

SOE Alumni

UConn Honors Engineering Alumnus John Krenicki

Engineering alumnus John Krenicki, Jr. (B.S.E. Mechanical Eng. '84) was presented an honorary Doctor of Science degree from the University of Connecticut during the May 2007 commencement ceremonies. UConn President Philip Austin presented the honorary degree, lauding Mr. Krenicki for his impressive career accomplishments and international recognition as one of the nation's top corporate strategists. During his 23-year career with General Electric, Mr. Krenicki has served as CEO of four major GE units.

As President and CEO of GE Energy, Mr. Krenicki oversees a world-leading supplier of technology, products and services to the energy industry. "GE technology supports about 1/3 of the world's electricity," said Mr. Krenicki. "GE leads in many areas such as wind energy, with \$4 billion in revenues in



wind power yearly. We manufacture wind turbines, which are installed on location at wind farms mostly in California, Texas, Colorado and other western states. We're also involved in solar, but it's more expensive and has more materials science hurdles that must be countered before it can expand beyond distributed power applications. GE Energy is also involved in nuclear and in coal gasification and carbon sequestration. For environmental reasons, nuclear energy ultimately may prove crucial to the nation's future. Sustainable energy fits our economic and environmental commitments, and today's customers are willing to pay a little more for cleaner energy, so a diverse energy mix makes good economic sense."

This year, Mr. Krenicki and his wife, Donna (Samson; B.A., Fine Arts, '84) established scholarships in the schools of Engineering and Fine Arts. The *Paul Krenicki Endowed Scholars in Sustainable Energy* scholarship will support an undergraduate or graduate engineering student whose interests lie in clean energy. The scholarship is

named in honor of Mr. Krenicki's younger brother. "Paul was very curious and always interested in science and technology. Sadly, he died of cancer while in college and never had the opportunity to pursue his dreams."

During his multifaceted career, Mr. Krenicki has worn many GE executive hats. He was the CEO of GE-Bayer Silicones (a GE joint venture) in Erkarth, Germany, from 1997-99. He was then named a GE Company Officer and became a Vice President and General Manager of the Americas for GE Lighting. Mr. Krenicki was Vice President and General Manager of GE Superabrasives in Worthington, OH, before being promoted to President and CEO of GE Transportation Systems in June 2000. In that role, he staged the unit's turnaround from a cyclical downturn that saw sales of freight and passenger locomotives drop by half in just two years. In early 2003, he was named a Senior Vice President of GE and President and CEO of GE Plastics. A year later, the merger between GE Plastics, GE Silicones and GE Quartz resulted in formation of GE Advanced Materials, over which he presided as President and CEO until July 2005.

Mr. Krenicki's training as an engineer provided an important platform for his career. "Engineering is a great foundation—for business, medical school, law, anything. Being an engineer is like passing through the tollbooth fully prepared." Looking back on his own varied career, he advised students to go with the flow, don't plan too much, and be open to change.

He has been a passionate advocate for diversity in the engineering workforce, and in 2005, GE established a \$500,000 gift to the School of Engineering for creation of the GE Advanced Materials Endowed Scholar Program Fund, which focuses particularly on African American engineering students at UConn. In 2000, Mr. Krenicki received the School of Engineering's Distinguished Engineering Alumni Award, and in 2003 he was inducted as a founding fellow of the Academy of Distinguished Engineers. He serves on the Advisory Board of the School of Engineering.

Raytheon Partners with UConn for Advanced Materials

An interdisciplinary faculty team received a \$1.47 million subcontract from defense giant Raytheon Company to assist in the development of engineered nanocomposites for optical applications. The project is being funded by the Defense Advanced Research Projects Agency (DARPA) and managed by the Office of Naval Research (ONR).

The project team includes principal investigator Eric Jordan, a professor of mechanical engineering (ME), and deputy manager Maurice Gell, a research scientist affiliated with the Chemical, Materials & Biomolecular Engineering department (CMBE). Critical tasks will be overseen by Baki Cetegen, professor and department Head of ME, and Mark Aindow, professor of CMBE. Partnering with the UConn-led, multi-institutional team are Inframat Corporation of Farmington, CT and researchers from MIT and the University of Michigan. Raytheon has subcontracted other portions of its larger DARPA contract to Rutgers University and the University of California - Davis.

The UConn team will seek to develop a new ceramic material that has the necessary optical properties as well as excellent mechanical and physical properties. These requirements greatly limit the choice of potential materials systems, according to Dr. Jordan. "To achieve optical transparency, it is necessary for the material to be fully dense and free of light-scattering defects such as micro-pores and cracks. Accordingly, the materials to be made are at or beyond the cutting edge of ceramics processing," he said.

The UConn team was chosen in large measure because of a unique new ceramic processing method it pioneered in partnership with Inframat Corporation, called Solution Precursor Plasma Spray

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