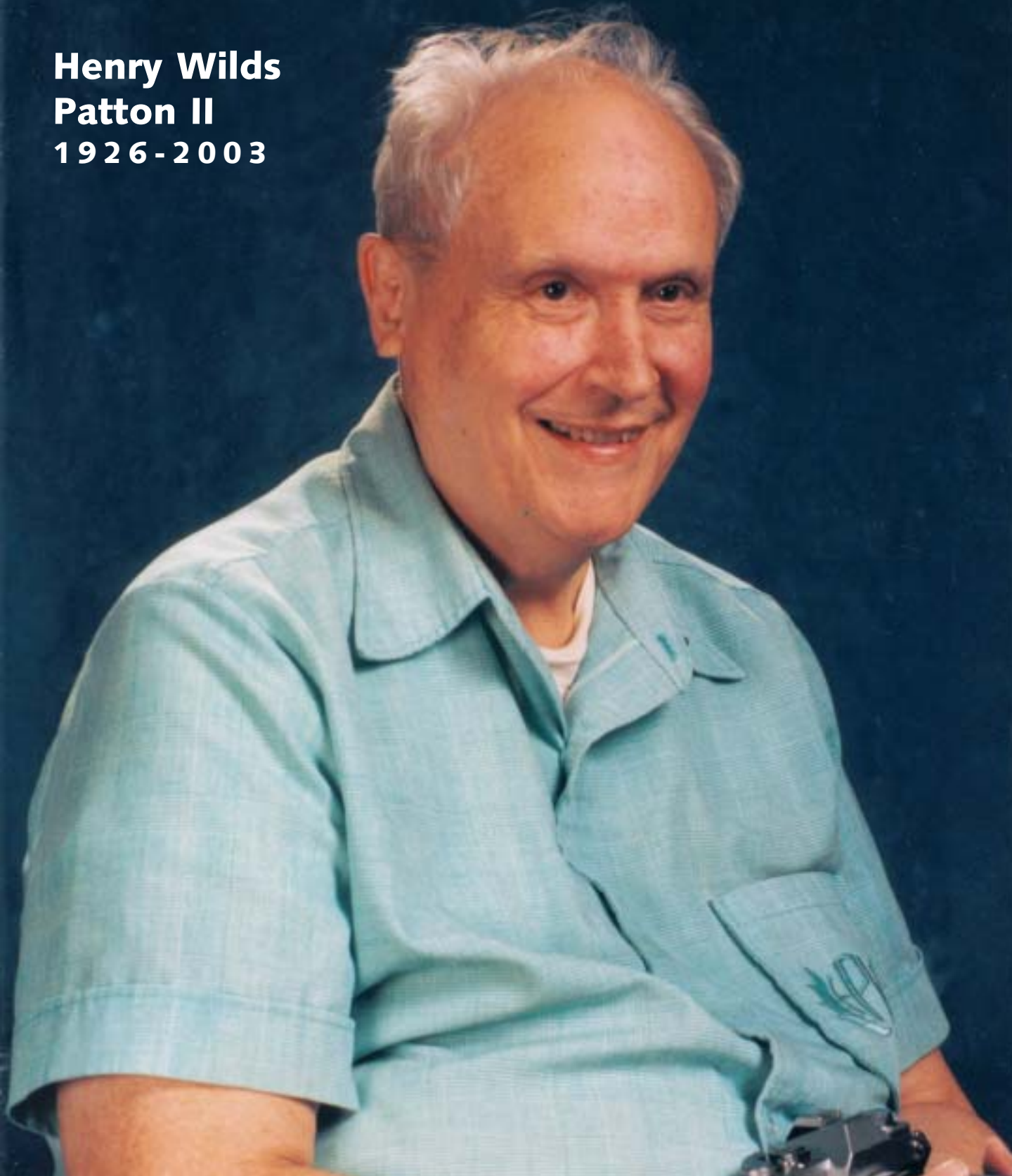


THE DEARBORN  
**Engineer**  
UNIVERSITY OF MICHIGAN-DEARBORN

SPRING 2004

**Henry Wilds  
Patton II  
1926-2003**



## LEAR DONATES BATTERY-OPERATED VEHICLE

For the second time in as many years, Lear Corporation has made a key donation to the University of Michigan–Dearborn that has the potential to improve the research and teaching capabilities within the College of Engineering and Computer Science (CECS). The initial donation, a programmable vehicle module, was joined this year by a battery-operated 1998 Ford Electric Ranger, which Lear had been using for research and development purposes. "Since Lear no longer had a use for this vehicle internally," says Dave Perkins, manager of Test Engineering at Lear, "we thought that donating it to a worthy cause would be a way to extend its usefulness."

During the past several years, executives from Lear have worked closely with the college on many levels, including its Visiting Committee and the Institute for Advanced Vehicle Systems, and have gained a strong understanding of the importance of students and faculty using up-to-date equipment in classes and research. Donating the electric vehicle to the college's Department of Electrical and Computer Engineering was an easy and practical solution for Lear.

Chris Mi, assistant professor of electrical and computer engineering, will be using the Ranger in projects and research related to alternative fuel vehicles, including powertrain modeling and design, dynamic braking, and hybridizing. Collaborating with him will be Yi Zhang, associate professor of mechanical engineering; Natarajan Narasimhamurthi, associate professor of electrical and computer engineering; and John Shen, associate professor of electrical and computer engineering.

"Our department plans to develop new strategies to control this vehicle," says Malayappan Shridhar, chair and professor of electrical and computer engineering. "We want to optimize the overall efficiency in terms of the distance traveled between battery charges. We will also examine the use of regenerative braking to improve the retention of each battery charge."

"We are very grateful to Lear for this gift," says Mi. "We believe it will greatly advance our research and provide an outstanding test platform for many



*Professors Malayappan Shridhar and Chris Mi with Dave Perkins and Mike Fawaz of Lear Corporation*

of our research projects. It will offer our students the ability to perform real-time experiments and give them hands-on experience they wouldn't otherwise have had. I believe this donation will lead to further collaboration between Lear and the college."

Although the Ranger is currently valued at approximately \$8,000, its value to the university is much higher. "We would probably never spend the \$20,000 or more needed to purchase an electric vehicle from a dealership," says Phil Snyder, the school's director of development. "And since it has only 8,000 miles on the odometer, we are getting a relatively new vehicle through this donation."

Lear feels that they have also benefited from the donation. "As a major automotive interior supplier, Lear is constantly exploring new product concepts and technologies," says Perkins. "We understand that there are no keener eyes or creative minds than those of college students, and from a marketing standpoint, they represent a very influential generation of consumers. Industry needs to tap this resource by developing relationships with local universities and colleges, and we look forward to seeing what these innovative students will develop in the area of automotive design and engineering."