

Workplace of the '90s,
pages 8-10

THE UNIVERSITY RECORD

For Faculty and Staff of The University of Michigan

Vol. 51, No. 34 June 11, 1996

\$12 million from NSF, \$10 million from industry will establish new manufacturing research center at College of Engineering

By Sally Pobjewski
News and Information Services

The University will receive \$12 million in federal funding from the National Science Foundation to create the Center for Reconfigurable Machining Systems, where researchers will develop a new type of manufacturing system with the flexibility, adaptability and productivity U.S. firms must have to compete in today's technology-driven global economy.

In addition to \$12 million in NSF funding, the center will receive \$10 million in cash and in-kind support from 31 industrial partners and \$6.2 million from the College of Engineering and Office of the Vice President for Research.

With \$28.2 million in total cash and in-kind contributions over the first five years, the center will be the largest in the University's history.

"New research advances and educational programs developed at U-M will help U.S. manufacturing firms maintain and increase their margin of technological advantage over international competitors," says President James J. Duderstadt. "In addition, the center will have a strong positive impact on our state's economy by enhancing the ability of Michigan's manufacturing industry to compete in the world marketplace."

"The successful initiation of this Engineering Research Center is the result

of an unusual level of collaboration between industry, federal government and universities," says Homer A. Neal, vice president for research. "The ERC represents a bold approach to industry-university collaboration, intended to meet the challenge of bringing knowledge from 'science' to 'market.' This NSF award and extensive industry participation will make this center a leader in extending our knowledge in engineering, business and basic science and applying it to the manufacturing process."

The center will be the only one of its kind in the country and is one of 25 NSF engineering research centers nationwide. Approximately 30 faculty members and 50 graduate and undergraduate students affiliated with the center will develop the science behind a new concept in manufacturing called reconfigurable manufacturing systems. These are designed with hardware and software modules that can be rearranged and upgraded quickly and easily to reduce new product development time and changeover time between products, according to Yoram Koren, the Paul G. Goebel Professor of Engineering. Koren will direct U-M researchers as they "develop RMS methodologies to quickly configure new automated production plants and reconfigure them to adapt to new manufacturing technologies and new products."

"Traditional manufacturing systems

incorporate new technology and new products by periodically building new production systems and discarding the old," Koren adds. "The vision of a reconfigurable system is a living factory that evolves over time as new technology and products are introduced."

"Initial work at the center will focus on machining processes for use in automotive, aerospace and heavy equipment manufacturing," says A. Galip Ulsoy, the William Clay Ford Professor of Manufacturing and center deputy director.

"In later research, we will expand RMS

principles to other manufacturing processes, such as assembly and welding."

To teach a new generation of manufacturing engineers, plant managers and machine operators how to use reconfigurable machining systems, a modular educational program will be jointly developed and tested by the Greenfield Educational Coalition in Manufacturing Engineering, the College of Engineering's Program in Manufacturing and the Tauber Manufacturing Institute—a joint

(see Establish, page 15)

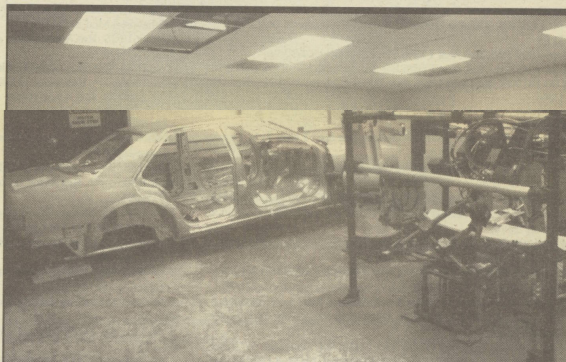


Photo by Paul Annunzi

An auto body in the S.M. Wu Manufacturing Research Center laboratory where U-M scientists study how to improve manufacturing quality in the automotive industry. Some of the researchers at the S.M. Wu lab also will be part of the U-M Center for Reconfigurable Machining Systems.

Party honors Duderstadt



Photo by Mary Jo Frank

The University community honored James J. and Anne Duderstadt at a reception in Schembechler Hall May 30. More photos and story appear on page 7 of this issue.

Workshops available to help cope with displacement, downsizing

The Medical Center Human Resources Department offers several group sessions on coping with stress and feelings related to job loss and insecurity.

■ **SOS (Skills Over Stress)** provides an opportunity to raise your awareness of how you react to stress and gain insight into the reasons you react that way. Coping strategies for managing stress will be discussed. Sessions are scheduled 2-4 p.m. today (June 11), 8:30-10 a.m. Mon. (June 17), and 2-4 p.m. June 25. Registration is required. To register or for more information, call 647-1886.

■ **Starting Your Own Business** can evaluate your potential as an independent business owner. Through a combination of comprehensive lectures, case studies and participatory workshops, the session provides information relevant to the initial planning stages of entrepreneurship. Each program is a two-day commitment. Ses-

sion I is scheduled 8 a.m.-5 p.m. Wed. (June 12) and June 19. Session II is available 8 a.m.-5 p.m. June 24 and July 9. To register (required) call the Office of Organizational Effectiveness, 647-1886 or send e-mail to J615.

■ **Support Groups.** Several factors influence how you respond to organizational change. These may include: your previous experience with downsizing, personal or professional losses that you have experienced, length of time in the organization or other support that is available to you. It is important to note that everyone responds differently. If you would like to talk about these changes and how they are affecting you, please drop in on one of the following sessions. No registration is necessary. Sessions are scheduled for 3:30-5 p.m. in Room B1C111 University Hospital and 7:30-9 a.m. June 26 in Room C106 Med Inn.