LEADING ENGINEER ELECTED INTO NATIONAL ACADEMY OF SCIENCES

M. Granger Morgan, University Professor and head of the department of Engineering and Public Policy, has been elected into the National Academy of Sciences (NAS). Annually, the NAS elects a small number of new members who are "distinguished scholars engaged in scientific and engineering research." The NAS was originally established by an act of Congress in 1863. Through its executive arm, the National Research Council, it provides advice to the federal government on matters of science and technology.

Serving for 30 years as the head of EPP, the department that tackles complex problems in which technology and policy issues intertwine, Morgan has acquired broad expertise on a variety of issues in technology and public policy. His current research explores scientific uncertainty, especially concerning climate change, the electricity system, and the effects uncertainty bears on public policy. Communication plays an important role in his work in that people need information that will allow them to make informed decisions about the environment and future energy needs.

"The work I have been doing on describing and dealing with uncertainty in environmental science, technology, and policy is highly interdisciplinary in nature. I am delighted that the NAS has recognized its contribution," said Morgan.

Throughout his career, Morgan’s work has delved into topics ranging from the future of energy systems, especially electric power, to the health and environmental impacts of these systems, security aspects of engineered civil systems, and radio interference on commercial airliners.

For more than 10 years, Morgan, along with other Carnegie Mellon faculty, has studied the impacts of climate change. He is the director of the university’s Climate Decision Making Center, which is funded by the National Science Foundation, and he co-directs the Carnegie Mellon Electricity Industry Center, where he and others study the problems associated with distributed resources, carbon management, and technology research that supports clean energy. Active in a number of prestigious organizations, he is the chair of the Environmental Protection Agency’s Science Advisory Board.

USHERING ETHANOL INTO PENNSYLVANIA

Amid great fanfare—there was a bagpiper, free hot dogs, and lots of giveaways—General Motors (GM) showcased its new ethanol (E85) vehicles at Carnegie Mellon on October 9, 2007. The event was part of GM’s fall kickoff for their Fuel for Thought Tour. Pittsburgh was the first stop on the national tour, and GM brought cars, trucks, and energy experts to Carnegie Mellon because of our alternative fuel research.

While the vehicles were displayed, GM personnel were on hand to answer questions on topics ranging from local accessibility of ethanol to engine performance of Flexfuel vehicles.

A biofuels forum was also held in Porter Hall, and representatives from Carnegie Mellon, GM, Pittsburgh Region Clean Cities, Sheetz Inc. (a local provider of ethanol), and the Pennsylvania Department of Environmental Protection discussed issues surrounding ethanol usage. The event was hosted by the Steinbrenner Institute for Environmental Education & Research and the Green Design Institute.

Mike Griffin (left) and Dave Dzombak met with Dr. Mary Beth Stanek, Director of Environment Energy and Safety Policy at General Motors.
In Memory

PROFESSOR GARY J. POWERS
Was Revered By University Community For His Passion for Teaching

Gary J. Powers, 61, a respected educator and pioneer in risk assessment technology at Carnegie Mellon University, died July 23 at his farm in Sewickley, PA. Powers, a professor of chemical engineering, was a leading researcher in process systems engineering and an outstanding faculty member of the Carnegie Mellon community since 1974.

“This is a tremendous tragedy for Carnegie Mellon,” said Pradeep K. Khosla, dean of the College of Engineering. “Gary was uniformly respected and admired by his students and colleagues, and his seminal work involving safety analysis helped set industry standards for the past three decades.”

For more than 30 years at Carnegie Mellon, Powers used his unbridled energy to create unique laboratory experiments that emphasized process safety and environmental risk assessment for chemical engineering students.

“He used engineering fundamentals to address product and process development problems, but he did it in a way that not only inspired the interest and imagination of his students, but prompted many to become successful entrepreneurs,” said Andy Gellman, head of the Department of Chemical Engineering.

Steven Lapp (B.S., M.S., Ph.D. ChemE, 1978) credits his company’s success to Powers’ creative and inspirational guidance. “He was my advisor, my friend, and my business mentor, and I simply can’t say enough about Gary’s enthusiasm. He exuded enthusiasm for any task at hand, and he always had that wonderful smile,” said Lapp, a principal in Pittsburgh-based Design Sciences, a risk-assessment company the two formed in 1978 to assist industry giants like Alcoa and PPG in assessing process risk.

His faculty peers also laud Powers for his ability to turn problem-solving into a great educational expedition for students. “His teaching was unconventional, but his students loved it, and he was always keen to help others,” said Dennis C. Prieve, the Gulf Professor of Chemical Engineering.

Powers’ dedication to students and creative learning environments made him a frequent recipient of the department’s Run Li Award for Excellence in Education, which is given each year by the graduating senior class to an outstanding chemical engineering professor.

In 2005, Powers won the prestigious Walton-Miller Award from the American Institute of Chemical Engineers for his pioneering research in process risk assessment. As a Ph.D. student at the University of Wisconsin, in a joint effort with colleagues, he developed a program for the automatic synthesis of process flow sheets using artificial intelligence techniques. He also co-authored Process Synthesis, the first text in this area.

He received his bachelor’s degree in chemical engineering from the University of Michigan in 1967 and a doctorate in chemical engineering from the University of Wisconsin in 1971. Prior to coming to Carnegie Mellon, he served as a faculty member at the Massachusetts Institute of Technology.

Powers is survived by his wife, Susan; six children and five grandchildren; and a brother and a sister.

BY CHRISS SWANEY

An undergraduate scholarship has been established in memory of Dr. Powers. Donations may be sent to the Gary J. Powers Scholarship Fund, c/o Toni McIlrot, Department of Chemical Engineering, Carnegie Mellon University, Pittsburgh, PA 15222-5488.

WATER EXPERT POISED TO ADVANCE ENVIRONMENTAL EDUCATION AND RESEARCH

David A. Dzombak, a professor in civil and environmental engineering and a nationally recognized authority on water-related environmental issues, has been named the Walter J. Blenko Sr. Professor of Environmental Engineering. In addition to this honor, he was appointed to the post of faculty director of the Steinbrenner Institute for Environmental Education and Research (SEER).

For more than 20 years, Dzombak, who is also the associate dean of graduate and faculty affairs, has conducted research in the areas of water chemistry, water and wastewater treatment, abandoned mine drainage remediation, river and watershed restoration, and hazardous waste site remediation. His experience makes him well suited to direct the Steinbrenner Institute and worthy of the Blenko Professorship, which was previously held by Professor Francis C. McMichael, of engineering and public policy and civil and environmental engineering.

The Blenko Professorship was established in 1981 by Walter Blenko Jr. and his wife, Joy, in honor of Blenko’s father Walter Blenko Sr. The senior Blenko graduated from Carnegie Mellon in 1950 with a degree in mechanical engineering and later served as a university trustee.

“I am honored to be recognized with the Blenko chair, and I will use the visibility and resources of the chair to advance the mission of civil and environmental engineering, the College of Engineering, and Carnegie Mellon,” said Dzombak. Dzombak intends to work equally as hard in advancing the goals of the Steinbrenner Institute by promoting environmental education and collaborative research. “I will build on the initiatives of founding SEER Director Chris Hendrickson and Executive Director Deb Lange, who got the Institute off to a good start since operations commenced in 2004,” he said. During the past three years, SEER has provided more than $250,000 to support Carnegie Mellon research and educational activities.