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The *UNT Insider*, a monthly e-newsletter, connects UNT alumni and others to the university by letting you hear directly from President Gretchen M. Bataille.

The *UNT Insider* is brought to you by the Office of the President in conjunction with the Division of University Relations, Communications and Marketing. Please send any comments or suggestions to president@unt.edu.

UNT researcher works to make energy-efficient chips

From a UNT News Service press release

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 UNT, 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 says. "It could also save a lot of energy during production and operation, which would cut our carbon emissions."

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 was 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 NSF to conduct computer-aided design research into low-power, high-performance chips.

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