Registration is required by Monday, October 27. There is no cost to attend. Details and a registration form are available at www.epscor.unh.edu.

NOVEMBER 7 ANNUAL STATE MEETING

AGENDA

8:30 – 9:00 a.m.
Registration &
Continental Breakfast

9:00 – 11:30 a.m.
Welcoming Remarks

EPSCoR in NH, 2004-2008

NSF Research Infrastructure
Improvement Project: Enabling
Technologies for Scientific
Innovation through Sensor
Development

NASA
Department of Energy
Department of Defense

11:30 – 12:15 p.m.
Buffet Lunch &
Poster Session

12:15 – 12:45 p.m.
Outreach Programs in the
Physical Sciences

12:45 – 2:00 p.m.
Funding Opportunities

On reverse
side:

NH EPSCoR
Co-Sponsors
NSF Day at
Dartmouth

Research
Experiences
For Teachers

200 ATTEND NSF DAY AT DARTMOUTH COLLEGE



George Wilson, Legislative Specialist in the Office of Legislative and Public Affairs at the National Science Foundation, presents an introduction to NSF basics.

(Photo Courtesy of Joseph Mehling, Dartmouth College Photographer)

More than 200 faculty, administrators, and graduate students from colleges and universities around New England met at Dartmouth College Sept. 11 for a workshop with program officers from the National Science Foundation. "It was great, especially for new and upcoming investigators, to hear from NSF officials about how the grant application and review process works," said Roger Sloboda, the Ira Allen Eastman Professor of Biological Sciences at Dartmouth.

"I went to learn more about NSF's cross-cutting programs, which are ideal for interdisciplinary research," said Denise Anthony, associate professor and chair of Dartmouth's Department of Sociology, "but I also learned some helpful information about how proposals are handled within the Social, Behavioral and Economic Sciences Division."

NSF Day was sponsored by the Dartmouth College Office of the Provost and Office of Sponsored Projects, with support from NH EPSCoR. To sign up for notification of future workshops on funding opportunities and grant writing, email nh.epscor@unh.edu.

NANOTECHNOLOGY RESEARCH EXPERIENCES FOR TEACHERS (RET)

What do teachers do during the summer? Some go back to school. Since 2007, both high school and middle school science teachers have worked in laboratories at UNH as part of the Research Experiences for Teachers (RET) program. The 2007 program was sponsored by the NSF-funded Center for High-rate Nanomanufacturing (CHN); in 2008, NH EPSCoR provided partial support. RET participants typically work on projects that involve 3 weeks of research, 8 hours per day, 5 days per week, receiving a stipend and a certificate documenting 120 professional development hours. They prepare posters that describe their research to bring back to their classrooms to educate students about nanotechnology.

Two teachers worked in RETs in 2008 — Aurora Merry, a biology teacher at Salem High School, under the supervision of Glen Miller, professor of chemistry and materials science; and Jim Fabiano, a chemistry teacher at Newmarket Jr./Sr. High School, with Brad Kinsey, associate professor of mechanical engineering and materials science.



"During these three weeks, I was immersed in an individual research project with the support of Dr. Miller and members of his research group. I can honestly say that I felt like a research scientist. It is Dr. Miller's intention to include the data that I obtained in a paper. This experience is one that most high school science teachers do not have an opportunity to experience. I feel it is vital to have experiences like this as a science teacher. Science teachers inspire future scientists.

"Participation in this Research Experience for Teachers (RET) program will allow me to share the excitement and enthusiasm that I have for science with students in the years to come in my classroom." – Aurora Merry

"To say that my five weeks at the university was successful would be an understatement ... Now that I am comfortable with the program I hope to stay a part of it next year by jumping and completing specific research topics. Again, thanks for the opportunity." – Jim Fabiano

RET Photos courtesy of Simka Ellis, Administrative Assistant, University of New Hampshire CHN Group



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