



**News Categories**

- [Latest News](#)
- [Arts and Music](#)
- [Business](#)
- [Education](#)
- [General University News](#)
- [Humanities](#)
- [Public Service](#)
- [Research](#)
- [Science](#)
- [Social Science](#)
- [UNT Dallas Campus](#)
- [TAMS](#)
- [UNT System](#)

**UNT Links**

- [Working with the media](#)
- [UNT Home](#)
- [UNT Dallas Campus](#)
- [Quick facts](#)
- [UNT fact book](#)
- [President's site](#)
- [E-reports](#)
- [UNT Event Calendar](#)
- [Campus Map](#)
- [Athletics](#)
- [North Texan Online](#)
- [UNT Research Magazine](#)
- [Inhouse](#)

August 20, 2009

[Printable version](#)

**UNT researcher works to make energy-efficient chips**

DENTON (UNT), Texas -- In five years, charging your laptop or cell phone may take seconds and last for weeks before needing recharged.

**Saraju Mohanty**, an assistant professor in computer science and engineering at the University of North Texas, is working to make the production and operation of electronic chips more energy efficient, which would increase battery life, reduce power consumption and lead to lower costs for consumers.

"This could make electronics more affordable, so they can reach more people and more diverse communities," Mohanty said. "It could also save a lot of energy during production and operation, which would cut our carbon emissions."



**Saraju Mohanty**, assistant professor of computer science and engineering.

Mohanty has been instrumental in generating about \$1 million in research funding, including a new, three-year grant from the [National Science Foundation](#) for about \$250,000. He is working with Elias Kougianos, an assistant professor in engineering technology, on the grant, which began Aug. 1. This is Mohanty's second NSF grant.

The goals of the research are to reduce power consumption of electronics by 70 to 80 percent within the next five years and to improve the manufacturing yield by 30 percent. The manufacturing yield refers to the number of viable chips produced in each batch versus the number that must be discarded or sold at a lesser price because of defects.

Both areas could help bring down the cost of electronics, including digital cameras and radios, PDA devices, cell phones and laptops.

Researchers, along with graduate students, will use state-of-the-art computing facilities in the [VLSI Design and CAD Laboratory](#), which Mohanty directs. The facilities at [Discovery Park](#) include high-end servers, several terabytes of storage and hardware simulation tools funded by the National Science Foundation to conduct computer-aided design research into low-power, high-performance chips.

UNT News Service Phone Number: (940) 565-2108  
 Contact: Sarah Bahari (940) 565-4835  
 Email: [sarah.bahari@unt.edu](mailto:sarah.bahari@unt.edu)



**Latest News**

[U.S. News & World Report experts recognize UNT advances](#)

The University of North Texas has been designated as one of the top national universities because of its innovative changes in the 2010.



[UNT researcher named prestigious fellow of scientific society](#)

Wes Borden, the Robert A. Welch Professor of Chemistry, was named to the inaugural class of Fellows of the American Chemical Society, the world's largest scientific