



Center for High-rate  
Nanomanufacturing

**PRESS RELEASE**

FOR IMMEDIATE RELEASE



## **Northeastern University Announces Roger H. Grace Fellowship in Nanomanufacturing**

**Award to Support Ph.D. Students at the University's NSF Nanoscale  
Science and Engineering Center for High-rate Nanomanufacturing**

**Boston, Massachusetts – November 21, 2006**

The NSF Nanoscale Science and Engineering Center for High-rate Nanomanufacturing (CHN) at Northeastern University is pleased to announce the **Roger H. Grace Fellowship in Nanomanufacturing**. Recipients will be awarded a renewable one-year position at the CHN with stipend to work on a CHN project/thrust area.

The future of nanomanufacturing will depend on a workforce well-educated in nanoscience and nanoengineering. Among the greatest challenges in nanotechnology is the ability to commercially produce devices that work at the nanoscale level, which is measured at one-billionth of a meter. If developed, these systems could catapult the field into a \$1 trillion industry by 2015.

Northeastern brings its leadership in Microelectromechanical Systems (MEMs) as well as the study and control of nanoscale surface defects to this effort, and strives towards the goal of bringing the social – and financial – benefits of nanotechnology to the world. "Northeastern aims to be at the forefront of nanotechnology research," said Ahmed Abdelal, provost at Northeastern. "This fellowship builds on our world-class, federally funded, national center in nanomanufacturing."

The CHN is well positioned to discover innovative answers to the wide-ranging challenges of nanomanufacturing and train scientists to bring these new techniques to industry. It is one of the very few research centers in the nation to focus solely on developing economically viable fabrication processes to bring inventions into commercial production, and do so more quickly than the usual multi-decade time frame.

Ahmed Busnaina, William Lincoln Smith Professor and Director of the CHN said, "We aim to recruit the best students to conduct research at the frontiers of nanotechnology and nanomanufacturing, leading to the commercialization of nanotechnology to provide unparalleled advantages in medicine, electronics, energy, food, renewable resources and many other applications. The Roger Grace Fellowship will provide us with the means and the opportunity to hire the brightest and highly motivated students to work in this field at Northeastern."

**Center for High-rate Nanomanufacturing**  
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Roger Grace, President of Roger Grace Associates (Naples, Florida), has been a vital supporter of the CHN and their efforts. Grace said, "Having been an alumni of Northeastern University in both their undergraduate and graduate engineering schools and a consultant in micro and nanotechnology commercialization for over 25 years, I have kept a watchful eye on the progress of the university as a player in the research and development area. Most recently, the university has captured two major National Science Foundation grants to create Engineering Research Centers...certainly a formidable accomplishment. The most recent, the Center for High Rate Nanomanufacturing has caught my attention because it is truly what I have focused on in my consulting practice, the commercialization of technology. I am gratified that I could make a contribution to support research students in this area in such a prestigious and important position and to have my friend and learned colleague Professor Ahmed Busnaina as his/her research advisor".

**To qualify for the Fellowship, you must have been, or are applying to be, admitted to a Ph.D. program at Northeastern and have fabrication experience. If you are interested in applying for the fellowship, please send a cover letter, resume, and two letters of recommendation by the following deadlines:**

**SUMMER AND FALL SEMESTERS 2007  
SPRING SEMESTER 2008**

**March 26, 2007  
November 13, 2007**

Contact: Jennifer Bose, Manager of Finance and Administration, [j.bose@neu.edu](mailto:j.bose@neu.edu)

#### **About Northeastern:**

Northeastern University, located in the heart of Boston, Massachusetts, is a world leader in practice-oriented education and recognized for its expert faculty and first-rate academic and research facilities. Northeastern integrates challenging liberal arts and professional studies with the nation's largest cooperative education program. Through co-op, Northeastern undergraduates alternate semesters of full-time study with semesters of paid work in fields relevant to their professional interests and major, giving them nearly two years of professional experience upon graduation. The majority of Northeastern graduates receive a job offer from a co-op employer. Cited for excellence four years running by *U.S. News & World Report*, Northeastern has quickly moved up into the top tier rankings-an impressive 35 spots in four years. In addition, Northeastern was named a top college in the 2006 edition of the Princeton Review's annual "Best Colleges" issue. For more information, please visit <http://www.northeastern.edu>.

**The NSF Center for High-rate Nanomanufacturing** In the fall of 2004, the National Science Foundation awarded Northeastern University and its partners, the University of Massachusetts Lowell, the University of New Hampshire, Michigan State University and the Museum of Science, a Nanoscale Science and Engineering Center for high-rate Nanomanufacturing with funding of \$12.4 million over five years.

The Center for high-rate nanomanufacturing is focused on developing tools and processes that will enable high-rate/high-volume bottom-up, precise, parallel assembly of nanoelements (such as carbon nanotubes, nanoparticles, etc.) and polymer nanostructures. The center nanotemplates are utilized to conduct fast massive directed assembly of nanoscale elements by controlling the forces required to assemble, detach, and transfer nanoelements at high rates and over large areas. The developed nanotemplates and tools will accelerate the creation of highly anticipated commercial products and will enable the creation of an entirely new generation of applications.

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