

CECS RANKS HIGH IN U.S. NEWS AND WORLD REPORT SURVEY



The College of Engineering and Computer Science placed among the country's top 25 engineering schools that do not confer doctoral degrees in this year's *U.S. News and World Report* survey of America's best colleges. In its September 16 issue, *U.S. News and World Report* also ranked the CECS undergraduate program in industrial and manufacturing engineering fifth in the nation.

Rankings were based on a survey of deans and senior faculty from schools throughout the United States.

"One of the keys to this rating is the opinions of faculty members at schools around the country, and it's nice to know that we have a good reputation among our peers," according to Subrata Sengupta, dean of the UM-Dearborn College of Engineering and Computer Science. "But a far more accurate measure of our quality can be found in the work of our faculty and students in the lab and classroom, and of our alumni in their professional careers," Sengupta said.

(Engineering Complex pictured here)



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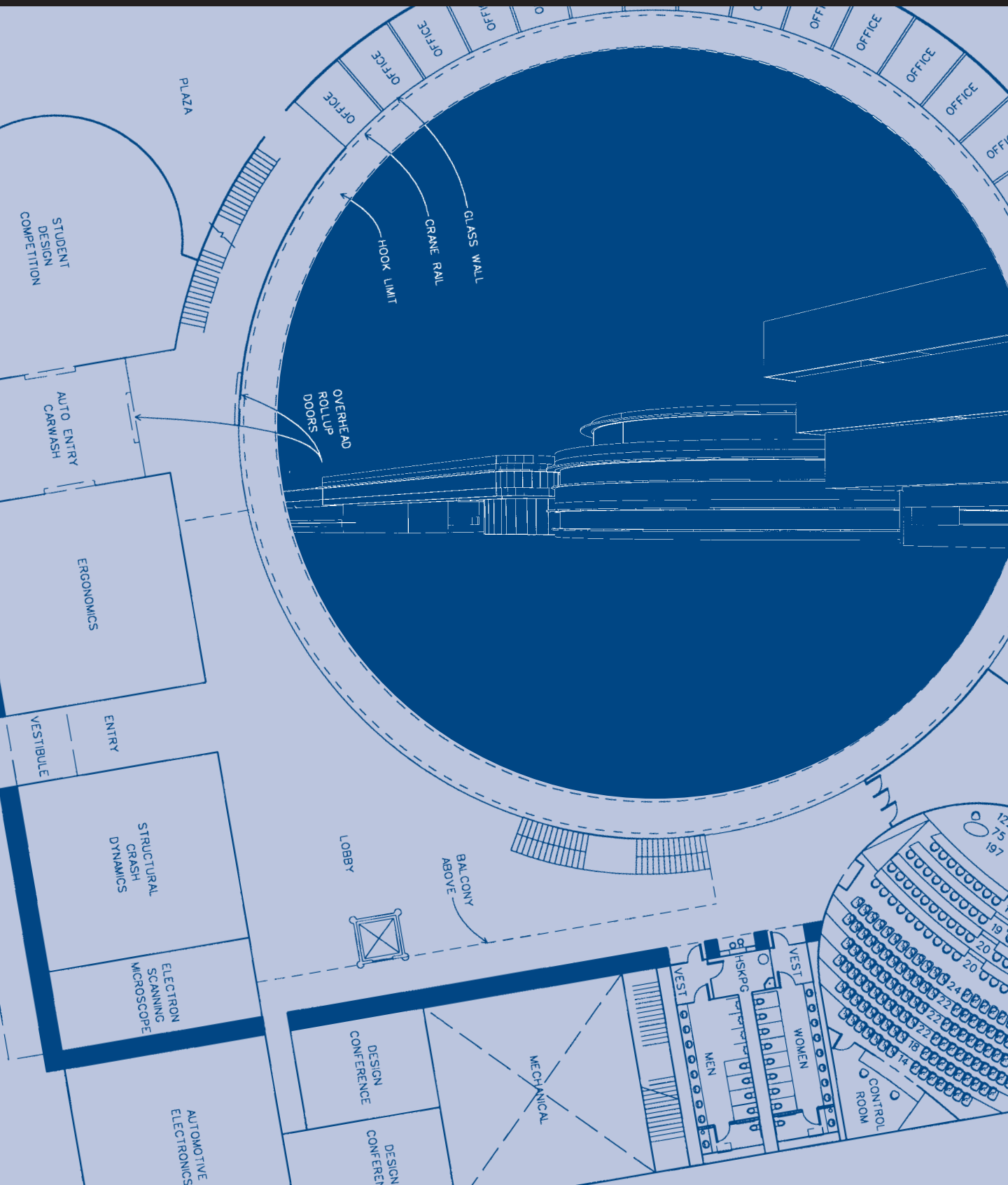
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UNIVERSITY OF MICHIGAN-DEARBORN

FALL 2002





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www.engin.umd.umich.edu

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FRONT COVER:

Architectural concepts of the CECS building expansion

TIME TO GROW AGAIN

Within the next couple of years, the College of Engineering and Computer Science and the entire University of Michigan system will be embarking on a campaign that will include building projects, new academic programs, upgrades to laboratories, and installation of much-needed equipment. Among the most important components of this endeavor will be the construction and outfitting of a new home for the Institute for Advanced Vehicle Systems.

However, the college will also be focusing on other academic and infrastructural areas that are key to accommodating its continued growth and to improving the quality of education that is offered to the college's graduate and undergraduate students. This includes developing new degree programs, expanding the facilities for student and faculty research, and strengthening the school's relationship with business and industry.

"The college continues to grow at a rapid pace, especially at the graduate level," says Subrata Sengupta, Dean of the College of Engineering and Computer Science. "We are now among the top 20 schools nationally. The college has nearly 1,000 graduate students, and I expect this number to continue increasing during the next few years. With this type of growth come additional needs for laboratories, facilities, and programs."

Thanks to an allocation of \$22 million from the State of Michigan, the College of Engineering and Computer Science will soon be breaking ground for a new engineering building that is to be constructed during the next few years. The building will house the Institute for Advanced Vehicle Systems and will include a variety of research and teaching labs as well as open bay space. Currently, IAVS is housed in three different engineering buildings.

The new building is being designed by an architectural firm that is working closely with University of Michigan-Dearborn administrators, Dean Subrata Sengupta, Associate Dean Keshav Varde, and other college officials. Also included in the planning are industry executives from a wide range of corporations that work closely with the college on a variety of projects and programs.

"We have relied on the insight of our corporate partners in developing two of our other buildings



The University of Michigan-Dearborn's Engineering Complex

during the past twelve years," said Dean Sengupta. "We think their guidance will be crucial to designing a building that includes laboratories and facilities that are needed to most effectively educate students and make them a valuable asset to industry."

The college is now meeting with executives from automotive and manufacturing companies to develop plans for additional laboratories and facilities that will be useful to practicing engineers and companies from the region. The construction of a new building will provide a unique opportunity for industry to provide support for leading-edge labs, teaching facilities, and research areas that will ultimately benefit companies from the region.

Adds Dean Sengupta, "Our corporate partners may find that having a specialized lab located within the college will provide a wide range of benefits

to students, faculty, and their practicing engineers while still providing a satisfactory level of accessibility to the companies. We hope that industry will take advantage of this opportunity.”

The new building is the central focus of the college's campaign. However, several other important growth areas are being addressed including: (1) the Institute for Advanced Vehicle Systems; (2) the Center for Engineering Education and Practice; and (3) laboratories and equipment for the new building.

INSTITUTE FOR ADVANCED VEHICLE SYSTEMS

The Institute for Advanced Vehicle Systems is focused on applied research and enhancing curriculum in the areas of product development and manufacturing. The work of IAVS is focused on body and chassis manufacturing techniques and integration with power plant and driveline systems. IAVS enhances curriculum for degree-seeking students, refines professional education courses for engineers, accelerates information and technology transfer from academia to industry, and improves the competitiveness of the region.

The institute was founded through a grant of \$500,000 from the World Heritage Foundation-Prechter Fund. Since then, substantial funding for initiatives related to the objectives of IAVS has been received from industry and governmental sources, including the United States Department of Energy Graduate Automotive Technology Program, Ford Motor Company, Arvin-Meritor Corporation, General Motors Corporation, and the American Plastics Council.

IAVS seeks to stimulate faculty research into the systems aspects of designing, manufacturing, and marketing of automobiles and related business systems, supply base, and information/enterprise systems. While the scope of the institute covers all aspects of vehicle systems research, IAVS will develop and build a “low-mass vehicle” as its initial project.

“We're excited about the more integrated approach that IAVS brings to students' education,” says Roger Shulze, director of the Institute for Advanced Vehicle Systems. “We've already seen the powerful educational benefit of working as a multidisciplinary team. With their support, companies are demonstrating that they value what we can add to their incoming workforce when we produce graduates who can work in teams and see the larger picture.”

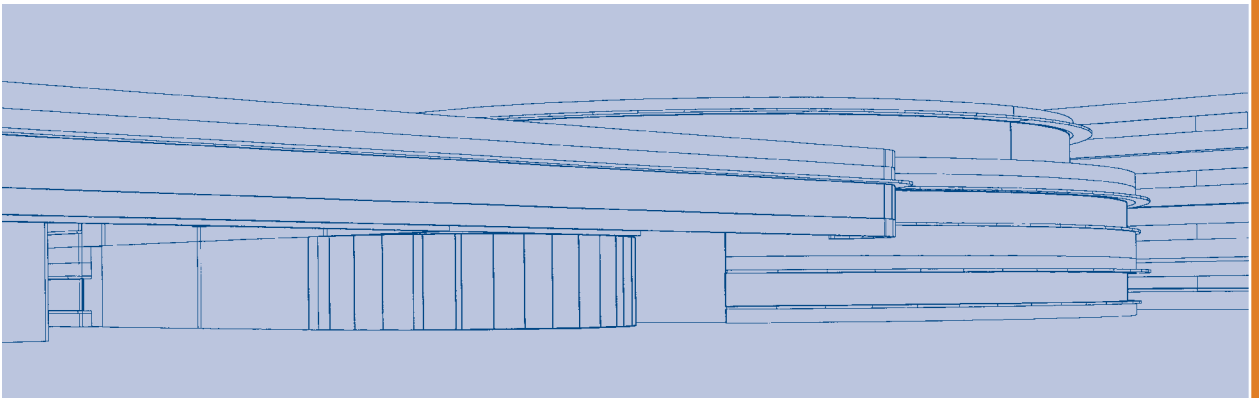
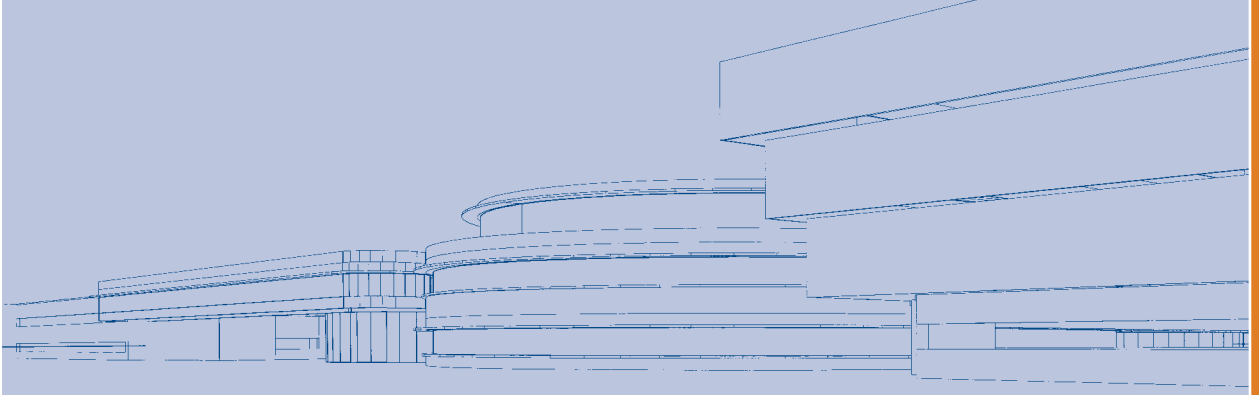
CENTER FOR ENGINEERING EDUCATION AND PRACTICE

Another major focal point of the college's campaign will be the continued growth and development of the Center for Engineering Education and Practice (CEEP). CEEP incorporates engineering practice, design, innovation, and concepts of manufacturing technology at all levels of engineering education by integrating the teaching environment with practice. To accomplish its mission, CEEP uses its resources to stimulate faculty and student interaction with practicing engineers from industry and government laboratories. Current efforts are geared toward:

- Providing seed funding to initiate collaborative applied research with industry on projects of real value to industry and with high potential for generating matching or follow-on funding
- Developing senior projects in conjunction with industry that are based on business needs and for which the industry sponsor will make available a practicing engineer to serve as a mentor
- Arranging faculty internships to provide faculty with exposure to the multidisciplinary nature of engineering practice and to the non-technical constraints on engineering projects
- Expanding the cooperative education program
- Developing continuing education courses tailored to industry needs based on collaborative research activities

“When we collaborate with industry, we create the best possible future workforce,” says Robert Hildebrand, director of the Center for Engineering Education and Practice. “Nothing can take the place of a practical, hands-on approach to education, and our industry mentors and sponsors continue to reinforce that with their tremendous gifts of expertise and finances.”

Since CEEP's inception in 1992, 79 internal grants totaling \$1,115,000 have been awarded. These grants have involved 35 corporate collaborators. In addition, the projects have included 29 faculty members (more than 45 percent of the college's faculty), 107 industry practitioners, 41 undergraduate students and 39 graduate students/research associates. More than 100 existing courses have been or are being enriched as a result of CEEP's support; and 19 new courses have been or are being developed. Over \$3 million has been generated from collaborating companies in matching funds and follow-on projects.



Architectural concepts of the CECS building expansion

LABORATORIES AND FACILITIES

The college is seeking to upgrade its laboratory facilities to meet the increasing needs of students, faculty members, and industrial collaborators. "It's critical that we offer students the opportunity to work in an up-to-date environment," says Pravansu Mohanty, assistant professor of mechanical engineering. "They need to keep their skills current with what's really needed in industry."

The school must provide new and enhanced labs that will give undergraduate and graduate students the opportunity to conduct research, complete lab assignments, and work with tools similar to those they will be using once they are employed. The creation and support of these laboratory facilities will also provide substantial support for teaching in areas that are critical to the future of the automotive systems engineering curriculum. Another goal is offering necessary facilities to use in conducting collaborative research with industrial, academic, and governmental partners. New labs may include:

- Automotive Electronics
- Automotive Materials Joining Laboratory
- Center for E-Manufacturing
- Computer Interfacing Laboratories
- Design Competition Laboratories
- Distance Learning Classrooms
- Dynamics and Control Laboratory
- Electron Microscope Laboratory
- Electronic Packaging Laboratory
- EMC Laboratory
- Emissions Research Center
- Ergonomics Laboratory
- Formula Car Laboratory
- Integrated Learning Rooms
- Intelligent Systems Laboratory
- Intelligent Vehicle and Transportation Systems Laboratory
- Metal Formability Center
- Microcontroller Laboratory
- NVH Laboratory
- Scanning Electron Microscope Laboratory
- Supply Chain and Electronic Commerce Laboratory
- Structural Crash Dynamics Laboratory
- Transmission and Gearing Laboratory
- Visualization and Software Reusability Laboratory
- VLSI Design and Fabrication Facility

WELCOME NEW VISITING COMMITTEE MEMBERS



ALY BADAWY

Vice President, Engineering, Linkage, Steering and Suspension, and Integrated Vehicle Control Systems, TRW

Aly Badawy is vice president of engineering, linkage, steering and suspension, and integrated vehicle control systems at TRW. He oversees product engineering and research and development on a global basis for these product lines.

Before joining TRW in July 1999, Badawy worked for Delphi and General Motors. From 1985 until 1999, he held engineering positions of increasing responsibility and was named director of engineering for GM's Electric Power Steering Systems in 1995. Prior to working at GM, Badawy served as superintendent of manufacturing engineering for New Departure Hyatt, a producer of wheel bearings, and was a principal research scientist for Battelle Columbus Laboratories.

Badawy holds a master's degree and a Ph.D. in mechanical engineering from McMaster University and a bachelor's degree in marine engineering from Alexandria University in Egypt.



JOHN GRACE

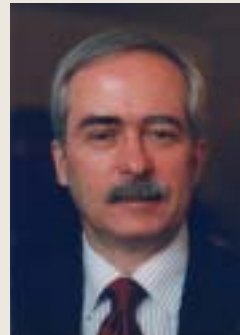
Vice President, Engineering and Technology, Arvin Meritor

John "Jack" Grace is vice president of engineering and technology at ArvinMeritor, Inc., a \$7-billion global supplier of integrated systems, modules, and components for light vehicle, truck, and specialty original equipment manufacturers (OEMs). He is responsible for corporate engineering involving analytical mechanics, experimental mechanics, testing and materials engineering, and simulation and analysis.

Before the July 2000 merger of Arvin Inc. and Meritor Automotive Inc., Grace was vice presi-

dent of systems and technology for Arvin Industries. Prior to joining Arvin in 1995, he worked with Calspan Corporation/Cornell Aeronautical Laboratory, where he began his career in 1963. Before being named vice president for product development in 1990, he held a number of technical assignments, ranging in fields from hydrodynamics and fluid dynamics to ballistic missile re-entry discrimination research.

Grace holds a bachelor of science degree and a master of science degree in mechanical engineering from the University of Notre Dame. He also holds a master of science degree in applied mathematics from Cornell University and a master of business administration degree from the University of Dayton.



ROBERT JENSEN

Vice President and General Manager, Product and Business Development—Seating and Floor Systems, Johnson Controls

Robert Jensen is vice president and general manager of product and business development—seating and floor systems at Johnson Controls. He leads the company's product development focus for complete seat systems, seat mechanisms, foam, and trim development programs. Jensen was appointed vice president in July 2002. Prior to this promotion, he served as vice president of product and business development for interior systems. He joined Johnson Controls in 1999.

Jensen has extensive OEM and tier-one supplier automotive work experience in a variety of areas, including product development for instrumentation, interior lighting, vehicle electronic modules/controllers, and wiring systems. Before joining Johnson Controls, he was vice president of product development for Ford car and truck programs at the former UT Automotive.

Jensen earned a bachelor's degree in mechanical engineering from the University of Michigan-Dearborn, a master's degree in mechanical engineering from the University of Michigan-Ann Arbor, and a master of business administration degree from the University of Detroit. He is a member of several advisory boards and committees at the University of Michigan-Dearborn, including the Center for Engineering Education and Practice Advisory Board and the Capital Campaign Committee.

2002 COOPERATIVE EDUCATION EMPLOYER AWARDS



At left: Anthony DeLaRosa, CECS co-op director; Sal Giacobelli, engineering manager, S-Y Systems Technologies; Chris Lomibao, electrical and computer engineering (ECE) student; Jesse Sheldon, mechanical engineering student; and Kevin Sidebottom, ECE student

At right: co-op director Anthony DeLaRosa; electrical and computer engineering students Wissam Joumaa, Hani Seblini, and Mohamad Ibrahim; and Lear engineering manager Vincent Verna



Few things prepare students for a career better than a taste of working in the real world. The College of Engineering and Computer Science (CECS) Cooperative Education Employer Awards were created more than a decade ago to acknowledge the important role that businesses play when they employ co-op students.

At the annual awards breakfast on May 8, Lear Corporation was named as the Cooperative Education Employer of the Year because of its longstanding participation in the college's co-op program and the more than 100 students it has accommodated.

This year, for the first time, an additional award was given to recognize companies new to the program. The New Cooperative Education Employer of the Year Award was handed out to five companies: Toyota Technical Center in Ann Arbor, ICA Cinetic Automation in Farmington Hills, Porsche Engineering in Troy, Lockheed Martin in Southfield, and S-Y Systems Technologies in Dearborn. Each of these companies placed CECS co-op students for the first time this past year.

In June 2002, S-Y Systems Technologies gave out its own co-op awards acknowledging Noel Paterson and Jason Furtak, both CECS electrical engineering co-op students. S-Y awarded the students with gift certificates and featured them in a company newsletter. "S-Y wanted to recognize these students for their hard work and flexibility," says Anthony DeLaRosa, director of cooperative education at CECS. "They exhibited dedication and commitment to a project by coming in early and staying late to finish it before the deadline date."

"The caliber of students participating from University of Michigan-Dearborn has been exceptional," says Sal Giacobelli, engineering manager at S-Y. "The co-ops are enthusiastic and very interested in learning how to contribute in the business world. The co-op program at S-Y Systems Technologies is a win-win situation. The students have an opportunity to develop business acumen, and S-Y gains a valued source of engineering talent."

S-Y Systems is a new company and a joint effort between Siemens Automotive and Yazaki Corporation.

EXCHANGE STUDENTS DISCOVER AMERICA

As the field of engineering becomes more global, international experience becomes increasingly important. "Engineers and computer scientists are very likely to work for companies that do business internationally," says Reinaldo Pérez, director of academic services. "Additionally, engineering and computer scientists work in a team environment. So, beyond the clear cultural, international, and linguistically broadening educational and personal benefits of studying in a different country, there are manifest professional benefits to students as well."

With this in mind, in 1999 the College of Engineering and Computer Science (CECS) at the University of Michigan-Dearborn joined forces with the School of Engineering at Jönköping University in Sweden to start a student exchange program under the direction of Pérez.

This fall, four computer and information science students from Jönköping University are taking classes at CECS: Marten Holmqvist, Peter Johansson, Marcus Fritz, and Amira Mulahusic. Holmqvist will continue through the winter semester as well. CECS also welcomes a computer and information science student from the University of Oviedo in Spain: Marta Virginia Blanco-Delgado.

Each student has a different take on the United States.

"There is a large cultural mix all over the U.S.," says Blanco-Delgado. "Also, there are a lot of little tiny things that make me smile, such as the free refills in all the chain restaurants. Driving is safer here. People don't judge you for your clothes, and women seem like they are more independent and confident. But I don't like the food!"

"I wanted to see a lot of punk and ska concerts, and it seems I came to the right place," says Fritz.

While most of the students express surprise by the lack of public transportation and the necessity of



Swedish exchange students: Marten Holmqvist, Marcus Fritz, Amira Mulahusic and Peter Johansson

owning a car, their overall reactions to the area are positive. Johansson likes the stores that stay open 24 hours a day; Mulahusic has appreciated meeting new people. All of the students especially value improving their English skills.

"Studying here gives me a view of the American educational system, a hands-on experience that I feel will be very useful in my future career," says Holmqvist. "It will be to my advantage to be able to better understand foreign co-workers. It also gives me the ability to use my English in a real-life situation—living and studying. And I believe that I will benefit from the courses I'm taking when applying for a job."

All of the exchange students encourage others to try the experience. "Go for it!" says Holmqvist. "It's a once-in-a-lifetime chance to expand your horizons and gain experiences that are valuable on both a personal and a professional level."

2002 - 2003 SCHOLARSHIP AWARDS



Dr. and Mrs. Robert Cording, administrators of the Violet Sharpe Scholarship, and Raymond Ng, Douglas Waiono, and Sonali Sathe

CECS/FORD FRESHMAN MINORITY SCHOLARSHIP

Nicole Brown
Autumn Fields
Jasmine Mark
Matthew Maxey
Branden Oden

CHRYSLER SCHOLARSHIP

Lina Bazzi
Melissa Cinpinski
Andrea Iacoban
Anna Kagan
Dongja Kwak
Martina Moro
Evrard Ohou
May Putrus
Rania Saman

CSONKA SCHOLARSHIP

Winford Bishop
Ismail Hamieh

DETROIT EDISON SCHOLARSHIP

Melissa Abellana
Aristide Bechi
Maureen McGinnis

VIOLET SHARPE SCHOLARSHIP

Walid Aldeeb
Jalal Jawany
Wissam Joumaa
Peter Law
Redhwan Mawari
Antoine Mordovanaki
Raymond Ng
Ripal Pitel
Luke Reisner
Sonali Sathe
Blendi Sullaj
Douglas Waiono
Eric Zelman

NATIONAL SCIENCE FOUNDATION SCHOLARSHIP

Safaa Al-Abdul
Ayoub Alata
Muaiad Al-Habib
Arref Ali
Daniel Alsaffar
Hassan Beydoun
Muhammad Bhatti
Shefali Bhavsar
Michele Howard
Justin Karchner
Muhammad Khan
Jean Claude Kwam
Iddya Matos
Redhwan Mawari
Kenneth Mayle
Meghan Moore
Matthew Morelli
Amber Sanborn
Sonali Sathe
Alan Scarantino
Susanne Sommer
Charles Thomas
Monica Zuzow

National Science Foundation scholars



DISTINGUISHED ALUMNUS OF THE YEAR: TIMOTHY M. MANGANELLO

Tim Manganello likes to tinker. "I always had a mechanical side to me, I guess," he says. "When I was a kid, I was usually taking something apart. I didn't always get it back together, either. But it was all part of the learning process." Manganello's penchant for figuring out how things work led him into a career of nearly 30 years in the automotive industry, starting as an engineer at Chrysler and moving gradually toward the business side of the trade.

"When I left Chrysler back in 1981, I decided to get away from engineering and try something different," Manganello says. He took a position in sales management at PowerTrain Components-LinkBelt. "I wanted to utilize the business background I'd picked up at University of Michigan-Dearborn."

His years at UM-Dearborn provided a two-faceted background for Manganello in both engineering and business. Engineering courses fleshed out the technical skills he had picked up from his bachelor's degree at UM-Ann Arbor. "The engineering portion of my Dearborn degree provided more depth technically," he says. "I remember one course in particular on heat transfer, taught by Dr. Tsung Na. It was one of the more challenging classes I took. At first, I was worried about just surviving the class, but once I started to understand the material I did fine."

It was also at UM-Dearborn that Manganello first started to pursue his interest in the business side of engineering. In addition to his master's degree in science and engineering, Manganello picked up a professional degree in management. "Those courses provided more formal knowledge for the business side of my background," he says. "Of course, I'm still getting business training every day—from the school of hard knocks."

While Manganello recognizes that the engineering and business training he received at UM-Dearborn provided a good foundation for his career, he especially values another side of those years. "Going to school at night at Dearborn is where I really learned how to balance work, education, and beginning a family," he says.

The art of maintaining this balance continues today, but Manganello gives his wife much of the



Timothy M. Manganello

credit. "Liz runs every part of our lives except the business side," he says. "She's the major enabler for my ability to do this job. It's a little bit of a challenge, because we live in Bloomfield Hills, my office is in Chicago, and I'm often traveling around the rest of the world."

The job that keeps Manganello traveling is president and chief operating officer at BorgWarner Inc., a position he acquired in February 2002 after working at the company in various management capacities for 13 years. With over 13,000 employees and more than \$2.5 billion in sales, BorgWarner is a world leader specializing in advanced products and technologies to satisfy customer needs in powertrain components and system solutions.

Manganello initially learned about BorgWarner when he worked in sales management at PowerTrain Components-LinkBelt (PTC). "PTC competed against BorgWarner," he says. "That's where I learned a lot about BorgWarner. I discovered they were a formidable rival and a good company; I thoroughly enjoyed competing against them." Through an acquisition in 1989,

ALUMNI
UPDATE

Manganello came to work at BorgWarner as vice-president of sales for their Morse TEC division and eventually worked his way up through positions of increasing responsibility.

For Manganello, it's the people that make his job at BorgWarner particularly rewarding. "I enjoy working with the people within BorgWarner, but I also enjoy working with customers," he says. "This company is international; we have employees and customers around the world. I think one of the highlights of my job is that as we've grown globally, I've also been able to personally grow globally."

"Everybody thinks international travel is glamorous," he continues, "but of course it's hard work. At the end of the day, though, it's rewarding when you can make a town a better place to live because you helped build a BorgWarner factory there."

Manganello sees the auto industry as becoming increasingly international. "I think it's developing similarly to the way BorgWarner has," he says. "There have been acquisitions and rationalizations in OEMs; auto companies are now becoming globalized families of companies. The supply base is also becoming global. I think that's a good thing, so long as you know how to do business internationally. If you're a company just focused on your own geographic location, it'll be very difficult. We've been an international company for a number of decades, so we've been able to leverage our position and grow globally more quickly than a number of other suppliers."

"My job is to further the global growth of BorgWarner with the kind of rates and profitability that our shareholders and board of directors expect," he continues. "That, as always, will be a challenge. The auto industry today is a tough area to do business. It's very competitive. You have to be good."

When he's not at the office, Manganello likes to indulge a passion for UM-Ann Arbor football games. "Every fall we go to as many UM football games as we can," he says. But Manganello's daughter is studying education at "that other school in East Lansing," which makes for some friendly rivalry at home. "I'm used to it; my brother and a few other family members went to Michigan State."

Manganello's family also has a cottage in northern Michigan. "That's our family gathering point, where we go to escape from day-to-day stuff," he says. "We like to go up there and focus on all the family things—sailing, water skiing, tubing. My son has talked me into starting to go fishing again. In the end, I spend a lot of my time up there just puttering. I find that very relaxing. I guess I never got away from that fix-it thing."

Dean Subrata Sengupta and Timothy Manganello at BorgWarner in Auburn Hills, Michigan



Tanya Hurley, '79 BS-CS, '88 MSE-ISE, is a systems engineer at Telcordia Technologies.

Thomas Saur, '80 MSE-EE, has joined the Southfield law firm of Brooks & Kushman P.C. as an intellectual property attorney.

Daniel DiCiuccio, '81 BSE-ME, professional engineer, has been elected to the board of managers at Integrated Design Solutions in Troy.

Roderick Jenkins, '91 BSE-ME, is a supervisor at Yazaki North America Inc. in Canton.

Kirk Lilley, '92 BS-CIS, is working as a management/IT consultant in Mongolia with Geek Corps, an organization that sends IT volunteers around the world to help private companies in developing countries.

William Allai, '94 BSE-EE, is a senior engineer at National Instruments in Austin, Texas.

Kristin Godfrey-Fradle, '96 BSE-ME, is a design engineer at Nissan Technical Center in Farmington Hills, Michigan. She was awarded her first US patent, "Automotive Frame Bumper Interface for Discriminated Deceleration Response," in March 2002.

Beverly Henderson, '99 MS-EM, is a program management specialist at DaimlerChrysler in Detroit.



*Inchul Kim,
assistant
professor
of mechanical
engineering*

FACULTY RESEARCH GRANTS

ALLOY COMPOSITE STRUCTURES

Alan Argento, associate professor, and **Pravansu Mohanty**, assistant professor of mechanical engineering, have received \$240,013 from the National Science Foundation (NSF) to study high-damping structures for automotive applications. This three-year research grant will help develop a new class of materials: high-strength, shape-

memory alloy that has been spray deposited onto a core of carbon-fiber-reinforced polymeric composite. General Motors and suppliers are interested in this technology and are expected to support the research through in-kind contributions.

Profs. Argento and Mohanty have also received a \$12,000 Research Experience for Undergraduates award from NSF that will provide support for two students to participate in the above research.

PHASE II: ACE PROJECT: HUMAN FACTORS ENGINEERING SUPPORT

Vivek Bhise, professor of industrial and manufacturing systems engineering, has received \$38,724 from Collins & Aikman for a project that seeks to optimize ergonomics in vehicle instrument panel and console design.

ERGONOMICS STUDY

Mahmut Eksiouglu, assistant professor of industrial and manufacturing systems engineering, has received a \$15,000 grant from TRW Automotive to investigate the effects of steering system vibration on human comfort.

U.S.-JAPAN JOINT SEMINAR

William Grosky, chair of the Department of Computer and Information Science, has transferred a \$5,290 grant from the National Science Foundation. Grosky brought this grant project with him from Wayne State University.

Prof. Grosky has also transferred \$14,850 from the National Institutes of Health.

SUPPORT FOR GRADUATE RESEARCH

Inchul Kim, assistant professor of mechanical engineering, has received a \$7,500 award from the UM Office of the Vice President for Research. This award will be matched with unit funds to support a graduate research student who will develop particle motion equations.

INVESTIGATION OF SLURRY PREFORMING PROCESS

P. K. Mallick, professor of mechanical engineering and director of engineering interdisciplinary programs, has received a \$26,830 subcontract from the Oak Ridge National Laboratory, funded by the Department of Energy, to support a graduate student to investigate slurry preforming process parameters at the Budd Company.

VIDEO PASSENGER OCCUPANT DETECTION

Yi Lu Murphey, associate professor of electrical and computer engineering, has received an additional \$114,000 from TRW Automotive to further develop a demonstration model of vehicle passengers. This application of computer vision and pattern recognition will help fine-tune the deployment of airbags in the case of a collision to better protect children and pets.

PRE-CRASH DETECTION

Dr. Murphy has also been awarded \$30,000 from TRW to investigate advanced technology for pre-crash detection and warning using sonar and optical sensors. This will include pedestrian detection and stop-and-go control.

INTELLIGENT GEOMETRIC MODELING

Jie Shen, assistant professor of computer and information science, has received a \$15,000 student support award to study geometric models.

SBIR PHASE II: AUTOMATED VIDEO GLANCE DATA EDUCATION

Paul Watta, assistant professor of electrical and computer engineering, has received a \$50,000 contract from M-Vision, Inc. This award supports further development of video imaging data processing.

OPTIMIZATION OF COMPLEX QUERIES IN DATABASE MANAGEMENT

Qiang Zhu, assistant professor of computer and information science, has received \$12,000 from IBM. This grant will support both a student fellow and database query development.

NEW FACULTY AND STAFF MEMBERS



JINHUA GUO

*Assistant Professor,
Computer
and Information
Science*

Jinhua Guo is an assistant professor of computer and information science. He earned his Ph.D. in computer science in 2002 from the University of Georgia. Guo received a bachelor's degree in 1992

and a master's degree in 1995 in computer science from China's Dalian University of Technology, where he served on the faculty in the department of computer science until 1998. His current research interests include interactive steering, distributed systems, distributed computations, distributed algorithms, web technologies, and bioinformatics.



YUQING SONG

*Assistant Professor,
Computer and
Information Science*

Yuqing Song is an assistant professor of computer and information science. He received his bachelor's degree in mathematics

from Nanjing University in China in 1990 and his master's degree in computer science in 1993 from the Institute of Mathematics, Chinese Academy of Sciences. He received his Ph.D. in computer science from the State University of New York at Buffalo in 2002. His research interests include multimedia information retrieval, multimedia systems, image processing, computer vision, data mining, and bioinformatics.

NILESH V. PATEL

*Assistant Professor,
Computer
and Information
Science*

Nilesh V. Patel is an assistant professor of computer and information science. In 1989, he received his bachelor's degree



in control engineering from Gujarat University, India. He then studied computer science at Wayne State University, where he received his master's degree in 1993 and his Ph.D. in 1997. From 1996 to 2002, he worked as a software engineering manager and architect at Visteon Corporation. Before joining Visteon Corporation, he served as a lecturer in the Department of Computer Science at Wayne State University.

Patel's research interests include software engineering and digital imaging, with a focus on software management, software architecture and design methodologies, embedded systems software, and human factors engineering. His applied research involves in-car computing devices, including driver information, entertainment, safety, and security systems.



RICHARD DURANT

*Computer Systems Specialist
Engineering Computer Services*

Richard Durant, computer systems specialist, earned his bachelor's degree in electrical engineering from UM-Dearborn in 1998. After graduation, he designed networking cards for Dearborn Group, which were used to test the electromagnetic compatibility of automotive vehicle components.

As a computer systems specialist, Mr. Durant maintains the Engineering Computer Services labs, supports staff with computer and networking issues, and oversees UNIX servers, which handle email, internet access, logins, and Oracle databases.

Mr. Durant and his wife, Paula, live in Dearborn.

NEW DISTANCE LEARNING COURSES

Beginning January 2003, the UM-Dearborn College of Engineering and Computer Science will be offering internet-based graduate courses in software engineering and automotive systems engineering. Not limited by geographic location, students will have the opportunity to complete these courses at their convenience using distance learning technologies. Courses are internet accessible and use video with audio, text, and graphics. Students can interact with instructors and with other students synchronously and asynchronously from personal computers through chatrooms and threaded discussions. For more information on distance learning opportunities, please contact Engineering Professional Development at 313-593-4000, by email to sguinn@umich.edu, or visit <http://dln.engin.umd.umich.edu> or <http://online.umd.umich.edu>.



WINTER 2003 ONLINE GRADUATE COURSE OFFERINGS

SOFTWARE ENGINEERING

Software Engineering (CIS 553)
Computer Networks and Distributed Processing (ECE 570)

AUTOMOTIVE SYSTEMS ENGINEERING

Automotive Manufacturing Processes (AENG 587)
Automotive Powertrains I (AENG 547)

TECHNICAL SHORT COURSES

Engineering Professional Development (EPD) courses are offered from 8 am to 5 pm (except as noted) and are held on campus:

MANUFACTURING

Overview of Supply Chain Optimization	January 27
Factory Physics: The Science of Lean Manufacturing	January 24
Engine Emissions	February 11, 13, 18
Automotive Manufacturing Processes	February 3, 4, 5, 6
Metal Machine Processing	March 10, 11, 12, 13
Ergonomics in Vehicle Design	June 25, 26

COMPUTER TECHNOLOGY

Introduction to C++ Using Engineering Methods	February 10, 11, 12, 13, 14
Fundamentals of Visual Basic	April 29, 30, May 1
Intermediate Visual Basic	May 6, 7, 8
Advanced Visual Basic	May 13, 14, 15

SIX SIGMA TRAINING

Design for Six Sigma in Non-Manufacturing Environments	March 31, April 1, 2, 3, 4
Six Sigma Project Selection	May 22
Six Sigma Overview	May 7

VEHICLE ELECTRONICS SERIES

Automotive System EMC (Electromagnetic Compatibility)	May 8, 9
Automotive Power Electronics: Devices, Circuits, and Systems	May 15, 16
Computer Networks in Embedded Systems	May 20, 21
Electrical Engineering for the Non-Electrical Engineer	May 22, 23

VEHICLE NVH ACADEMY

Vibro-Acoustic Modeling and Analysis	April 9, 10, 11
Fundamentals of Vehicle NVH Analysis	March 13, 14, 17, 18
Measurements and Controls	March 13, 14, 17, 18
Automotive Sound Quality	May 20, 21, 22

For more information or to register for any of these programs, contact Theresa Ceccarelli at (313) 593-4000, tceccare@umich.edu, or visit <http://epd.umd.umich.edu>

WAYS OF GIVING

The chart below summarizes the many options donors have in making a gift to the College of Engineering and Computer Science. As with any investment, we encourage you to seek legal and financial advice about the specifics of your situation and how a gift may be structured for maximum benefit. There are also many naming opportunities at the college, from a single classroom or study area to an entire laboratory.

For more information, call Phillip Snyder, development director, at (313) 436-9141.

WAYS OF GIVING	ASSET TYPES	METHOD	INCOME AND TAXATION	BENEFITS TO DONOR
Outright Gift	Cash, stocks, bonds, real estate, tangible personal property (gift in kind).	Donor transfers assets to UM-D		Tax deduction on value of gift. No tax on capital gains.
Pledge	Gift made over one or multiple years	Written agreement with UM-D		No tax deduction until gift is made.
Matching Corporate Gift	Any negotiable gift such as cash, stocks, bonds.	Send in your company's matching gift form with your gift.		Tax deduction of individual gift.
Bequest	Cash, stocks, bonds, real estate, and tangible personal property (gift in kind).	Donor's will transfers assets to UM-D		Distribution of estate as intended by donor. Avoids estate and inheritance taxes.
Charitable Lead Trust	Cash, stocks, bonds and revenue-producing real estate	Donor and trustee enter into written agreement. Donor transfers assets to trustee.	Income paid to UM-D for term of trust. Then the principal is returned to donor. No taxation of income.	Trust income not taxed to donor. Potential estate and gift tax savings.
Charitable Gift Annuity	Cash and stocks	Donor and UM-D enter into contract agreement.	Fixed income based on age(s) of income recipients for lifetime(s). Taxes based on age of donor. Partially untaxed based on actuarial data.	Secure income. Gift partially untaxed. Tax deduction based on age.
Charitable Remainder Annuity Trust	Cash, stocks, and bonds	Donor and trustee enter into written trust agreement. Donor transfers assets to trustee.	Fixed income (based on initial value of trust assets) paid to donor and/or beneficiary(ies) for life or for up to 20 years.	Tax deduction based on value of assets transferred to trustee. Avoids tax on capital gains.
Revocable Trust	All types of property	Donor and trustee enter into written agreement. Donor transfers assets to trustee.	Net income paid to Donor and/or other beneficiary(ies) for life. Beneficiary taxed on income received (may include ordinary income or capital gain).	Principal available to donor upon demand. Estate tax deduction.
Charitable Remainder Unitrust	Cash, stocks, bonds, or other property	Donor and trustee enter into written agreement. Donor transfers assets to trustee.	Variable income. Trustee must pay a fixed percentage of the fair market value of asset. Tax based on age of donor.	Potentially increasing payments to donor. Tax advantages based on type of trust.

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Photographs from top to bottom of page: Dean Sengupta, Anthony Early, Robert Buckler, and Nirmal Singh at DTE Energy in Detroit, Michigan; Thomas Stephens, vice president of Powertrain at General Motors; Acromag employees with Henry Patton, Acromag president

2002 ALUMNI AWARDS



Alan Amici, CECS Distinguished Service Award recipient; Dean Subrata Sengupta; Timothy Manganello, CECS Distinguished Alumnus of the Year; Thomas Stephens, UM-D Distinguished Alumnus of the Year.

University of Michigan–Dearborn DISTINGUISHED ALUMNUS OF THE YEAR

THOMAS G. STEPHENS

'71 Engineering

Currently group vice president of Powertrain at General Motors Corporation, Thomas G. Stephens began his career with GM in 1969 at the Chevrolet Engineering Center under UM-Dearborn's student co-op program. Over the years, he has been instrumental in bringing GM executives to participate in various capacities at the College of Engineering and Science (CECS). He is a former member of the CECS Visiting Committee and has also made presentations, delivered lectures, and served on panels on behalf of the university. Mr. Stephens helped the college obtain major financial support from GM, including a recent gift of \$250,000 for the college's Institute for Advanced Vehicle Systems and, in 2000, a grant of \$25,000 to support the college's Discovering Connections Conference. Mr. Stephens is chairperson of GM's Energy and Environmental Strategy boards, serves on GM's North American and Automotive Strategy boards, and sits on the Board of Directors for Fiat-GM Powertrain, Isuzu, and Saturn. He is also a member of the Detroit Science Center Board of Trustees. He and his wife, Kathleen, live in Northville.

College of Engineering and Computer Science DISTINGUISHED ALUMNUS OF THE YEAR

TIMOTHY M. MANGANELLO

'75 Engineering and '81 Management

In 1989, Timothy M. Manganello joined BorgWarner Inc., a global \$2.7 billion automotive powertrain components and systems manufacturer, as vice president of sales and marketing for the company's Moresse TEC operating group. In February of this year, he was named that company's president and chief operating officer. During the intervening years, Mr. Manganello served as vice president of business development for BorgWarner TorqTransfer Systems and then as vice president of operations for the TorqTransfer Systems operation in Muncie, Indiana. He held this position until he was named president and general manager of that division in January 1999. In addition to his professional duties, Mr. Manganello completed the Advanced Management Program at Harvard Business School and is a graduate of the Chrysler Institute program. He lives in Bloomfield Hills with his wife, Liz.

College of Engineering and Computer Science ALUMNI SERVICE AWARD

ALAN J. AMICI

'85, '87 Engineering and '93 Management

During Alan J. Amici's 17 years with DaimlerChrysler, he has held a variety of positions in vehicle engineering and manufacturing. Since 1999, he has served as senior manager of E/E Powertrain and Chassis Electronics. When he joined Chrysler in 1985, Mr. Amici became responsible for developing a corporate diagnostic strategy for manufacturing and service, for which he received two patents. One of those patents saved his corporation over \$16 million and, in 1994, earned him the Walter P. Chrysler Outstanding Patent award. In 1997, Mr. Amici was named senior manager of DaimlerChrysler's Huntsville Electronics Manufacturing, where he developed an advanced modeling, simulation, and specification strategy used to design vehicle electrical features. Mr. Amici supports CECS and UM-Dearborn by being active in college recruiting and through DaimlerChrysler's Corporate Partnership program. He and his wife, Marie, live in Royal Oak.

SAVE THE DATE

Alumni Open House
March 5, 2003, 5:30 p.m.–8:30 p.m.
Crowne Plaza Ponchatrain, Detroit, Michigan

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Help us keep in touch by making sure our alumni information is up to date. Use the form below to send changes to the address at the right.

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Keep in Touch On-Line

The "keep in touch" form is now available on-line. College of Engineering and Computer Science alumni are invited to visit <http://www.engin.umd.umich.edu/alumni> to update or add information about themselves, including career moves, recent honors, and address changes.