

THE UNIVERSITY OF MISSISSIPPI

Woods Order • Department of Civil Engineering

Ole Miss CIVIL ENGINEER

FALL 2007 • NEWS FROM THE DEPARTMENT OF CIVIL ENGINEERING

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Chair's Message



Dear Alumni and Friends of Ole Miss Civil Engineering:
I welcome you to this redesigned issue of the civil engineering e-newsletter. Dr. Alex Cheng, the department chair, is on sabbatical during the fall 2007 semester. We are pleased to report that we have had a wonderful year with a large graduating class in May and several new research grants awarded to the civil engineering faculty. Our alumni have donated generously to renovate and upgrade the computer graphics laboratory. I invite you to read about these noteworthy accomplishments and a new faculty member in this e-newsletter.

Sincerely,

Waheed Uddin, Ph.D., P.E.

Professor and Acting Chair

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Homeland security grant awarded to faculty

Civil engineering faculty members at The University of Mississippi have received \$780,000 to conduct homeland security research.

The research is being done through subcontracts awarded by the Southeast Region Research Initiative, or SERRI, of the Department of Energy's Oak Ridge National Laboratory. SERRI is a program funded by the U.S. Department of Homeland Security. The duration of the award is one year.

The project, “Nano-Particle Reinforced Composites for Critical Infrastructure Protection,” will be led by Alexander H.D. Cheng, chair and professor of civil engineering.

“This project investigates the use of recent advancements in material, structure and building technologies for the protection of critical infrastructures against terrorist threats and natural disasters,” Cheng said. “The new structural/building technologies developed from this research can be used to improve the survivability of these structures.”

Cheng said a team of four professors, a postdoctoral researcher and several graduate assistants will work together on the project. There will also be a number of subcontractors that includes the U.S. Army Corps of Engineers Research and Development Center at Vicksburg.

Cheng and Prabhakar Mantena, professor of mechanical engineering, are principal investigators for a \$1 million congressional earmark research project on the use of nano-particle reinforced composite materials to strengthen navy ships against impact and blast. Ahmed Al-Ostaz, associate professor of civil engineering, will serve as co-principal investigator. Several faculty members from other departments will also participate.

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Technology transfer grant awarded to CAIT



Waheed Uddin speaking at the ITS stakeholders' workshop in Karachi

Traffic management in Karachi, Pakistan's largest metropolitan city, stands to improve, thanks to a \$94,000 grant to the Center for Advanced Infrastructure Technology (CAIT) at The University of Mississippi. The project is one of only 13 selected from 121 applications evaluated by the Pakistan-U.S. Science and Technology Cooperative Program this year.

The research center in UM's Department of Civil Engineering has received the three-year award from the U.S. Agency for International Development (USAID) through the National Academy of Science. The grant will be used to provide technology transfer of the latest innovations in remote-sensing applications for intelligent transportation systems modeling in Karachi.

“The primary objective of this USAID project is to strengthen the partnering engineering education and research institution in Pakistan for adapting modern geospatial technologies and science models of traffic flow and air quality,” said Waheed Uddin, director of CAIT and principal investigator on the U.S. side of the

Pak-USAID project.

Uddin's summer trip to Pakistan included a four-day geographic information systems and geospatial analysis workshop at NED University as a part of workforce training. Forty-three participants, including nine women from around the country, attended the workshop. Uddin gave several invited lectures to academia and highway professionals in Karachi, Lahore and Islamabad. His trip culminated in an ITS stakeholders' workshop in Karachi on July 30th, which received media coverage. Visit <http://www.dawn.com/2007/07/31/local20.htm> for more information.

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Computer lab overhauled

The civil engineering computer graphics laboratory recently underwent a major renovation.

Improvements include new computers with flat-screen monitors, which replaced bulky CRT screens; an upgrade of the AutoCAD software; a ceiling-mounted computer projector; and new furniture. The renovation has allowed the addition of seven new seats, which brings the total number of available seats to 27.

"The computer lab is most heavily used to teach the computer graphics course for the School of Engineering and the civil engineering senior design course," said Alex Cheng, chair and professor of civil engineering. "This modernization of teaching facilities enables our students to gain skills at the forefront of national technology development."

Renovations were made possible through alumni funds provided by the Woods Order. For more information about the Woods Order, click on this link:

http://www.olemiss.edu/depts/engineering_school/alumni/woods_order.html

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Female faculty member joins civil engineering department



An assistant professor has joined the university to become the second female faculty member in the Department of Civil Engineering.

Cristiane Surbeck will be teaching Environmental Water Resources this fall. She came to The University of Mississippi from the University of California-Irvine, where she received her master's and doctoral degrees in environmental engineering.

"I decided to apply because I thought that here I'd have unique and relevant teaching and research opportunities," Surbeck said. "My research at Ole Miss will range from

Cristiane Surbeck treatment of polluted waters to characterizing sources of pollution to water bodies.”

Assistant Professor Elizabeth Ervin joined the civil engineering faculty in 2006, becoming the first female tenure-track faculty member in the department. She received her doctorate from Carnegie Mellon University.

With Surbeck and Ervin as faculty members, Iman Gohar as a half-time graduate director and Marni Kendricks as an instructor, the percentage of females in the UM civil engineering department is among the highest in the nation.

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11 students get co-op experience

Eleven civil engineering students received professional work experiences recently as part of the university’s cooperative education program, 10 of whom worked at the Mississippi Department of Transportation (MDOT).

“We have had many Ole Miss students work with us,” said Skip King, director of recruitment/safety/contracts and engineering programs for MDOT. “These include co-op students, scholarship recipients and student apprentices.”

Students who worked at MDOT are

- Derek Kendrick, a graduate scholar from Tupelo
- Will Castle, an undergraduate scholar from Winona
- Shane Hall, a junior from New Albany
- Eric Lowstuter, an intern from Oxford
- John Mark Henderson, an apprentice from Carthage
- Phillip Rogers, an undergraduate scholar from Oxford
- Leyton Proctor, an undergraduate scholar from Hollandale
- Dave Funderburk and Collins Simpson, apprentices from Senatobia
- John Barnett, an apprentice from Clinton
- Michael Frizzell, an apprentice from Grenada
- Lauren Haney, a sophomore from Sandy Hook, Miss., who was employed at Ergon, Inc.



Derek Kendrick of Tupelo (center) is a graduate scholar in the Tupelo lab of the Mississippi Department of Transportation. He was welcomed by Randy Battey (left), research engineer; Al Brantley, assistant state planning engineer; Skip King, recruiting director; John Head, assistant human resources director; and Keith Purvis, roadway design division engineer.



Leyton Proctor of Hollandale and Philip Rogers of Oxford (from right) are undergraduate scholarship recipients at the Mississippi Department of Transportation. They were welcomed by Skip King (left), recruiting director; Butch Brown, executive director; and Al Brantley, assistant state planning engineer.



Dave Funderburk (left) of Senatobia is an apprentice at the Mississippi Department of Transportation. He is welcomed by Skip King, recruitment director.



Will Castle (left) of Winona is an undergraduate scholarship recipient at the Mississippi Department of Transportation. He is welcomed by Butch Brown, executive director.