

FALL 2007

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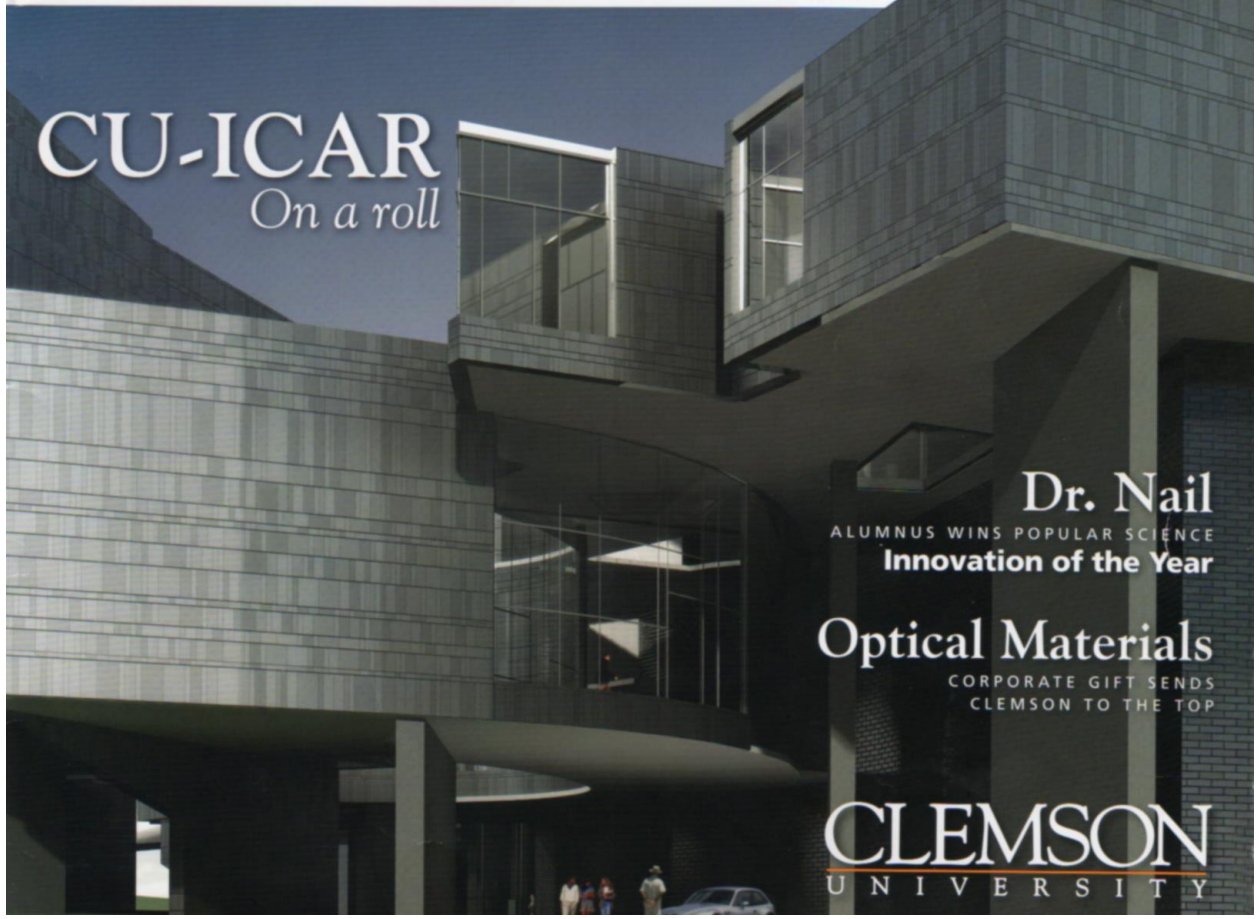
COLLEGE OF ENGINEERING AND SCIENCE

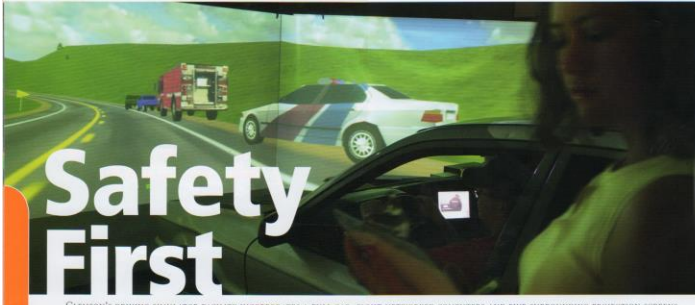
CU-ICAR
On a roll

Dr. Nail
ALUMNUS WINS POPULAR SCIENCE
Innovation of the Year

Optical Materials
CORPORATE GIFT SENDS
CLEMSON TO THE TOP

CLEMSON
UNIVERSITY





Safety First

CLEMSON'S DRIVING SIMULATOR FACILITY INCORPORATES A FULL CAR, EIGHT NETWORKED COMPUTERS AND FIVE SURROUNDING PROJECTION SCREENS.

CU-ICAR / ASRI-CEC

The statistics are sobering: traffic crashes are the leading cause of injury and death in the United States.

In its vision of becoming the premier automotive and motorsports research and educational facility in the world, the Clemson University International Center for Automotive Research (CU-ICAR) is making safety a focus.

"CU-ICAR is not just about vehicles; ultimately it's about improving vehicles to improve and save lives," says Chris Preimbel, Clemson's vice president for research and economic development.

Improving overall vehicle performance through the application of research and new knowledge generated by Clemson and its partners will undoubtedly save lives. CU-ICAR's strategy, however,

is more direct. It has established the Automotive Safety Research Institute (ASRI) as a research-based interdisciplinary initiative focused on the critical human-vehicle-road interface. The institute—in the College of Engineering and Science's civil engineering department—provides synergy for interdisciplinary research, education and public service that enhances scholarship with increased opportunities for graduate and undergraduate students.

The University did not have to go far to find the right person to head the institute. Kim Alexander, ASRI executive director and faculty member, has a lifelong passion for automotive safety. She's earned a national reputation for the University's Cruisers Program, an evidence-based K-12 life skills curriculum, which focuses on the issue of youth traffic safety. "The Cruisers

curriculum contains the most creative and innovative lesson plans for traffic safety that I've seen in this country," says Terecia Wilson, director of safety for the S.C. Department of Transportation (SCDOT).

Alexander says ASRI's goal is to bring together nationally and internationally recognized researchers, educators and practitioners in a variety of disciplines to improve the safety of the automotive transportation environment and leverage resource support through public and private funding.

"The interdisciplinary approach enables us to perform a comprehensive, systemic analysis of the human-vehicle-road system," she says. "This unique structure is addressing complex and interconnected challenges of the future of automotive transportation safety where

it's no longer possible for these issues to be solved in a single discipline or profession." ASRI is already collaborating with Clemson faculty including civil engineering, sociology, public health, psychology, marketing, mechanical engineering and industrial engineering.

Current initiatives include safety and health issues such as vehicle-highway automation and human-machine interface; emerging technologies such as rapid tire deflation and advanced steering systems and driver training and evaluation.

In addition to the on-campus collaborators, Alexander has built successful partnerships with state and federal agencies and private corporations. The institute is currently working on a research project for the SCDOT to assess road users in

South Carolina on current understanding, perceptions, attitudes and behaviors regarding key traffic control measures.

Alexander's longtime private partners are Michelin North America, Inc. and Michelin Americas Research and Development Corp., and she's enthusiastic about the potential for expanding collaboration with the company as part of the CU-ICAR team.

"Michelin is an outstanding partner," says Alexander. "Their corporate culture is very supportive of mobility safety."

"Our support of the ASRI and Cruisers programs has saved lives, and we look forward to taking our work together to a new level through the synergy of the CU-ICAR research environment," says John Tully, director of community relations for Michelin.

Michelin's Laurens Proving Grounds, where vehicles can be tested for safety and other performance features, will be

a key resource for ASRI. One creative project that has grown out of the partnership between Michelin and ASRI is "Fast Responders' Safety First." This bold new idea utilizes a team of Michelin safety experts and ASRI faculty to train and certify first responders in advanced emergency highway safety procedures.

The institute's comprehensive goals will require significant, long-term funding. In addition, Alexander plans an aggressive sponsored-research component for ASRI.

"Whether it's communication about safety issues, psychological factors in driver impairment, vehicle design or marketing safety programs, we have many opportunities for collaborative research," she says. "We are limited only by our imaginations."

ASRI will have a permanent home on the CU-ICAR campus in Greenville, which will place the institute in the center of the research and collaboration neighborhood environment. □

Petty and Clemson Drive Safety

Richard Petty Driving Experience (RPDE), in partnership with Clemson's Automotive Safety Research Institute (ASRI), is launching its new Safe Driving Program.

RPDE and Clemson will develop a unique research-based program, initially designed for high-risk drivers aged 16 to 25. It will teach safe driving skills and safety education to participate through classroom instruction and on-track experiences by placing students in hazardous driving situations in a controlled and safe environment.

Kyle Petty, a longtime advocate of driver safety for young adults, will serve as the spokesman for the initiative. He's an eight-time winner in the NASCAR Cup Series and son of seven-time NASCAR Cup Champion, racing legend Richard Petty, known simply as "The King."

ASRI, the safety research arm of the Clemson University International Center for Automotive Research, will conduct research to validate the new program. Kim Alexander, executive director of ASRI, will lead the research team and serve as Clemson's spokesman.



KIM ALEXANDER, ASRI EXECUTIVE DIRECTOR WITH RICHARD PETTY, "THE KING".