

Carnegie Mellon University

# ENGINEERING

Carnegie Institute of Technology • Winter 11/12



## Nanotechnology

New technologies that will transform our lives

## Priorities Drive Action



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### The College of Engineering operates from a position of strength.

Our graduate and undergraduate programs are ranked top ten by *U.S. News and World Report*, and the *London Times Higher Education* places CIT among the top engineering schools in the world. More than 3,330 students are enrolled in CIT, making it Carnegie Mellon's largest college. Approximately 27% percent of the master's and 42% of the doctorate degrees awarded at CMU are in engineering. Graduate students boost our research capacity, and CIT's sponsored research budget has grown to \$80 million.

We are strong because we strategically choose our priorities, like the Bio, Energy and Nanotechnology Building that we hope to break ground for later this year. Representing CIT's first new building in more than 15 years, it will become a major research hub. The 100,000 square-foot structure will house the Biomedical Engineering Department, the Carnegie Mellon Energy Futures Institute and state-of-the-art nanofabrication facilities—all of which signify areas of strategic focus for the college. The building will enable CIT to leverage its expertise in multidisciplinary research and deliver breakthroughs that have made CIT respected worldwide.

Other endeavors that broaden CIT's global reputation include our international education programs. This fall we are launching a master's degree program in information technology in Rwanda. This program is especially exciting because we are the first major U.S. university to offer graduate education in Rwanda, a country poised to become East Africa's technology leader. (See page 19 for more on Carnegie Mellon in Rwanda.) In another pioneering effort, CMU has partnered with Sun Yat-sen University in China to offer graduate programs in electrical and computer engineering beginning in 2013. As this venture evolves, we will provide you with updates.

We know that industry and government leaders both in the U.S. and abroad look to CIT for innovations in education and research. The Bio, Energy and Nanotechnology Building will enable faculty and students to work side by side as they develop knowledge and technologies that will transform the world as well as Carnegie Mellon. Solving problems and improving the lives of people worldwide is what drives CIT to forge new frontiers in engineering.

*Sincerely,*  
**Dean Pradeep K. Khosla**



### Obama Launches Manufacturing Partnership from CMU

President Barack Obama launched the Advanced Manufacturing Partnership (AMP) from Carnegie Mellon University on June 24, 2011. The AMP is a national effort that brings together industry, universities and government to invest in emerging technologies, create sustainable new businesses and enhance U.S. competitiveness. AMP is made up of what the President called some of the "most advanced engineering universities, like Carnegie Mellon, Georgia Tech, Stanford, Berkeley, Michigan and innovative manufacturers, from Johnson & Johnson to Honeywell, Stryker to Allegheny Technologies."

Carnegie Mellon was privileged to serve as the venue for this milestone announcement, which highlights investment in fields such as information technology, biotechnology and nanotechnology, all areas of strategic focus in the College of Engineering.

**Photo: President Barack Obama and Dean Pradeep K. Khosla at the Carnegie Mellon National Robotics Engineering Center**



## New Bio, Energy, Nano Building Will Transform CMU

CIT's success is due in part to its collaborative culture. We work across engineering disciplines to tackle complex technical problems and drive innovation. To ensure that CIT remains one of the world's top engineering schools, the university has committed to build a new biomedical engineering, energy and nanotechnology facility to provide the necessary infrastructure for exciting discoveries and unparalleled educational opportunities.

Representing a new focal point for CIT, the 100,000 sq. ft. building will house a state-of-the-art nanofabrication facility, the Biomedical Engineering Department and CMU's Energy Futures Institute. An estimated 200 faculty members and students will be based in the building, whose design and location will foster collaboration. Throughout the structure, there will be shared research labs, and the building itself will be physically connected to other engineering and computer science buildings on campus—Hamerschlag, Wean and Roberts Halls, creating a sense of working “under one roof.” Located at one end of the Mall and overlooking Panther Hollow, the building will transform CMU physically and symbolically by uniting research and education, while also creating a vibrant center for campus life. We hope to start construction in 2012, with completion in 2014. —CMU

