

IMAGE COURTESY OF JOE HUGHES

“We could do just a little bit, and it will have a huge impact. I don't think it will be that hard to restore these mangroves. If we can restore their fishery, it will bring back a way of life that's been gone for 30 years.”

— Kevin Caravati
senior research scientist, Georgia Tech Research Institute, on a project to restore mangrove forests in the struggling African nation of Angola

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“We could generate 100 percent security simply by locking the 'front doors' of ports, but obviously that would have drastic consequences to U.S. commerce.”

— Page Siplon
director of the Maritime Logistics Innovation Center in Savannah, an academic, government and private agency partnership developing new technologies and adapting existing ones for the safe, efficient movement of freight through the nation's seaports

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PHOTO BY GARY MEER

“Generally, most feedback from a computer is visual. But people who are visually impaired need other types of feedback to supplement this. For example, a haptic mouse provides vibratory cues when a user moves closer to a target on the screen. Or the user might hear a sound and feel a vibration as they move the cursor closer to a file.”

— Julie Jacko
associate professor of industrial and systems engineering, who is leading development of software that measures the capabilities of computer users with low vision and automatically customizes computer graphical user interfaces, such as file and folder icons

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“Many sensor technologies under development are becoming reliable, versatile, inexpensive and presumptive — they can help first responders make a reasonable assessment.”

— Dan Campbell
senior research scientist, Georgia Tech Research Institute, on the development of sensing technologies that may improve homeland security

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“Once they know a certain film exists, they want to preserve it. If we can catalog it all now, even if it's something on film, it might stand a chance of lasting a while. If it's not cataloged, and nobody knows it's there, it will just deteriorate and be gone forever.”

— Ed Price
director of Georgia Tech's Interactive Media Technology Center, on creating an online moving images archive in cooperation with the Academy of Motion Picture Arts and Sciences

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IMAGE COURTESY ACADEMY OF MOTION PICTURE ARTS AND SCIENCES

“You can provide cues through your sense of touch that you're getting close to a water, gas, electric or communications line by feeling resistance or whatever other kind of response you want to code into the control mechanism.”

— Wayne J. Book
professor of mechanical engineering, who is exploring applications for the emerging field of haptics, the “feel” associated with operating a mechanical device, such as a backhoe

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PHOTO BY GARY MEEK

“This technique extends dip pen nanolithography (DPN) into new sets of materials and provides a higher degree of control. We also believe this technique will extend DPN into new environments, such as the vacuum environments that would be more compatible with conventional semiconductor device fabrication.”

— Lloyd J. Whitman
head of the Surface Nanoscience and Sensor Technology Section at the Naval Research Laboratory, describing the impact of the collaborative development with Georgia Tech scientists of thermal DPN, which uses atomic force microscopy probes as pens to produce nanometer-scale patterns

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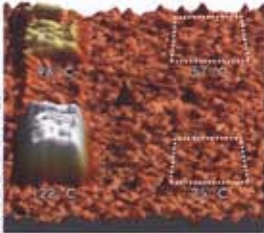


IMAGE BY J. ABENAVI



PHOTO BY GARY MEEK

“The whole point of solving the traveling salesman problem (TSP) is to find solutions to real-world applications. The TSP serves as a platform for discovering new algorithmic ideas.”

— William Cook
professor of industrial and systems engineering, explaining the motivation for solving a complex mathematical puzzle called the traveling salesman problem, which has applications in routing delivery trucks, among other things

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