

UNIVERSITY OF PITTSBURGH

SWANSON school of
engineering

Gerald D. Holder
U.S. Steel Dean of Engineering



Just two months ago, the University of Pittsburgh announced the renaming of its engineering school to the Swanson School of Engineering, in recognition of the largest individual donor in the University's 220-year history. John A. Swanson, founder of Canonsburg-based ANSYS, Inc., and a 1966 Ph.D. graduate of the school, would receive the honor in recognition for more than \$41.3 million in support, all of which has been committed during the course of the current capital campaign. For Gerald D. Holder, the U.S. Steel Dean of Engineering at Pitt, the historic announcement was another highlight in a string of accomplishments that has marked his tenure as the ninth dean of the school. Holder has served as dean since 1996, but has been with Pitt for 27 years, and has been instrumental in leading the engineering school's advance into the nation's top engineering programs.

Following the completion of his PhD at the University of Michigan in 1976, and a three-year role on the faculty at Columbia University, Holder joined the chemical engineering faculty at Pitt. He was appointed chairman of the department in 1987, where he served until becoming dean. A few years after being appointed dean, U.S. Steel endowed a permanent chair for the dean's position, resulting in the U.S. Steel Dean of Engineering.

During his time at Pitt, he has received awards for his research and teaching, and has also worked for, or consulted with, ExxonMobil, General Motors, Gulf Oil, Amoco, Petrobras, Arco, Norsk Hydro, Allied Chemical, Alcoa, and many other corporations. He has served on more than 20 national panels and committees for the National Science Foundation, the Department of Energy, the American Institute of Chemical Engineering, and the American Chemical Society, as well as the boards of several corporations.

Holder is recognized throughout the world as one of the leading authorities on the thermodynamics properties and phase behavior of clathrate hydrates of light gases commonly known as gas hydrates. He currently serves on a Congressional Advisory Panel on Methane Hydrates, whose purpose is to advise Congress on the potential of gas hydrates as a future energy source.

The school's accomplishments during Dean Holder's tenure are unprecedented and include:

Enrollment & Student Quality... Both the overall enrollment and the academic quality of students coming to the Swanson School have risen dramatically as it is now among the top choices for the best students throughout the U.S. In 1995, the year before he became dean, the school received a total of 752 applications for freshman admission. For the current year, that total reached 2,245. More than 35 percent of applications this year also came from outside Pennsylvania, demonstrating the school's growing national reputation. This year's incoming freshman class hit a record high both in size and quality. More than 450 freshman enrolled this year, and the average SAT for the class is 1313, while 54 percent graduated in the top 10 percent of their high school class. In 1996, the average SAT was 1195 and just 32 percent graduated in the top 10 percent of their high school class.

Perhaps the best example of Dean Holder's impact on student quality was the naming in fall 2006 of the school's first Rhodes Scholar, Daniel Armanios. Of the 32 Rhodes Scholars named that year, Daniel was the only engineering undergraduate among them. He was also one of 20 students named

to the 2007 All-USA College Academic Team by *USA Today*. And it is important to note Daniel is from Atlanta, and his father is an engineering professor at Georgia Tech, yet he chose to come to Pitt.

Faculty Growth & Accomplishments... The caliber of new faculty coming to the Swanson School is significantly different from a decade ago, with faculty coming from elite engineering programs including MIT, Northwestern, Michigan, UC Berkeley, and UCLA, as well as prominent national laboratories, including NASA's Jet Propulsion Lab in Pasadena. Senior faculty are also gaining more frequent national recognition for their research accomplishments. As an example, last year two bioengineering faculty members, Michael Sacks and Bill Wagner, were named to the *Scientific American 50*, an annual ranking of the nation's most prominent research scientists. Also, Anna Balazs, a professor in chemical engineering, published two articles in the same month in the premier journal, *Science* (It is a considerable accomplishment to have just one article appear in this publication). The overall volume of faculty research activity during Dean Holder's tenure also illustrates his commitment to advancing the boundaries of knowledge in this field. In 1996, total research expenditures (generated by externally funded sources including corporations and government sources such as NSF, NIH, Dept. of Defense, etc.) has grown from less than \$20 million to more than \$55 million.

Investments in Facilities... Engineering education is a highly capital-intensive endeavor, requiring the latest laboratory equipment and facilities, along with the best instructional technologies. The school's home, Benedum Hall, was designed in the late 1960s and opened in 1971. During his tenure, Holder has raised funds to upgrade many spaces throughout the building. Now the school has begun an entire "Transformation Plan" to completely renovate Benedum Hall and expand its facilities through the construction of a new three-story building. Renovation work begins later this spring, and groundbreaking for the new Mascaro Sustainability Initiative building will take place in February. The entire project, which is expected to approach \$100 million, will result in world-class instructional and research facilities throughout the Swanson School, and allow for continued growth in student enrollment and faculty size.

Alumni & Corporate Engagement... No dean in the school's history has made a greater commitment to engaging alumni and corporate partners than Gerald Holder. Numerous research partnerships which benefit western Pennsylvania companies can be highlighted throughout Dean Holder's tenure. The latest is a new *Power & Energy Initiative*, which is providing new courses and certificate programs in critical areas to local companies including Westinghouse, First Energy, Consol, Allegheny Energy, and others.

Dean Holder's commitment to strengthening the school's outreach efforts has also yielded previously unimaginable levels of philanthropic support. In addition to John Swanson's generosity, the school successfully reached a \$100 million campaign goal in 2007, which has since been raised to \$175 million as part of Pitt's \$2 billion campaign, *Building our Future Together*. During the past decade, the school has received more than \$90.4 million in outright cash support. By comparison, the total during the prior decade was just \$18.6 million. The Swanson School's overall endowment has grown to more than \$98 million, up from \$48 million in 2000, and today, the school is able to offer more scholarship and fellowship support to its students than at any time in its history.