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CIT TechBytes

Carnegie Mellon

COLLEGE OF ENGINEERING

How can we improve efficiency of brain surgery?

Matt Oberdier, a Ph.D. candidate in biomedical engineering, James Burgess, a neurosurgeon and adjunct lecturer and James Antaki, an associate professor in biomedical engineering, Carnegie Mellon

Carnegie Mellon University researchers are developing a new hydrosurgery system to help physicians better manage excessive bleeding during surgery. The device will house a clear, hermetically sealed dome through which instruments may be passed and a special pump to apply fluid pressure and monitor the flow to the surgical area. The new tool will save time and has the potential to benefit more than 35 million patients.

Contact: James F. Antaki, 412-268-9857

How can we improve cybersecurity for today's school children?

Dena Haritos Tsamitis, director of the Information Networking Institute, Carnegie Mellon

Carnegie Mellon's Information Networking Institute and CyLab received a \$20,000 grant from the Verizon Foundation for a cyberawareness outreach program that will design, create and deliver targeted educational workshops and materials that raise cyberawareness and promote safe and responsible computing in the Point Breeze St. Bede community.

Contact: Dena Haritos Tsamitis, 412-268-3297

What is the real risk of driving a recalled Toyota?

Paul Fischbeck, a professor in engineering and public policy and social and decision sciences

Carnegie Mellon's Paul Fischbeck calculated the risk of driving a recalled Toyota and found that the accelerator problem increases the driving risk by only 2 percent. His risk analysis, for example, found that walking a mile is 19 times or 1,900 percent more dangerous than driving a mile in a recalled Toyota. And driving while using a cell phone would increase the risk much more than the chance of having a stuck accelerator.

Contact: Paul Fischbeck, 412-268-3240

How can we help preserve scarce water resources?

Chris Hendrickson, professor of civil and environmental engineering, Carnegie Mellon

Chris Hendrickson recently released a study that gives both consumers and industry a way to look at how to use water more efficiently and how we can start generating new ideas and technology for better management. The study found that it takes almost 270 gallons of water to produce \$1 worth of sugar; 140 gallons to make \$1 worth of milk and 200 gallons of water to make \$1 worth of cat and dog food.

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