Big questions about rebuilding New Orleans
Kimberly Link-Wills Alumni Association

Joseph Hughes chairs the School of Civil and Environmental Engineering at Georgia Tech and serves on the U.S. Environmental Protection Agency’s environmental engineering advisory committee. He toured the hurricane-ravaged Gulf Coast with President Wayne Clough in November, and now is helping coordinate a conference that will address the future of New Orleans.

What is Georgia Tech’s role in the rebuilding of New Orleans?
We’re at the stage right now in the discussion where there are real questions about whether we should rebuild or what we should rebuild. Clearly, the city will be forever changed. We were brought in initially — President Clough, myself and others — to engage in a discussion from the civil engineering perspective. What we realized is this is a problem that goes far beyond infrastructure.

We’ve got members of the faculty who are much more engaged than I am. We’ve got a growing number of projects that our faculty are supporting. Coastal disasters are something that Georgia needs to worry about — a storm like Katrina could just as easily hit Savannah.

How will you proceed?
A proposal has been funded from the United Engineering Foundation for Georgia Tech and our partner universities — Tulane University, the University of New Orleans and Louisiana State University — and in partnership with the American Society of Civil Engineers to have a forum on the subject of rebuilding New Orleans. Our goal is to look forward and not to look to the past and really explore what it would mean to protect New Orleans and the region.

We’re proposing to do a scenario analysis that would allow us to consider anything from doing nothing to building the most incredible infrastructure project the United States has ever seen. What I think most people believe is that it will be somewhere in the middle.

Will the forum address issues outside engineering?
The human component of this is extremely important. We could build anything hypothetically, but what we really want to do is build things for the people who will benefit from them. What is it that’s going to get people, particularly businesses, to reestablish operations?

We are not the only people who are trying to do this. But we do think we’re taking a unique approach to it and have the capacity to make some contributions.

What kinds of contributions?
There will probably be various types of documents to come from it, but we’re trying to use an innovative way to disseminate our information. It’s going to be Web based … something that’s going to be available globally. We have the potential to develop a warehouse of usable information.
To test emergency preparedness and communications operation

What: Disaster response drill
Where: Georgia Tech Police Department, along Hemphill Avenue
When: May 18 9:30 - 11:30 a.m.
Why: To test emergency preparedness and communications operation

For more information: Georgia Tech Police Department www.police.gatech.edu

The demonstration is intended to test the techniques and technologies that support emergency response in an urban setting. The breadth of the exercise will run the gamut from the conventional, such as responding to a chemical spill, to more atypical events, such as relocating an emergency operations center while maintaining communications control.

For more information: www.whistle.gatech.edu

"QUOTE-END"
University System chancellor makes first campus visit

University System of Georgia Chancellor Erroll Davis paid his first official visit to Georgia Tech last week. Over the course of the day, he was introduced to members of the administration, faculty and alumni, while touring many of Tech’s facilities.

Since his appointment in February, he has been traveling to each campus within the 35-member System. Davis said he was very impressed with Tech’s level of commitment to the training and development of its people, which he called “a model for the rest of the System.”

Davis also stated his intention to continue visiting System institutions during his tenure, in an effort to better understand how USG policies are being implemented.

GTRI to collaborate on new law enforcement vehicle

Officials from Georgia Tech and Carbon Motors Corporation—a new U.S. automaker that has announced plans to locate in Georgia—have taken the first step toward a collaboration that would develop the world’s first vehicle built expressly for law enforcement agencies.

The company, which will market its innovative “purpose-built” vehicle directly to customers, also plans to take advantage of the U.S. automobile manufacturing as a lean and integrated organization. Last month, officials from Georgia Tech and Carbon Motors signed a memorandum of understanding setting forth their intent to establish research, education and financial arrangements.

“In this era of enhanced homeland security concerns, law enforcement first responders require the most appropriate specialized equipment delivered to them in the most efficient way possible so our women and men in uniform can patrol our communities in a more effective and safe manner,” said William Santana Li, chairman and CEO of Carbon Motors.

To make that vision a reality, Carbon Motors plans to take advantage of Georgia Tech’s expertise in a broad range of areas. Initially, the company’s designers and engineers plan to tap Georgia Tech’s expertise in the ergonomic design of aircraft cockpits and the integration of highly complex electronic and electrical systems.

“Police vehicles today have a complex set of systems that need to be ergonomically configured to ensure proper flow of information to officers, especially when they are in pursuit or in stressful situations,” said Li. “What we essentially need is comparable to the cockpit of a helicopter, which Georgia Tech has experience in designing. That is expertise not normally found in the automotive industry.”

Beyond the human factors interface expertise, the company also intends to take advantage of Georgia Tech experience with integrating complex electronic systems—expertise also developed in decades of work done for military agencies.

“The amount of electronic and electrical equipment that will be in this vehicle is an order of magnitude beyond what you’d find in any existing automobile,” Li noted.

The Georgia Tech Research Institute (GTRI) plans to work with Carbon Motors on those key tasks.

“Large-scale systems engineering is an area where GTRI has a proven track record of success,” said GTRI Director Stephen Cross. “We recently designed and built a concept military fighting vehicle to keep soldiers safer on the battlefield. We look forward to working with Carbon Motors to develop new vehicles that will make first responders safer on the streets.”

Beyond human factors and systems integration, the company is also exploring Georgia Tech’s expertise in other areas, including materials selection, logistics, information technology, manufacturing product life cycle management, sensor technology, aerodynamics, decision making algorithms and process engineering.

“This project is a prime example of how forward-thinking companies like Carbon Motors can collaborate with Georgia Tech to bring innovative products to the market and to transform a vital sector of the U.S. economy,” said Wayne Hodges, vice provost in the Georgia Tech Office of Economic Development and Technology Ventures.

For Georgia Tech, the collaboration will not only provide an opportunity to impact industry and help create jobs in Georgia, but it will also give students an opportunity to work on real-world projects, Hodges noted.

Based on two years of market research, Carbon Motors identified what law enforcement agencies needed in a vehicle built expressly for their use. Current police vehicles are based on retail passenger vehicles that are modified by a highly fragmented set of local suppliers with little standardization or integration.

Among the improvements will be significantly enhanced total vehicle performance, improved fuel economy, enhanced safety and a reduction in total costs.

 Former Tech co-op director honored as pioneer

The late James Wohlford, former director of Georgia Tech’s co-op program, was named to the Cooperative Education Hall of Honor at the University of Cincinnati last month. Wohlford was one of seven co-op pioneers honored at UC’s Centennial Celebration of Co-op. His name will be engraved into a memorial plaque in a peaceful garden at UC honoring the cooperative education. UC began the country’s first cooperative education program in 1908.

Wohlford served as director of Tech’s program for more than 30 years. He graduated from Tech in 1941 with a degree in electrical engineering. After serving in the army, Wohlford returned to Tech in 1947 to teach. The next year, he became acting director of the Co-Op Division and was named director in 1951.

He retired from Tech in 1981 and was named director emeritus of Tech’s Co-op Division. He died in 2000.

CEISMC Gazette gives students a window into STEM careers

Through its more than 20 programs, Georgia Tech’s Center for Education Integrating Science, Mathematics and Computing works with teachers and school districts to improve awareness and instruction of math, science and technology in K-12 classrooms and excite students about the disciplines.

While researching Georgia high schools, CEISMC Web author Andrew Nerr found that while some schools do have solid engineering programs, the majority do not. “How do kids even know that they might be interested in exploring the opportunities at Georgia Tech when there’s little that they experience in their daily lives that is directly relevant to the research that is conducted here?” he asked.

In February 2005, CEISMC launched an online newsletter. Published monthly during the academic year, the CEISMC Gazette profiles students, professors, administrators and alumni of Georgia Tech doing exciting and innovative things in math, science and technology. Many of the articles are accompanied by links to Web sites for more information and even lesson plans for teachers. The Gazette currently has about 1,000 e-mail subscribers, predominantly Georgia teachers.

To read the latest issue, visit www.ceismc.gatech.edu/gazette.