Who are our students?
They are ambitious, intelligent, friendly, high-caliber individuals who attend classes, do research, design products, participate in student organizations and competitions, assist with community outreach activities, speak at MSU commencement ceremonies, and move on into highly successful careers. They are also athletes, musicians, dancers, and photographers who take their talents seriously.

The College of Engineering is the fourth largest college on the MSU campus. As of fall 2003, we had 4,301 students enrolled—3,690 undergrads and 611 graduate students. About 19 percent are women, and about 89 percent are Michigan residents. We also have 164 students from nearly 40 countries outside the United States.

More than 10 percent of our students are in MSU’s Honors College and many more have grades that exceed the Honors College requirements. Year after year, these outstanding students receive national acclaim; they are selected as Rhodes Scholar nominees, Goldwater Scholarship recipients, and winners of national and international design competitions.

Our dominance in many design competitions reflects well on MSU. For the past two years, the university was ranked first among all public institutions in the nation by *U.S. News & World Report* for the quality of our capstone experience—thanks in large part to the College of Engineering. As of spring semester 2004, each of our departments within the college has a senior capstone course. Our Department of Civil and Environmental Engineering begins its capstone course this spring, while our Department of Mechanical Engineering is in its ninth year of a very successful Design Day program.

Due to our strong capstone design courses and our excellent co-op and internship programs, our students gain real-life experience and learn how to solve real-world problems. Once our students graduate, they are ready to step into the work force. Employers don’t have to spend valuable time bringing our graduates up to speed—they are “good to go.”

One requirement of a contemporary workforce is the ability to capitalize on the skills and talents of people from many cultures and backgrounds. Our industry partners expect that we will prepare our students for this aspect of their work life and set a climate that fosters the success of each individual. To help us address this challenge and promote “inclusive classrooms,” College of Engineering faculty, staff, and graduate student teaching assistants from every unit—academic and non-academic—recently participated in a “diversity in the classroom” presentation by the CRLT Players, a theatre troupe from the University of Michigan’s Center for Research on Learning and Teaching. While entertaining, this interactive experience skillfully highlighted the challenges before each of us.

Even though we are a big institution, we value each student as an individual. Sometimes students preface an appointment with a professor by saying: “I’m sorry to bother you . . . I know you’re busy . . .” The faculty response is: “For the time you’re in my office asking a question, you are my most important consideration.”

Nearly all faculty in the College of Engineering interact directly with the students. Well over 100 of our undergrads participate with faculty members in research projects. And this past fall, Tom Wolff, associate dean of undergraduate studies, and I each taught a freshman-level class. That first year is critical!

Lyle C. Wilcox (Ph.D. electrical engineering ’63) recently wrote us a letter recalling his days as a student at MSU. He reflects on “how powerful the early years of the engineering student are in charting a course of career success for decades ahead.” (Read his letter on page 44 of this issue.)

We are proud of our students here in the College of Engineering. Within this issue of *Currents Magazine*, you will find a sampling—not an all-inclusive list—of the activities and accomplishments of our exceptional students. It is impossible to include every student worthy of recognition because even as this issue went to press, we were receiving notifications about students receiving scholarships, winning awards, and achieving outstanding successes. We think our students are the brightest and the best. What do you think?
For two years in a row, MSU has been ranked first among all public institutions in the nation by *U.S. News & World Report* for the quality of its capstone experience.* All of the departments in the College of Engineering now provide a capstone experience. Some have been ongoing for many years, while one will be available for the first time in spring 2004. Following are summaries of the capstone courses within the college.

**AGRICULTURAL ENGINEERING/BIOSYSTEMS ENGINEERING**

**BE 487: Biosystems Design Project**

Individual or team design project selected in BE 485. Information expansion; development of alternatives; and evaluation, selection, and completion of a design project. Spring semester.

In BE 487, the senior design capstone course, students work in teams on development, evaluation, and selection of design alternatives and completion of a detailed engineering design that was conceptualized in the preceding course, BE 485. Some teams build a prototype and test it. Other teams present documents that might be used to solicit bids from contractors. The projects are diverse, but they have a common theme: they all reflect “systems thinking” by requiring the incorporation of all interconnected issues impacting the problem, including critical biological constraints. Each team has its own technical faculty adviser(s), as well as an industry sponsor who acts as an adviser on technical matters. At the completion of the work, projects are presented to a jury of licensed professional engineers and engineer-

ing faculty for evaluation. The course was taught by Professor John B. Gerrish (who recently retired) and Keith Tinsley. Professor Gary Van Ee, P.E., and Hope Croskey, P.E., specialist, are the current instructors.

At the end of spring semester, the students truly get to “showcase” what they have learned—during the annual Biosystems Showcase, which includes a luncheon, senior student design presentations, an opportunity for students to meet with industry representatives, a reception, and a dinner. The 2004 Biosystems Showcase is scheduled for April 22 at the Kellogg Center.

CHEMICAL ENGINEERING & MATERIALS SCIENCE
CHEMICAL ENGINEERING
CHE 433: Process Design and Optimization I
Applications of chemical engineering principles in design calculations. Selection of optimum design. Influence of design on capital investment, operating cost, product loss and quality. Mathematical programming methods for optimization. Fall semester.

CHE 434: Process Design and Optimization II

Students take the principles learned in CHE 433 and CHE 434 (both taught by Professor Martin C. Hawley) and apply them to practical design projects by competing each spring in team and individual divisions of the American Institute of Chemical

Capstone design experiences in senior-level engineering courses require students to apply the basic knowledge they have acquired over the course of their degree programs to a large-scale, comprehensive engineering design project. In contrast, a unique “cornerstone” course in the biosystems engineering program is exposing students to the design process at the beginning of the curriculum. This required course (BE 130), Engineering Design Fundamentals for Biological Systems, is taught by Bradley Marks, associate professor of biosystems engineering, and was introduced four years ago in order to improve student retention and to provide design experiences across the entire curriculum. Traditionally, engineering design experiences have been found only in upper-level courses. Although first-year students are obviously not prepared to complete technically complex engineering designs, they can learn to apply the basic techniques associated with the engineering design process, and this course actively engages students in this process.

For example, in one of the design projects, teams of BE 130 students were assigned to design, build, and test an apparatus that was capable of accurately weighing objects between 1 and 100 grams in mass and smaller in size than a golf ball. However, as an added twist, the apparatus had to be made of materials that are commonly eaten, and had to be entirely consumed by the team after testing. The purpose of the assignment was for students to complete the entire design process, including selection of design criteria, brainstorming, design analysis and selection, testing, and presentation and documentation of the design—all at a level that is technically appropriate for first-year engineering students. Using edible materials introduced an added constraint that is universal in the discipline of biosystems engineering—the variability and instability of biological materials.

After this course, we find that our students move through the rest of the curriculum with a greater understanding of the importance of creativity and teamwork in engineering design, and therefore are better motivated for the core curriculum that adds critical technical competencies to their basic understanding of the engineering design process.

— Bradley Marks, associate professor, biosystems engineering
Engineers (AIChE) Student Design Competition. See page 11 of this issue for more about the AIChE competition.

MATERIALS SCIENCE
MSE 465: Design and Application of Engineering Materials
Fundamental principles of strengthening: toughening, specific strength and stiffness. Material development based on environmental, temperature, wear, damping, fatigue, and economic considerations. Spring semester.

Students in MSE 465, taught by Professor K. N. Subramanian, often take ME 481 and participate in the Department of Mechanical Engineering’s Design Day competition. See page 6 of this issue for more information about ME Design Day.

CIVIL & ENVIRONMENTAL ENGINEERING
CE 495: Senior Design—Preliminary Design
Application of design concepts in civil engineering. Integrated design solutions for situations with geotechnical, hydrological, pavement, structural, environmental, and transportation considerations. Planning the design process. Design specifications. Cost. Written and oral presentations. Spring and fall.

This course, being offered for the first time spring semester 2004, is required for students who entered the program in fall 2003 as juniors. While only six students are enrolled in the pilot course, enrollment is expected to be about 40 to 50 by fall 2004. Course coordinators/main instructors are Tom Maleck and Roger Wallace, both associate professors.

Selected faculty from each technical area will serve as advisers to the student teams.

CE 495 will focus on a large civil engineering design project. The hypothetical project for the first two semesters will be the design of a hotel at the northwest corner of the Hagadorn and Jolly Road intersection. Drainage issues in the wetlands, rerouting the streets, designing the pavement, a bridge, and foundations, are parts of the project. Teams will be assembled so that each student can cover a required technical area such as structures, transportation (highway design), geotechnical engineering (foundations), pavement engineering, hydrology, etc. The clients are hypothetical. Professional engineers (members of the visiting board, local alumni) will advise the student teams and be involved in the evaluation of the proposals and final reports.

A formal Design Day and prizes for the best project may be established in subsequent semesters.

COMPUTER SCIENCE & ENGINEERING
CSE 498: Collaborative Design
Development of a comprehensive software and/or hardware solution to a problem in a team setting with emphasis on working with a client. Participation in a design cycle including specification, design, implementation, testing, maintenance, and
ECE Alum Visits MSU

“Nothing happens unless first a dream,” said Carl Sandburg, poet and author.
And according to William McGowan, who founded MCI in 1968, “Nothing happens . . . until somebody sells something.”

William M. Seifert, BS ’71, MS ’75 (electrical engineering), agrees. This successful entrepreneur spoke to electrical and computer engineering students in the fall semester senior capstone class, ECE 480, about starting a business.

The essential steps in starting up a business, he says, are assembling a core team, understanding customer needs, communicating, and getting funded. While experience, skills, attitude, and a business plan are important, the number one priority is the people.

The focus should be on customer problems and priorities. “Know who your customers are and what they want,” Seifert told the students. “Go talk to a dozen prospective customers. Get your ideas in front of a target audience.”

Fifty percent of engineering is getting the problem right, says Seifert. “It is important to know what problem you are solving . . . and for whom. Understand the market—one customer at a time.”

Building a work team is important too. “Good people are essential,” he says. “If you try to do it all by yourself, it will limit your growth.” Share growth, share the risk, is Seifert’s philosophy.

Attitude also comes into play. When he was founding his first company, he says, “I had no idea what I was doing. I just wanted to learn.”

And don’t be afraid of competition; it makes you better, he says. “If you’ve got a good idea, guess what? Someone else has had the same idea.” But concepts don’t sell—products do. So focus on producing a high-quality product, Seifert recommends.

Finally, investors are essential business partners. Once you obtain funding, says Seifert, communicate with the venture capital firm on a regular basis to keep them in the know about what’s going on.

WILLIAM SEIFERT Biography
- Graduate of MSU, BS EE ’71, MS EE ’75
- U.S. Army Signal Corps officer, 1971–1979
- Los Alamos National Lab, microprocessor systems engineer, 1975–1979
- Prism Venture Partners, general partner, 1998 to present

—Laura Luptowski Seeley
students, but corporate sponsors joined the program just recently. And in spring 2003, William Seifert, a graduate of MSU’s ECE program and a general partner in Prism Venture Partners, established the Prism Venture Partners Prize. This set of awards for the top three teams in ECE 480 provides cash prizes that are split among team members. The competition, which includes a demonstration and a formal presentation, is judged by a team of industry engineers. The fall semester competition was held December 4–5, 2003.

ECE 480 instructors are Erik Goodman, professor, and Elias Strangas, associate professor.

MECHANICAL ENGINEERING

ME 481: Mechanical Engineering Design Projects

Each semester, graduating seniors in ME 481 collaborate with industrial partners to solve real-world problems. Teams of generally four students design, build, and test projects; produce posters; and deliver formal presentations to corporate representatives. The 18th Design Day was held on December 5, 2003. Eighteen companies from mid-Michigan sponsored projects for 19 teams of graduating seniors. The top three teams are awarded prizes in separate poster and presentation competitions. Brian Thompson, professor, is conference director and ME 481 course coordinator. Craig Gunn, academic specialist, is Design Day operations coordinator.

Design Day also showcases projects from ME 371 (design and construction of mechanisms and machinery), ME 412 (design, fabrication, and testing of a heat transfer device), ME 456 (mechatronics systems design prototypes of commercial devices), and ME 471 (engineering design of machine elements and mechanical systems).

In addition, the conference offers activities to promote science and technology to the precollege set. About 250 local students in grades 7 through 12 participate. They attend a session to hear MSU students talk about the engineering profession and life on the MSU campus, and they work in teams to solve design challenges.

—Laura Luptowski Seeley
Our students have many opportunities to get involved in design competitions at the regional, national, and international levels. These design competitions—most of them team competitions—provide students with opportunities to develop teamwork skills while solving real-world engineering problems. Some of the contests are sponsored by professional engineering or student organizations, and others are sponsored by corporations, foundations, and the U.S. government.

On the following pages, you will read about the major competitions in which our students have been competing—and winning.
Formula SAE

In this Society of Automotive Engineers (SAE) competition, students design, fabricate, and compete with small formula-style race cars. Restrictions are placed on the car frame and engine so the students’ knowledge, creativity, and imagination are tested. Four-cycle engines up to 610cc can be turbocharged or supercharged to add a new dimension to the challenge of engine design. The vehicles are judged in three different categories: static inspection and engineering design, solo performance trials, and high performance track endurance.

MSU’s Formula SAE team placed third overall in the international competition held at the Pontiac Silverdome in May 2003. More than 125 teams from across the United States and around the world, including Australia, Korea, Venezuela, and Finland, competed in seven categories. The MSU team also won a triathlon event that was sponsored by Road & Track magazine following the Formula competition; they were featured in the November 2003 issue of Road & Track. For the complete story about MSU’s 2003 team, go to http://www.egr.msu.edu/egr/publications/today/articles/20030521.Formula.SAE.php

In 2002, the team placed 38th overall; in 2001, they ranked 25th.

MSU has been competing since the 1980s. Gary Cloud, professor of mechanical engineering, is the current team adviser.

2004 International Competition
May 19–23, Pontiac Silverdome, Pontiac, Michigan.
For more about the competition, visit http://www.sae.org/students/formula.htm

SAE Mini Baja

The Society of Automotive Engineers (SAE) Mini Baja Collegiate Design Series consists of three regional competitions that simulate real-world engineering design projects and their related challenges. Engineering students design and build an off-road vehicle that will survive the severe punishment of rough terrain and—in the East competition—water.

The competition provides SAE student members with a challenging project that involves the planning and manufacturing tasks encountered when introducing a new product to the consumer industrial market. Teams compete against one another to have their design accepted for manufacture by a fictitious firm. Students function as a team to design, build, test, promote, and race a vehicle within the limits of the rules; they also need to generate financial support for their project and manage their educational priorities. All vehicles are powered by a ten-horsepower Intek Model 20 engine donated by Briggs & Stratton Corporation. Use of the same engine by all the teams creates a more challenging engineering design test.

The 2003 Midwest Mini Baja competition was held at Kenworthy’s Motorcross Park in Troy, Ohio, on June 5–8. Four days of events included: hill climb, sled pull, top speed, maneuverability, and a four-hour endurance race. The MSU team placed second out of 140 in the hill climb event. An accident during the enduro race eliminated the team from competition. The team also competed in the Mini Baja West earlier in the year.

The team has a history of success in the Midwest event. In 2001 the team placed seventh overall and in 1998 they...
finished second overall.

They have also been competitive in the East competition, winning water maneuverability and finishing ninth overall in 1996.

MSU has been competing since the 1980s. Current team adviser is Jun Nogami, associate professor of chemical engineering and materials science.

2004 Competitions
WEST: April 22–24, Portland, Oregon
EAST: May 6–8, Montreal, Quebec, Canada
MIDWEST: June 3–6, Milwaukee, Wisconsin
(This year, the MSU team is planning on attending all three events.) For more about the competition, visit http://www.sae.org/students/minibaja.htm

2003 Mini Baja Team CLOCKWISE FROM FAR RIGHT: Adam Zemke, Ron Senakiewch, Liz Traskal, Jim Wilde, Mike Cronk, Tom Pabst, Tim Strand, and Neal Koenig.

Institute of Food Technologists Product Development Contest

Sponsored by the Institute of Food Technologists (IFT), an international not-for-profit scientific society founded in 1939, the Product Development Contest is a chance for students to apply their skills and knowledge to a real-world situation. Each participating school’s team develops a new food idea and carries the concept through marketing and production, much like a commercial product development team. Held at the IFT annual conference, attended by more than 20,000 professionals from academia, government, and industry, the contest draws teams from all across the United States.

The uniqueness of MSU’s participation is that the students participate as an interdisciplinary, cross-functional team composed of biosystems engineering and food science students. The food science students formulate a novel food product, and the biosystems engineering students provide the process design.

The MSU food product development team (Tausha Burns and Kerri Harris) and the biosystems engineering senior design team (Maryn Zengerle, Carrie Wing, Tom Nixon, and Shannon Sweeney) placed second in the 2002 IFT Product Development Contest. The contest consists of a written report, an oral presentation, a poster presentation (with rigorous questioning periods by the panel of industry judges), and product tasting.

The oral presentation was attended by well over 200 people and included industry representatives. The judges were from M&M/Mars, Frito-Lay, and General Mills.

MSU team faculty advisers were biosystems engineering faculty members Bradley Marks, P.E., associate professor; Jim Steffe, P.E., professor; and Kirk Dolan, assistant professor; along with biosystems engineering graduate student Dean Baas.

2004 Competition
July 12–16, Las Vegas, Nevada, during the 2004 IFT Annual Meeting + FOOD EXPO®. For more about the competition, visit http://www.ift.org/iftsa/competitions/pdc.html
Quarter-Scale Tractor

The Quarter-Scale Tractor Student Design Competition is one of the most intense and rewarding experiences that biosystems engineering students can experience at MSU. The national competition was established in 1998 by ASAE, The Society for Engineering in Agricultural, Food, and Biological Systems. The main judging categories include: a written design report; a team presentation; safety, serviceability, and manufacturability; and maneuverability. The highlight of the event is the overall performance competition where students perform a multi-stage tractor pull using a progressive sled.

Through involvement in the competition, students gain practical experience in the design of drive train systems, tractor performance, manufacturing processes, analysis of tractive forces, weight transfer, strength of materials, and ergonomics. It has given thousands of students hands-on, real-world engineering experience that will help them in upcoming courses and prepare them for future careers. The competition also provides students an opportunity to meet corporate sponsors such as AGCO Corp., Bridgestone/Firestone, Briggs & Stratton Corp., CLAAS, CNH, Caterpillar, Deere & Company, The Grasshopper Company, Kubota, and New Holland North America.

In the 2003 competition, MSU’s quarter-scale tractor design team won the first-ever perfect score in maneuverability, first place in technical inspection, first place for best appearance, and fifth place overall out of 32 schools.

Other highlights of the 2003 competition:

- Placed second in the ASAE Power and Machinery History Quiz
- Scored a sixth place in the tractor pulling competition and a third place in the 2X-tractor pulling competition (highest scores ever recorded for hydraulic transmission tractors)
- Competed in the “Guts Challenge” with 1,100+ pounds ballast with no mechanical or structural failures
- Completed the competition with no mechanical maintenance required

In the 2002 competition, MSU’s quarter-scale tractor design team won first place for the written design report, second place in maneuverability, eleventh place in pulling, and ninth place overall. The competition included 34 universities from the United States, Canada, and Malaysia.

MSU has competed since 1999. Current team adviser is Gary R. Van Ee, P.E., professor of agricultural engineering.

2004 Competition
June 3–6, East Moline, Illinois. For more about the competition, visit http://www.asae.org/students/tractor/asaecomp.html
Solar Car

The Formula Sun Grand Prix (FSGP) is an international, annual closed-course solar car race and a qualifying event for the American Solar Challenge (ASC). The FSGP is organized by the Formula Sun Education Foundation, a nonprofit organization.

The American Solar Challenge (ASC) is an international, intercollegiate competition sponsored by the U.S. Department of Energy. Student teams design, build, and race solar-powered vehicles across the United States in a 2,300-mile race. The ASC, held every other year, is the longest solar car race in the world. It promotes a greater understanding of solar energy technology; fosters educational excellence in science, engineering, and mathematics; and provides a “hands-on” opportunity for students and engineers to develop and demonstrate their technical and creative abilities.

The 2003 American Solar Challenge was run from Chicago, Illinois, to Claremont, California, along old Route 66. The next American Solar Challenge will be held in July 2005.

The MSU Solar Racing team was founded in the spring of 2000. Previous teams produced a half-welded frame for the car, named Brasidas. The current team plans to compete in the 2004 Formula Sun Grand Prix and the 2005 American Solar Challenge.

Current status of the car:

- Solar cell panels are being fabricated in Arizona
- Body plug is being fabricated in Grand Rapids
- Frame, suspension, and steering are being fabricated in garage space at Holt Junior High School in Holt, Michigan
- DC/DC converter and Maximum Power Point Tracker are being created at MSU

The current MSU team is a group of students in mechanical, electrical, and computer engineering. Elias Strangas, associate professor, electrical and computer engineering, is the team adviser, with Jerry Moerdyke as project manager and Arthur Matteson as electrical captain. Team members include Jason Krause, Steve Kelly, Chad Boone, Paul Podziokowski, Maceij Skierkowski, Mike Noorman, Eric Thomas, Michelle Kimball, Rodrigo Gomes, Carl Luyendyk, Justin Tiedt, Tommy St. Louis, and Jeremy Carter. For more about the MSU team, visit http://www.egr.msu.edu/solar/

AlChE National Student Design Competition

Each year, chemical engineers from a designated company devise and judge a student contest problem that typifies a real, working, chemical engineering design situation. The problem’s solution requires a wide range of skills in calculation and evaluation of both technical data and economic factors. Awards are presented at the AlChE Annual Student Conference.

For more than 35 years, the MSU Department of Chemical Engineering and Materials Science has had the nation’s best record for placing in the team and individual divisions of the American Institute of Chemical Engineers (AlChE) National Student Design Competition. MSU has received awards in the individual category 32 times, 11 of which were first-place honors.

Kathryn Baker, a May 2003 chemical engineering graduate, received an honorable mention in the 2003 competition. She is currently employed by Kraft Foods doing strategic research on packaging and delivery systems. Baker received her award at the national AlChE meeting in San Francisco in November.

2004 North Central Regional Competition
April 1–3, Illinois Institute of Technology, Chicago
2004 National Competition
November 7–12, Austin, Texas. For more about the AlChE National Student Design Competition, visit http://students.aiche.org/honors/
Jim Wilde, mechanical engineering senior, explains his team’s winning project to Barbara Wertheimer, secretary and program officer, DENSO North America Foundation. Representatives from DENSO, a global supplier of automotive technology, systems, and components, visited the College of Engineering on September 29 to present a $75,000 check in support of the Industrial Projects Lab in the new Design/Manufacturing Learning Center.

TEAM MEMBERS NOT IN PHOTO: Chris Siler, Jessica Hollis, and Tina Isaac.

ASME Student Design Contest

In this competition, sponsored by the American Society of Mechanical Engineers (ASME), individuals or teams of up to four student members design, construct, and operate a prototype that meets the requirements of a problem statement.

For the sixth consecutive year, the MSU team won the ASME Region V student design competition, which was held in Toronto in March 2003. They placed fourth in the finals, held during the ASME International Mechanical Engineering Congress in Washington, D.C., on November 16. Thirteen teams competed.

The 2003 design challenge was to transport rice to the top of a ramp using only the power generated by two liters of falling water. The objective was to move as much rice as possible up the ramp in the shortest amount of time and dispense it into the designated bin. MSU’s project, named The JB Whomper, moves 1600 grams of rice with each run.

MSU has competed since 1993. Current adviser is Craig Somerton, associate chair and associate professor of mechanical engineering.

2004 Region V Competition
April 1–3, Ohio State University, Columbus, Ohio.
For more information, visit http://www.asme.org/students/Competitions/designcontest/

2004 National Competition
November 13–19, Anaheim, California. For more information, visit http://www.asmeconferences.org/congress04/

ASAE-AGCO National Student Design Competition

ASAE-AGCO National Student Design Competition is conducted annually by The Society for Engineering in Agricultural, Food, and Biological Systems (ASAE) and sponsored by the AGCO Corporation. The purpose of the competition is to encourage undergraduate students to participate in the basic design of an engineering project useful to agriculture and related areas and to provide an arena of professionalism in which the student can experience peer recognition of a well-conceived and well-executed design project.


2004 Competition
August 1–4, Ottawa, Ontario, Canada. For more about the competition, visit http://www.asae.org/awards/competitions/National.html
Steel Bridge

When the steel bridge competition began in 1987, it was run only in the North Central region (Michigan and northern Ohio). The first national contest was held in 1992 and hosted by MSU.

Teams of civil engineering students design, fabricate, and erect steel bridges across an imaginary river. Prizes are awarded in seven areas: construction speed, lightness, aesthetics, stiffness, economy, efficiency, and overall performance. The bridges are approximately 20 feet long and are tested with over a ton of load.

Regional student steel bridge competitions are held in conjunction with 20 American Society of Civil Engineers (ASCE) regional conferences. Nearly 200 teams compete. Qualifying teams from these competitions are invited to compete in the prestigious National Student Steel Bridge Competition. The regional and national competitions are sponsored by both the ASCE and the American Institute of Steel Construction, Inc. (AISC).

In 2003, MSU’s steel bridge building team came in third in the North Central Regional Competition, held at Lawrence Technological University, in Southfield, Michigan. The MSU team also came in third overall in the 2002 regional competition.

MSU first competed in 1988. Current civil and environmental engineering faculty advisors are Frank Hatfield, professor emeritus, Amit Varma, assistant professor, and Rigoberto Burgueño, assistant professor.

2004 North Central Regional Competition
April 2, University of Akron, Akron, Ohio

2004 National Competition
May 28–29, Colorado School of Mines, Golden, Colorado. For more about the competition, visit http://www.aisc.org/steelbridge.html

2003 Steel Bridge Team
Concrete Canoe

As early as 1848, according to the website of the American Society of Civil Engineers (ASCE), Joseph Louis Lambot built concrete boats for use on his estate in France.

In the 1960s, some ASCE student chapters were participating in intramural concrete canoe races. The University of Illinois–Urbana and the University of California–Berkeley both claim they held the first ASCE regional competitions in the early 1970s. The first national competition was held in 1988, hosted by MSU at Lake Lansing Park in Haslett, Michigan. Eighteen teams competed.

Today, 20 regional competitions are held every spring; the regional winners continue on to the nationals.

MSU began participating in the ASCE regional competition in 1972. The first-year canoe team adviser was Frank Hatfield, professor emeritus of civil and environmental engineering; Mackenzie Davis, professor emeritus of civil and environmental engineering, was advisor from 1977 through 2002. Current team advisor is Neeraj Buch, associate professor of civil and environmental engineering.


2004 North Central Regional Competition
April 2–3, University of Akron, Akron, Ohio

2004 National Competition
June 17–20, Washington, D.C. (in conjunction with the National Building Museum’s exhibition opening of Liquid Stone: Architecture in Concrete)

For more about the competition, visit http://www.asce.org/inside/nccc2004/index.cfm

WERC Environmental Design Contest

Sponsored by WERC, a Consortium for Environmental Education and Technology Development, the Environmental Design Contest is a unique event that brings together industry, government, and academia in the search for improved environmental solutions. Held annually since 1991 at New Mexico State University in Las Cruces, New Mexico, the contest draws hundreds of college and high-school students from throughout the United States, as well as Mexico, India, Canada, and the Middle East.

The student teams design solutions for real-world problems while developing fully operational bench-scale solutions that are presented to judges. The teams must prepare four different presentations: written, oral, poster, and bench-scale model.


MSU student teams won first place in the competition all three years. In the 2002 competition, the students competed under Task 21, which was to develop and demonstrate a novel procedure for sanitizing sprout seeds. The MSU team did not compete in 2003.

2004 Competition
April 4–8, Las Cruces, New Mexico. For more information, visit http://www.werc.net/contest/
With this feature, we invite you to come alongside six engineering students as they learn and grow at MSU. In each issue, for the next several issues, we will give you updates on each of these students as they progress through their programs. The students were first featured in Currents Magazine, Volume 2, Number 2, Winter 2003. This is the third installment. (Back issues are available upon request; or view previous installments at http://www.egr.msu.edu/egr/publications/archive.php)

Bryan Cotton
SOPHOMORE (DOLTON, ILLINOIS)
COMPUTER SCIENCE & ENGINEERING; MUSIC—JAZZ STUDIES

What were your highlights/challenges from summer 2003?
I would say that the highlight of my summer had to be working at Grainger, because I got to see quite a bit of downtown Chicago through different events that the interns went to as a group. I got to see Aretha Franklin at the Ravinia (the summer home of the Chicago Symphony Orchestra in suburban Highland Park). It was a special team activity for Grainger interns.

What kind of work did you do at Grainger this summer?
I worked in the Business Intelligence Department, doing front-end reporting and maintaining trouble tickets—electronic forms that people fill out when they have a problem using the software. We would help to resolve the problem.

While I was there, I took the initiative to develop an evaluation form for each of the reports. I also made an Excel spreadsheet of all the reports and created a color-coded system to help improve them.

How has your experience at Grainger influenced your career goals?
My experience at Grainger definitely had an effect on my career goals. I had thought about working in corporate America with a degree in computer science, but I didn’t really know what positions were out there. By working with Grainger this summer, I was able to see where computer science majors are an invaluable resource to the company by supporting databases, Web site development, and various other things.

What did you do in your free time over the summer?
This summer I really didn’t have much free time. My job was about an hour and a half to two hours away from my home. I lived in corporate housing for the summer, which was about 15 to 20 minutes from my job, so I wasn’t home much. With the little free time that I did have on the weekends, I hung out with friends, went to the movies, and usually just relaxed, since I was working 40-hour weeks.

Did you read any good books over the summer?
The only book I read this summer was The Queen of the Damned by Anne Rice. The book was made into a movie last year. My aunt always told me how good the book was but I had never had time to read it.

What were your highlights/challenges from fall semester 2003?
I originally was going to take 18 credits fall semester—but I dropped a class, which bought it down to 14. I had six music classes and CSE 231, Introduction to Programming (C++). It was challenging. I had never actually programmed before.

As part of Jazz Band I, I performed Duke Ellington’s Nutcracker Suite in the Music Auditorium.

Eboni Harper
JUNIOR (DETROIT, MICHIGAN)
ELECTRICAL ENGINEERING; MATHEMATICS

What were your highlights/challenges during summer 2003?
I had a job at Cedar Point amusement park in Sandusky, Ohio. I had never worked in a sales position before, and I wanted to do something interesting for the summer. I was a
games host, working at the game One In. The object of the game is to get the ball into a milk can. It was fun learning my game and “selling” it—and then teaching people how to play. It was challenging getting to know people.

Has your “sales” experience at Cedar Point made you rethink any of your career goals?

No, I still want to go into computer engineering and math, where I can do research. It has helped me to realize that the combination of engineering and math is a compatible career choice for me.

So, how does it feel to be officially admitted to the College of Engineering?

I was admitted to the college last spring. I think my parents were more excited than I was. Now I am getting more of a feel for what computer engineering is like.

What did you do in your free time over the summer?

During my free time, I got to know the people who worked around me at Cedar Point. I got to meet a few international people, since there are a lot of international workers there.

Did you read any good books over the summer?

Matters of the Heart by Juanita Bynum, Ph.D.; Coming of Age in Mississippi by Anne Moody; and a computer programming book to keep me up to date on my studies.

What were your highlights/challenges during fall semester 2003?

I took Japanese 101. I had intended to take an Arabic language class, but I had trouble with my schedule. So I signed up for Japanese 101. I’ve always liked Japanese art and would like to minor in Japanese or Asian studies. I plan to take a class in Japanese every semester.

There’s a study abroad program that would allow me to stay with a host family and earn 5–10 credits in my major, and 4 credits in art or ISS. There’s a study abroad program that would allow me to stay with a host family and earn 5–10 credits in my major, and 4 credits in art or ISS (Integrative Studies in Social, Behavioral and Economic Sciences). One of my long-term goals is to become a traveling professor—to be able to go overseas and teach in the native languages.

I also applied for a McNair/SROP* scholarship for next year—a program that would help me prepare for graduate school. I’m thinking about going to UCLA for grad school.

Jacob Kirshman
JUNIOR (LINDEN, MICHIGAN)
MECHANICAL ENGINEERING

What were your highlights/challenges during summer 2003?

The challenges that I faced over the summer were with my schoolwork. I was taking a full load during the summer, which means the normal class was condensed into only six and a half weeks. I was taking some difficult classes so the load was pretty overwhelming. It did get better after a couple of weeks because I was able to adjust to the course work. First session, I took ME 221 (Statics)

*The Ronald E. McNair Post-Baccalaureate Achievement Program/Summer Research Opportunity Program—McNair/SROP—focuses on preparing students for intensive research and the competitive graduate school admissions process. McNair is funded by the U.S. Department of Education and encourages first-generation, minority, low-income college students to pursue doctoral study. McNair runs simultaneously with SROP, which gives minority students the opportunity to acquire the research skills necessary to be successful in graduate school. SROP is funded by the Committee on Institutional Cooperation (CIC) and Michigan State University. McNair/SROP scholars engage in research in the academic fields of study in which they wish to pursue graduate studies. This helps them develop the skills and student-faculty mentoring relationships critical to success at the doctoral level.
and MTH 235 (Differential Equations); second session, I took ISS 310 (People and the Environment) and ME 222 (Mechanics of Deformable Solids).

I am very excited about being officially accepted into the College of Engineering. About a week after the summer session ended, I was informed by mail. I have worked very hard to keep my grades up so that I would not need to worry about getting in. (As of the end of summer, I had completed 57 credits with an overall GPA of 3.58.) Some people think that once they get admitted to the college they do not need to work as hard. I think the opposite is true. Now that I am in the college I will be taking more courses that directly relate to my major; therefore, it is important to do even better in these courses. I am really looking forward to taking more advanced classes and continuing my education at MSU.

What did you do in your free time over the summer?

I spent most of my time studying. I had classes three days a week, four hours each day. I lived in my hometown—Linden, Michigan. This meant that I had to commute an hour to my classes each day. In addition to studying and classes, I spent a lot of my summer on the lake. I own a 750 SXi Kawasaki Jet Ski. I spent most of my free time riding my Jet Ski or wakeboarding with my friends. I also helped my family build a shed and vacationed in Florida.

Did you read any good books over the summer?

This summer was extremely busy for me so I did not read any books except textbooks. Last spring semester, I did read some of the books in the Left Behind series. I read *Nicolae*, *Soul Harvest*, and *Apollyon* (by Tim LaHaye and Jerry B. Jenkins). These were extremely good books, and I would recommend them to everyone.

What were your highlights/challenges during fall semester 2003?

I returned to DENSO during the fall semester, doing the second rotation of my co-op. I worked again in the molding engineering department, but for mold and die design, instead of processing. This allowed me to see a different aspect of it—working with the mold/die design section of molding. I have learned so much this semester; I have been able to see the actual design of molds and how they are assembled. Combining what I had learned last time—about the process—with what I learned this past semester has allowed me to understand molding even better.

One major highlight of fall semester was using Unigraphics software for design changes. I was able to follow a design change through the entire process—completing the change, sampling, testing, and getting approval. I also worked on numerous other projects including starting up new molds, capability studies, and designing jigs for Quality Engineering.

In addition, I returned to projects that I had been working on last spring semester. I had been continually working on a project that will implement SPC (Statistical Process Control) into the cooling fan area.

Once again, I have learned so much during this work semester!

The co-op program that I am involved in is a two-year program where I switch between school and work. I will be returning to school again for spring semester; I will be back at DENSO one more time summer 2004.

I have enjoyed working at DENSO and am looking forward to returning for my final rotation this summer.

Greg Kehrier

SENIOR (BAY CITY, MICHIGAN)

CHEMICAL ENGINEERING & MATERIALS SCIENCE

What were your highlights/challenges during summer 2003?

The Pfizer internship was my biggest challenge—and accomplishment. Naturally, it seemed overwhelming when I started. Looking back on it, I can safely say it was the best experience of my life. I wonder how much what I have learned at my internship will help me with classes.

One other highlight—Wartorn (my band) is making some good progress, and I'm
extremely happy about that. I can’t wait to play around East Lansing this year so we can get all our college buddies at some shows!

What kind of work did you do at Pfizer [formerly Pharmacia] this summer?

I worked as a project engineer in KAPI division of Pfizer (Kalamazoo active pharmaceutical ingredients). My engineering work supported a production building that manufactures mostly active drug ingredients and also some drug intermediates. As an intern project engineer, I was assigned a project that had not yet been started—to improve and automate the cleaning system on seven process filter tanks. When I began working, the first step was to identify what problems existed with the processes and which issues should be addressed by my project. If so, I might get to finish what I started! Whether or not that happens, the experience was absolutely great.

How has your experience at Pfizer influenced your career goals?

I am now sold on the idea of working in the pharmaceutical industry. When I started college I was thinking I might want to go into polymers. That still isn’t completely out of the question, but I thoroughly enjoyed the engineering climate at Pfizer. It’s the most regulated industry there is. Everything must comply with FDA standards to ensure safety of the drugs. To an engineer, that means every change or improvement to a process must be preapproved by several departments, no matter how minor it is. Then once something is implemented it is validated to prove that it works as intended. Change happens slowly and coordinating everything is very challenging. It demands tremendous amounts of teamwork, but I like that.

What did you do in your free time over the summer?

There were 40 interns at Pfizer, so most of us hung out after work and on weekends, going bowling, playing beach volleyball, golfing, partying. Most weekends, I drove to Northville to practice with Wartorn, or to a gig if we had one that weekend.

Did you read any good books over the summer?

I didn’t read anything; I’m usually too busy playing my guitar to stop and read a book!

What were your highlights/challenges during fall semester 2003?

This fall semester my greatest challenge was design—my hardest class yet. On top of that, taking 16 credits along with playing in the marching band, working my job, and playing in Wartorn was overwhelming. All along I have been planning to graduate in either four and a half or five years. I needed to take 16 credits to make it in four and a half years, but that was a bad idea! I have been overloaded all semester. If any younger engineering students out there are reading this, learn from me; if you plan on sleeping more than three hours a night, taking your time is better than graduating fast!

My biggest highlight from this semester is the studio recording that Wartorn is finishing up right now. We are very excited that we are finally going to have a good-quality CD of our own music! I’d say another highlight was my math TA job, because I was fortunate enough to have a terrific class this semester. Teaching them was a lot of fun!

One other thing. Since MSU finished 8-4 and 5-3 we are going to a bowl game, and it looks like it’ll be either the Sun Bowl or the Alamo Bowl (both in Texas). I am really looking forward to that. Go State!

Tracy Kamikawa

SENIOR (HONOLULU, HAWAII)
BIOSYSTEMS ENGINEERING

You said that you and your family would be traveling around Ireland, France, and England over the summer after your study abroad in Dublin, Ireland, last spring. How was that?

This traveling experience was a lot differ-
ent from my travels with my friends during last spring semester. We students had used the most economical means in transportation and lodging and were often plagued with “graffitied” trains and run-down hostels. However, the family vacation was replete with first-class train rides, comfortable hotel rooms, and dinners in real restaurants. That was the difference I noticed immediately.

Plus, I didn’t have to lug around my huge backpack by myself anymore.

We rented a car in Ireland and visited the north and the west, namely the Giants Causeway (which didn’t live up to the hype), Derry, the Cliffs of Moher, Dingle Peninsula, and Galway. My favorite site was the Cliffs of Moher. Although it was cold and rainy, it cleared up long enough to get a breathtaking view of the cliffs in the distance and the sea splashing up against them.

Paris was amazing. My mom, sister, and I spent a lot of time shopping; there are so many amazing stores whether you have a big budget or not, and everything you find there is so unique, nothing like I’ve ever seen at home. My dad entertained himself by reading in the gardens. The Eiffel Tower and Cathedral of Notre Dame were must-sees, although a little disappointing. I was expecting to be more awestruck. Sainte-Chapelle Cathedral was lesser known, but beautiful with colorful paintings and stained glass. While we were there, a choir from Atlanta was inspired to break into song. It was so moving and the ambience so perfect that I nearly cried.

London was a huge, bustling city, a little overwhelming at first. We got well acquainted with the Underground because the bus system was ridiculous. The drivers never really stop and I saw a girl literally fall out of the back door because she hadn’t gotten a handhold before the driver accelerated. Piccadilly Circus was full of great shopping. Big Ben and the Tower of London were exciting because of their fame. The tour at the Tower of London was the best I’ve ever been on—the tour guides, or Beefeaters, were entertaining and knowledgeable, and it was interesting to see the site of so many incarcerations and executions. We were also able to see the The Lion King musical.

I returned to Hawaii with my family, over a month later than usual. For that reason, and because I wanted to recuperate before my senior year, I chose not to seek employment for the summer. Instead, I focused on completing an independent study with my MSU professor in Mass Transfer, and trying to catch up with friends whom I hadn’t seen for more than six months.

Did you read any good books over the summer?

Thus far I have only returned to old classics. I once again read Great Expectations. I first read it in high school, but loved it so much that I often reread it. I find that it comforts me. In fact, I also read it when I first reached Ireland. Everything was so new and daunting and this book served as a reminder of home and familiar times. I also read East of Eden, another book that I first read in high school. I was inspired to pick it up again by— I am almost ashamed to say—Oprah’s Book Club.

What were your highlights/challenges during fall semester 2003?

The highlight of this fall semester 2003 has undoubtedly been receiving one of the 100 awards from the U.S. Department of Homeland Security that were distributed to undergraduate and graduate students across the nation. The scholarship provides a monthly stipend for the 2003–04 school year as well as a summer internship opportunity at one of several DHS facilities located everywhere from California to D.C. to New York. I am excited to be one of the recipients in the inaugural year of the award and also to have the opportunity to apply my research with biosensors to the protection of our country. I recently attended a three-day orientation in Washington, D.C., with the other scholars and fellows, during which we were welcomed into the DHS community, shared our research goals in small discussion groups, met with our representatives and senators, and were addressed by DHS Secretary Tom Ridge. It is a thrill to be a part of such a significant endeavor.

When will you be graduating?

Currently, I intend to graduate in spring 2004. I will have completed my requirements by that time. However, my scholarship extends for another semester, so I am keeping the option open to remain enrolled at MSU and spend that final semester abroad. The deciding factors will be whether I receive any job offers immediately upon graduating, find intriguing study abroad opportunities, or
Nicole Danielson
GRADUATE STUDENT (RIVER FALLS, WISCONSIN)
ENVIRONMENTAL ENGINEERING

What were your highlights/challenges during summer 2003?

The highlight of my summer was getting engaged to my boyfriend, Mitch Bartelt (also an MSU civil engineering alum), in May! And then doing a lot of planning for the wedding, which will be July 24, 2004. I’m really excited, and I’m sure I’ll have lots of details for you in the future.

Planning the wedding is also one of the challenges this summer. I didn’t realize all of the planning and prep that you need to do, and so far in advance. Also, just trying to get started on my project and get it going so I wouldn’t have as much work to do during the school year (when TA’ing keeps me very busy).

You told us last time that you would be doing research at a constructed wetland site in Lansing during the summer. What did the project entail?

The site is the Tollgate wetlands, a constructed wetland located in Lansing Township, built to receive storm water runoff from the Groesbeck neighborhood. Constructed wetlands are a relatively new option for storm water or other wastewater treatments, so my advising professors (Dr. Wallace and Dr. Phanikumar) wanted to look into how we could describe the system or learn more about it by modeling the wetland using computer/mathematical modeling.

Most of my project focuses on modeling the hydrology, or water aspects of the wetland. I don’t have a lot of modeling experience, so I have to just keep plugging away at it. Some of my time was spent doing a literature review for the project and it is amazing how many resources I found out there! Sometimes it was a little overwhelming.

My role in the project was basically to help get this whole thing started. I am first working on describing each piece of the system, and what happens during a rain event in each of those pieces. I concentrated on the “water” part of the wetland, so I am trying to model what happens to the water as it moves through the system.

Eventually, the department may look into using this site as a teaching tool—where students will be able to set up models for other aspects of the wetlands, such as the nutrient cycles, possibly even leading to sampling and testing different parameters of the wetland. This could be a great class/course project in the future—especially since the site is so close to campus!

What did you do in your free time over the summer?

I tried to make it home a few times to see my family and relax up at our cabin in northern Wisconsin. At the very beginning of summer I visited a close friend in North Carolina, and was in the wedding of one of my closest friends, but otherwise I stayed at MSU.

Did you read any good books over the summer?

I read ‘Tis, by Frank McCourt. This book is the second part of Frank McCourt’s memoirs, the first being Angela’s Ashes. I really loved both of these books, and I encourage anyone to read them.

I also read American Gods, by Neil Gaiman, a Wisconsin native. This book is a little bit “out there,” but a great read.

What were your highlights/challenges during fall semester 2003?

One of the highlights was attending the SWE (Society of Women Engineers) National Conference in Birmingham, Alabama. I am the Region H student representative, so I got to attend a lot of interesting sessions and network with other SWE students and professional members.

My classes have been particularly challenging this fall, so I spent a lot of time at the Research Complex and in the Engineering Building, working with groups and studying. Also, I have been trying to work on my master’s project, but I have to confess that it has been difficult to work it in with classes, teaching, wedding planning, and job hunting. So even though that work hasn’t been moving along too well this semester, I have a pact with myself to work diligently over the break and make some headway.
Newly Renovated Library Cause for Celebration

On Friday, September 19, 2003, friends and supporters gathered to celebrate the completion of extensive renovations in the Anibal Engineering Library located on the first floor of the Engineering Building. During the summer of 2003, compact shelving, ergonomically correct work areas, an adjustable service desk for people with disabilities, new carpeting, and a self-service copy center were added. Other improvements included wall painting, window washing, and cleaning of the paintings of former deans. According to Tom Volkkening, director of the library, the installation of compact shelving increased shelving capacity by 50 percent.

During the renovations, the library maintained services to patrons to the fullest extent possible. “Occasionally we had to crawl under a table to retrieve a book for someone, but we remained open,” says Volkkening. —Lynn Anderson

ABOVE: The renovation project was funded by a gift to the College of Engineering by Charles Moore (chemical engineering ’35) and his wife, Loraine, of Toledo, Ohio. In September 1999, just a few months before Charles died, the Moores donated $62,000 for physical improvements to the library. Moore also established a multimillion-dollar endowment that is being used for the library.

AT LEFT (left to right): Richard Chapin, director emeritus, MSU Libraries; Cliff Haka, director, MSU Libraries; Janie Fouke, dean, College of Engineering; Tom Volkkening, director, Engineering Library; George VanDusen, assistant dean emeritus for undergraduate studies and former interim dean, College of Engineering.

“Tuesdays with Nancy.” The group charged with the planning and execution of the library renovation project met every Tuesday, led by Nancy Lucas, MSU Branch Libraries coordinator. Left to right: Virginia Boone of MSU’s Biomedical & Physical Science Library was the logistics person for the moving and reshelving of books as the project moved through its phases. Shannon Cunningham of the Engineering Library was in large part responsible for maintaining day-to-day operations during the renovations and helped plan the project and move materials. Lucas was the project manager, responsible for planning, including the project calendar, and keeping things on schedule; she also dealt with outside vendors and was Engineering’s liaison to the Main Library. Tom Volkkening, director of the Engineering Library, did a little bit of everything, which included acting as library liaison to the college. FAR RIGHT: Terry Casey, engineering facilities coordinator, dealt with building issues and served as the planning group’s contact with the dean; he also coordinated much of the work done by the MSU Physical Plant. The team always counted on Terry to bring along his tools for any “quick fixes” that seemed necessary.
WHO ARE OUR STUDENTS?

- **International Undergraduate Students**: 164
- **United States**: 3,213

**by gender**
- **Women**: 21
- **Men**: 143

**by class standing**
- **Freshmen**: 41
- **Sophomores**: 34
- **Juniors**: 48
- **Seniors**: 41

**by country**
- **U.S.**: 3,213
- **International**: 164

**by department**
- **Computer Science & Eng.**: 46
- **Civil & Environmental Eng.**: 7
- **Chemical Eng. & Materials Science**: 14
- **Mechanical Eng.**: 23
- **Agricultural Eng.**: 0
- **Engineering Arts / Engineering No-Pref**: 13
- **Electrical & Computer Eng.**: 61

**by class of 2002 graduating seniors**
- **Average composite score**: 20.6
- **Score range**: 14.8 - 25.0

**Bachelor's Degrees at MSU's College of Engineering**

- **Michigan Residence**: 683
- **Women**: 24,053
- **Men**: 20,489
- **Native American**: 14
- **Asian/Pacific Islander**: 2,272
- **Chicano/Other Hispanic**: 1,247
- **African American**: 3,608
- **Caucasian/Other**: 37,148

**Enrollment Statistics, Fall 2003**

- **Total**: 4,301
- **Women**: 24,053
- **Men**: 20,489
- **Native American**: 14
- **Asian/Pacific Islander**: 2,272
- **Chicano/Other Hispanic**: 1,247
- **African American**: 3,608
- **Caucasian/Other**: 37,148

**Michigan Residency**: Nearly 89% of our students are Michigan residents.

**Michigan State University**

- **Total**: 44,542

**College of Engineering**

- **Total**: 4,301
- **Graduation**: 88% of those admitted to the College of Engineering graduate in engineering.
- **International Connections**: About 13% of our graduates have studied abroad while at MSU. (The College of Engineering’s five-week program in Volgograd, Russia, established in 1998, has become one of MSU’s largest according to The State News [11/17/03]. MSU officials are expecting it to become the largest this summer.)
- **Student Organizations**: Nearly 50% of our juniors and seniors belong to a student organization. (There are approximately 25 active student organizations.)
- **Honors College**: More than 10% of our students are in MSU’s Honors College.
- **College of Engineering**: The College of Engineering is the 4th largest college on the MSU campus, with 4,301 students enrolled fall 2003.

**Engineering Enrollment in the United States (2002)**

- 367,684 students enrolled in engineering programs in the U.S.
- Of the 67,301 bachelor’s degrees in engineering awarded nationally, 22% were earned by women.

**Women in Engineering**

- Of engineering students enrolled in the U.S., ~19% are women.
- Of engineering students enrolled in MSU’s College of Engineering, ~19% are women.

**ACT Scores**

- **Average composite score**: 20.6
- **Score range**: 14.8–25.0

**by country**

- **UNited States**: 3,213
- **International**: 164

**by department**

- **Computer Science & Eng.**: 46
- **Civil & Environmental Eng.**: 7
- **Chemical Eng. & Materials Science**: 14
- **Mechanical Eng.**: 23
- **Agricultural Eng.**: 0
- **Engineering Arts / Engineering No-Pref**: 13
- **Electrical & Computer Eng.**: 61

**by class of 2002 graduating seniors**

- **Average composite score**: 20.6
- **Score range**: 14.8–25.0

**Bachelor’s Degrees at MSU’s College of Engineering**

- **In fall semester 2003, 164 students from nearly 40 countries outside the U.S. were enrolled in the College of Engineering.**
- **Of those students admitted to the College of Engineering, 88% graduate in engineering.**
- **In December 2003 commencement, 217 undergraduates received their degrees.**
- **About 13% of our graduates have studied abroad while at MSU. (The College of Engineering’s five-week program in Volgograd, Russia, established in 1998, has become one of MSU’s largest according to The State News [11/17/03]. MSU officials are expecting it to become the largest this summer.)**
- **Nearly 50% of our juniors and seniors belong to a student organization. (There are approximately 25 active student organizations.)**
- **More than 10% of our students are in MSU’s Honors College.**
- **The College of Engineering is the 4th largest college on the MSU campus, with 4,301 students enrolled fall 2003.**

**Who are our students?**

**Graduation**

- Of those students admitted to the College of Engineering, 88% graduate in engineering.
- At December 2003 commencement, 217 undergraduates received their degrees.

**International Connections**

- In fall semester 2003, 164 students from nearly 40 countries outside the U.S. were enrolled in the College of Engineering.
- About 13% of our graduates have studied abroad while at MSU. (The College of Engineering’s five-week program in Volgograd, Russia, established in 1998, has become one of MSU’s largest according to The State News [11/17/03]. MSU officials are expecting it to become the largest this summer.)

**Student Organizations**

- Nearly 50% of our juniors and seniors belong to a student organization. (There are approximately 25 active student organizations.)
- More than 10% of our students are in MSU’s Honors College.
- The College of Engineering is the 4th largest college on the MSU campus, with 4,301 students enrolled fall 2003.
Who Are Our Students?

By Country

- International
- Total

Looking at our international student population, we have students from over 40 countries. Here are some key facts:

- ~13% of our graduates have studied abroad while at MSU. (The College of Engineering’s five-week program in Volgograd, Russia, established in 1998, has become one of MSU’s largest according to The State News [11/17/03]. MSU officials are expecting it to become the largest this summer.)

- Of those students admitted to the College of Engineering, 88% graduate in engineering.

- At December 2003 commencement, 277 undergraduates received their degrees.

- Nearly 89% of our students are Michigan residents.

- Of engineering students enrolled in the U.S., ~19% are women. Of engineering students enrolled in MSU’s College of Engineering, ~19% are women.

- Of the 4,301 students enrolled in fall 2003, 683 were women and 2,618 were men.

- Nearly 9% of our students are members of ethnic minority groups.

- More than 10% of our students are in MSU’s Honors College.

- The College of Engineering is the 4th largest college on the MSU campus, with 4,301 students enrolled fall 2003.

- ACT scores for fall 2002 graduating seniors:
  - National: 20.0
  - Michigan State: 24.5
  - College of Engineering: 25.0

- Of engineering students enrolled in the U.S., ~19% are women.
It is wonderful to be associated with such a great teaching laboratory,” said John Voorhorst, president of the DENSO North America Foundation, at the September 29, 2003, dedication of the DENSO Industrial Projects Laboratory in the MSU College of Engineering. “The DENSO North America Foundation is very proud to be a partner with Michigan State University and the College of Engineering in providing a facility where students can gain practical experience that will serve them in their careers.”

Dean Janie Fouke expressed the appreciation of the faculty and students in the College of Engineering for the generous gift from the DENSO North America Foundation. “This laboratory is a tremendous asset for our students. We are very pleased to have the DENSO name connected to our design and manufacturing program.”

The Industrial Projects Laboratory, supported by a $75,000 grant from the DENSO North America Foundation, is an important component of the College of Engineering’s Design/Manufacturing Learning Center. In this work area, students assemble and test their design products.

Department of Mechanical Engineering Chair Manoochehr Koochesfahani noted the significance of DENSO’s generous support of this lab. “The Industrial Projects Lab made possible by DENSO is an important resource for the mechanical engineering program. With close proximity to the Student Machine Shop to facilitate construction and assembly of parts, this lab sees heavy use by the senior capstone design groups as well as by students taking 300- and 400-level courses,” says Koochesfahani.

In addition to the Industrial Projects Lab, the center includes a computer-assisted design laboratory, a design resource center, a product design lab, and a rapid prototyping lab. The interconnected areas allow students to work efficiently on individual and team assignments to design, build, test, and present products.

The Design/Manufacturing Learning Center is an effective educational center where students prepare for careers in a variety of industries. From their introduction to computer-aided design as freshmen to their completion of a senior design project, engineering students in the center cooperate in teams, work with advisers, consult with industrial clients, and refine their communication skills. Most importantly, students learn how to find a creative design solution that addresses a need and solves a problem.

Approximately 1,000 students use the center in a typical academic year, including some 350 mechanical engineering (ME) juniors and seniors, 400 ME freshmen and sophomores, and 250 students from other engineering disciplines.

Following the dedication of the Industrial Projects Lab, Voorhorst, along with DENSO Foundation Secretary and Program Officer Barbara Wertheimer, Tom Zahrt, manager of human resources for DENSO Manufacturing Michigan, Inc., and Pete Marino, senior recruiter for DENSO International America, Inc., toured the entire Design/Manufacturing Learning Center and interacted with students working on team projects.

In the Rapid Prototyping Laboratory, mechanical engineering senior Jim Wilde
demonstrated his team’s project, which won the 2003 Regional Student Design Competition sponsored by the American Society of Mechanical Engineers.

In addition, the DENSO group joined a class (ME 385) in the Product Design Lab. The students presented team projects they had constructed to meet the challenge of designing and building a serviceable, aesthetically pleasing chair using nothing but corrugated cardboard and glue.

Wertheimer said the Design/Manufacturing Learning Center “replicates the synergy that occurs in industries like DENSO International and DENSO Manufacturing. From concept to design, build, test, and modify, the students here are getting excellent preparation for their futures.”

Additional supporters of the Design/Manufacturing Learning Center include Ford Motor Company, General Motors, and Honeywell. For information on additional naming opportunities still available within the center, please contact Kristin Bradley, senior director of development for the College of Engineering at (517) 355-8339.

This article also appeared in MSU Partners (winter 2004), a publication of Michigan State University Development.
Civil and Environmental Engineering Faculty Demonstrate Commitment Through the Establishment of Endowments

For some of our engineering faculty, charity really does begin at home. Two civil and environmental professors recently demonstrated their philanthropic spirit by each establishing a new endowment that enhances departmental student activities.

During his tenure with the College of Engineering at MSU, Mackenzie “Mack” Davis, civil and environmental engineering professor emeritus, embraced the philosophy that student activities provide educational value beyond what is found in the classroom, and that professional development begins with membership in the student chapters of professional organizations. He further believed that these extracurricular student activities develop the qualities of leadership, creativity, planning, commitment, and sociability that make good engineers great engineers.

On the occasion of his retirement, and as a manifestation of his commitment to students, Davis established the Mackenzie L. Davis Student Activity Discretionary Endowment Fund. This endowment will enhance the activities of various departmental student organizations, including the Concrete Canoe Team, the Steel Bridge Team, American Society of Civil Engineers Student Chapter, Environmental Engineering Student Society, Chi Epsilon, Institute of Transportation Engineers Student Chapter, and the Associated General Contractors Student Chapter.

Like Davis, Associate Professor Thomas Maleck is committed to supporting civil and environmental engineering student activities. Maleck is co-director and co-founder of the highly successful Volgograd Russia Study Abroad Program, the largest study abroad program offered at MSU, with nearly 75 students scheduled to participate in 2004.

A true Spartan, Maleck received all three of his civil engineering degrees from Michigan State. His wife, Ellen, also received three degrees in education from MSU. As a gesture of deep appreciation for what Michigan State has done for them, and as a measure of further commitment to engineering student activities, the Malecks recently created the Thomas L. and Ellen E. Maleck Endowed Excellence Fund in Civil Engineering. This fund will provide deserving students—those who might otherwise be unable to participate—with the resources necessary to become involved in co-curricular activities related to civil engineering professions.

Through the Maleck Endowment, it is hoped that more students than ever will benefit from study abroad experiences, attendance at national professional conferences, and participation in national competitions.

The College of Engineering encourages alumni and friends who share Davis’s and Maleck’s commitment to students to pledge their financial support to endowments such as these. For further information on how to contribute to the Maleck or Davis endowments, to request a list of other endowments for which you may provide support, or to explore the possibility of creating an endowment of your own, please contact the Development Office at (517) 355-8339, or egrdevel@egr.msu.edu.
The Campaign for MSU  COLLEGE UPDATE

by Kristin Bradley

Last year, Michigan State University publicly commenced The Campaign for MSU, the most ambitious capital campaign in university history, with a goal of raising $1.2 billion by 2007. As a major participant in The Campaign for MSU, the College of Engineering set an equally ambitious fundraising goal of $209 million.

Despite an uncertain economy, coupled with the uncertainty posed by world events, the college experienced growth in its fundraising efforts during fiscal year 2002/2003. The college secured $4.8 million in new gifts and pledges, representing an 11 percent increase from fiscal year 2001/2002. To date, the college has raised nearly $170 million—or 81 percent of its overall campaign goal. This total represents gifts of cash, planned gifts, equipment, and other in-kind support and patents.

A campaign priority for the college is to heighten focus on the critical need for endowment support. The College of Engineering is committed to dramatically increasing its endowment from $20 million to $56 million by 2007. To date, more than $11 million has been raised toward this goal. Ten new endowment agreements were signed during this past fiscal year, with an additional eight endowment agreements nearing completion. The college has made endowed excellence funds—which enable the college to direct support where the needs are greatest—a high priority. Other priorities include endowed chairs and professorships, and endowed fellowships.

Giving within the College of Engineering continues to prosper, as evidenced by the past fiscal year’s success. Yet we do not have an easy journey ahead of us. As we continue our campaign endeavors, the College of Engineering will look to its many alumni and friends to play an important philanthropic role in reaching its campaign goals, especially those related to building the endowment.

New Endowments

July 1, 2002–June 30, 2003

- Chemical Engineering Endowed Discretionary Fund Established by Donald K. Anderson (Chemical Engineering & Materials Science Professor Emeritus and former Department Chair) and Gina Garrett (BA Art Hist. ’81)
- The William J. and Mary M. Blyth Endowed Excellence Fund Established by William J. Blyth (BS Egr. ’38, MS ChE ’40)
- The William H. and Jean G. Clement Endowed Chair in Manufacturing Established by William H. Clement (BS ME ’50) and Jean G. Clement (BA Bus. Admin. ’48)
- John Forsyth and Gretchen Duerr Forsyth Endowed Scholarship Discretionary Endowment Fund Established by John Forsyth (BS ’62, MS ’63, PhD ’71 ECE; Computer Science & Engineering Professor Emeritus) and Gretchen Duerr Forsyth (BA Soc. Sci. ’63)
- The Mackenzie L. Davis Student Activity Discretionary Endowment Fund Established by Mackenzie L. Davis (Civil & Environmental Engineering Professor Emeritus)
- McClure Family Endowed Scholarship/Fellowship Fund Established by Donald and Patricia McClure
- The Cotterman Family Endowment for Entrepreneurship Studies Established by Brant Cotterman (BA Business ’60; MBA Marketing ’61) and Sharon Cotterman (BA Education ’60)
- The Richard V. Pisarczyk Endowed Discretionary Fund Established by Richard V. Pisarczyk (BS CHE ’68)
- G. Glenn and Mariene D. Gardner Endowment in Automotive Engineering Established by G. Glenn Gardner (BS ME ’58) and Mariene D. Gardner
- The Keith D. and Beverly J. Salisbury Endowed Fund of Excellence Established by Keith D. Salisbury (BS ME ’58) and Beverly J. Salisbury
Josh Hall and Jim Feeney, sophomore students in ME 285, won the class competition for their design of a remote-controlled race car, but they had nothing to show for it—not literally, anyway. But they were virtual winners.

A panel of seven judges declared the team winners of the first-ever PACE Virtual Product Development Competition, held at MSU’s College of Engineering on December 3, 2003.

Janie Fouke, dean of the College of Engineering, was one of the judges. She is pleased that MSU was chosen as the site of the inaugural competition. It is fitting, because MSU was selected in September 1999 as the first PACE Institution. “We’re in front once again!” she says.

The PACE Program—Partners for the Advancement of Collaborative Engineering Education—provides hardware, software, training, automotive parts, and much more to strategically selected academic institutions worldwide. There are currently 26 PACE Institutions, with plans to add more.

General Motors, Electronic Data Systems (EDS), Sun Microsystems, and UGS PLM Solutions form this collaborative engineering education effort to prepare the automotive team of the future.

The PACE Virtual Product Development Competition was initiated to encourage students to use computer-aided design software. MSU students use Unigraphics and ADAMS, virtual prototyping and motion simulation software, to produce class projects.

Four teams of two students each in Computer Aided Design Tools, a course taught by Bob Chalou, academic specialist, participated in the PACE competition. The class project was to design a virtual remote-controlled race car. A virtual model was supplied by UGS-PLM Solutions; the teams were to redesign some or all of the parts using computer software. Hall and Feeney won the competition with their JJ Racer.

After the competition, Elaine Chapman-Moore, manager of PACE Partnerships, GM, asked the students for feedback on how to improve the competition in the future. PACE Program coordinators also met with the
More than 30 employers and nearly 500 students participated in the Engineering Co-Op Exchange on September 24 in the MSU Union Building. The Exchange is designed for employers to distribute or share information and make direct contact with cooperative engineering education applicants. A Senior Exchange was held on September 23 to facilitate information exchange between employers and graduating seniors.

**ME 285 Student Teams**

**Team #1 “ABJB”**
Aimee Brown & Jaime Pearson

**Team #2 “LuBe Buggy”**
Ryan Luoma & Jeff Belanger

**Team #3 “JJ Racer”**
Jim Feeney & Josh Hall

**Team #4 “APROG Racer”**
April Richardson & Roger Koenigsknecht

**PACE Virtual Product Development Competition**

**Judges**

Lynn Bechtel  
Vehicle Engineer Cost Reduction, GM

Darrell Bozeman  
Operations Manager, UGS PLM Solutions

Ron DeBrabant  
Director of PACE Projects–U.S., GM

Janie M. Fouke  
Dean, College of Engineering

David Hammerstein  
Region Manager, UGS PLM Solutions

Frank Hubert  
Manufacturing Engineer Advanced Applications, GM

Dennis Rahn  
Account Representative, UGS PLM Solutions

judges and MSU faculty for recommendations for future competitions.

The second competition was held December 8, 2003, at Michigan Technological University. The intent is to hold six competitions in 2004 at U.S. PACE Institutions and expand to the global institutions, says Tanya N. Jordan, PACE Program marketing & communications coordinator.
Preserving and maintaining our nation’s roads and highways is the aim of the new National Center for Pavement Preservation (NCPP), established at MSU in partnership with the Foundation for Pavement Preservation (FP2).

This center is the first and only one in the world according to W. R. Ballou, president of the FP2 and one of the key partners in initiating the NCPP.

“The NCPP represents and supports an industry of thousands of companies engaged in the business of preserving and maintaining our nation’s roads and highways—almost four million miles of them, with a replacement cost of nearly $2 trillion,” said Ballou at the October 17 grand opening ceremony. “The center’s value was envisioned more than 10 years ago. It is a vital first step to begin to manage the $1.75 trillion investment made by American taxpayers.”

“This center is a culmination and a milestone in which industry, government, and academia have come together to benefit the taxpayer,” Larry Galehouse, director of the NCPP, says. “Pavement preservation is just good public policy, and the center stands ready to lead the effort.”

The NCPP—the realization of a collective national vision of pavement practitioners, policymakers, and industry—will lead collaborative efforts among government, industry, and academia in the advancement of pavement preservation. The center’s purpose is to advance and improve pavement preservation practices through education, research management, outreach, and technical hands-on assistance.

“With the strong activity in pavement research, education, and outreach in the Department of Civil and Environmental Engineering, the center was a natural fit for us,” said Ronald S. Harichandran, chairperson of MSU’s Department of Civil and Environmental Engineering, at the October event. “Our faculty have a strong record of excellence in pavement engineering. Their contributions will greatly enhance the success of the center.”

Gilbert Baladi, MSU professor of civil and environmental engineering and the founding director of MSU’s Pavement Research Center of Excellence sponsored by the Michigan Department of Transportation, has expertise in the material characterization, design, non-destructive testing, and management of asphalt pavements. Neeraj Buch, associate professor of civil and environmental engineering and current director of the MSU...
Pavement Research Center of Excellence, has expertise in the design, performance, and rehabilitation of concrete pavements. Karim Chatti, assistant professor of civil and environmental engineering, has expertise in pavement modeling, performance, and dynamics, including truck/pavement interaction.

“These three faculty members, along with others in the College of Engineering who are experts in materials and nondestructive evaluation, offer strong research support to the center,” said Harichandran. “They will also facilitate the education of our students in the methods of pavement preservation.”

King W. Gee, the Federal Highway Administration’s associate administrator for infrastructure, said at the grand opening, “We anticipate a bright future for the new national center as it begins its journey to promote pavement preservation by providing technical support and services to stakeholders, not just here in the state of Michigan, but in every state and locality in the country.”

The NCPP is located at 2857 Jolly Road, Okemos. It is supported by the Foundation for Pavement Preservation, the Federal Highway Administration, Michigan State University, the MSU College of Engineering, and other federal and state agencies.

—Laura Luptowski Seeley
Dina Eldin received first place in the American Institute of Chemical Engineers (AIChE) 2003 Student Poster Competition, Computing and Systems Technology division, held in San Francisco in November. She received her bachelor’s degree in chemical engineering from MSU in 2002, her master’s in 2003, and began her Ph.D. work at MSU in January. She just completed a three-semester industrial co-op with Bechtel, San Francisco. Eldin first competed in the poster competition at AIChE in the Computing and Systems Technology division in 2001; she came in third. In 2002, she placed second in the Mixing division.

Pezhman Akbari, a mechanical engineering graduate student, received an AIAA Foundation Potential of Wave Devices in Gas Turbines Graduate Award for the 2003–2004 academic year for his wave rotor research. The AIAA Foundation is a nonprofit organization formed by the American Institute of Aeronautics and Astronautics to devote attention and resources to the education of current and future aerospace professionals. The AIAA Foundation funds scholarships on both the undergraduate and graduate levels.

Pezhman’s research focuses on wave rotor technologies that have the potential to increase the efficiency of aircraft engines, car engines, and gas turbines for power generation. This technology can enhance the fuel efficiency of modern propulsion and power generation systems significantly, making the United States less dependent on oil imports.

Karena Heikkila, a mechanical engineering graduate, was one of two graduating seniors chosen to speak during the December commencement ceremonies at MSU. Her focus was on how diversity links people together at MSU.

Heikkila, a 1999 graduate of Calumet High School, said coming to MSU has given her a new outlook on the cultural makeup of society. While attending MSU, Heikkila participated in National Society of Collegiate Scholars, Habitat for Humanity, and intramural sports.

Olivia M. Hobbick, an engineering arts graduate, was one of six students honored for academic achievement by the MSU Board of Trustees at the board’s December 5 meeting. Board of Trustees awards are granted at each commencement to students having the highest scholastic averages at the close of their last semester in attendance. Hobbick’s MSU grade point average was 3.9871. At spring 2003 commencement, four of the six students honored by the Board of Trustees were engineering students.

Tracy Kamikawa, a biosystems engineering senior, is the recipient of one of the U.S. Department of Homeland Security’s (DHS) first Undergraduate Scholarships. The awards are presented to highly talented students interested in pursuing basic science and technology innovations that can be applied to the DHS mission. Fifty-one undergraduate scholarships and 51 graduate fellowships were awarded; 2,500 students across the country applied.

Zachary Kiefer, an environmental engineering graduate student, is the first recipient of the Student Travel Program Award of the Michigan section of Water for People (WFP). Kiefer traveled to Ecuador with members of the WFP committee in September, giving him the opportunity to interact with water professionals on existing and new water projects. In 1999, he studied the ecosystem of Ecuador while attending classes there at the Universidad San Francisco de Quito.

Neal Koenig, a mechanical engineering junior, received a scholarship from Tau Beta Pi, the engineering honor society, for undergraduate study during the 2003–2004 academic year. Out of 234 applicants, 38 were selected to receive the awards on the basis of scholarship, campus leadership and service, and promise of future contributions to the engineering profession. Koenig’s scholarship was sponsored by General Motors.

Julie Schiller, a senior with a dual major in engineering arts and psychology, was nominated in October for the Rhodes Scholarship. She is the recipient of the Distinguished Academic Achievement Award from the College of Engineering, the Granger Scholarship in Engineering, and was an intern with Ford Motor Co. At MSU, Schiller has served as a residence hall mentor, an executive board member of the MSU Society of Women Engineers, and treasurer of the Council of Jewish Student Organizations. She also served as a member of the Student Literacy Corps, tutoring a student in Lansing through MSU’s Read to Succeed program. She also plays viola in the MSU Campus Orchestra.

The Rhodes Scholarships, the oldest of the international awards, bring outstanding students from many countries around the world to study at Oxford University. Schiller was
one of five MSU nominees to be considered for the prestigious scholarship.

Michael Shafer, a chemical engineering graduate student, has made mathematical history by discovering the largest known prime number—which is 6,320,430 digits long. It took more than two years to find using a distributed network of 60,000 volunteers’ computers around the world. Shafer used his office computer to contribute spare processing power to the Great Internet Mersenne Prime Search (GIMPS). For a complete story, go to http://msutoday.msu.edu/research/index.php3?article=03Dec2003-1

Janelle Shane, an electrical engineering junior, won third place in the student division of the 2003 MSU Global Focus international photography contest. Her photo, entitled “In the Cathedral Courtyard,” was taken in France in 2003 (see below).

The photo competition, sponsored by the MSU Office of International Studies and Programs (ISP) and the MSU Alumni Association, is open to MSU students, faculty/staff, and alumni. This year’s competition drew 385 entries from 136 individuals. A total of 30 awards were given.

To view the winning photos, go to http://www.isp.msu.edu/photocontest/

Four Engineering Students Named Academic All-Big Ten

Four engineering students were named to the 2003 Fall Academic All-Big Ten Conference Team. To be eligible, athletes must have won a letter in at least their second academic year at their institution and carry a career grade point average of 3.0 or better. Sixty-seven Spartans were named—the second most of any Big Ten school.

<table>
<thead>
<tr>
<th>NAME</th>
<th>SPORT</th>
<th>MAJOR</th>
<th>YEAR</th>
<th>GPA</th>
<th>HOMETOWN</th>
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<td>Breanna Harpstead</td>
<td>Field Hockey</td>
<td>Chemical Engineering</td>
<td>Sophomore</td>
<td>3.70</td>
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<td>Kyle Rasmussen</td>
<td>Football</td>
<td>Engineering Arts</td>
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<td>Nathan Usher</td>
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<td>Junior</td>
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<tr>
<td>Greg Yeaster</td>
<td>Football</td>
<td>Mechanical Engineering</td>
<td>Senior</td>
<td>3.31</td>
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</tr>
</tbody>
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Three Engineering Students On Homecoming Court

Three out of the nine seniors selected to represent the student body in the 2003 Homecoming Court were engineering students. Named to the court were Hammad Ahmed Shaikh, a computer engineering senior from Karachi, Pakistan; Dagan R. Mishoulam, a mechanical engineering senior from Arlington Heights, Illinois; and Justen Bond, a mechanical engineering senior from Flint, Michigan.

Students are nominated for the honor by MSU organizations and individuals, and chosen for their high academic standards, leadership skills, and “Spartan spirit.”

The theme for the October 3–4 activities was “Roots of Excellence,” named in honor of Michael Budman, 1968 alumnus with a degree in communications and grand marshal for the Homecoming Parade. He is the co-founder and CEO of Roots Canada, which has achieved worldwide recognition for outfitting the Canadian, United States, and Great Britain summer and winter Olympic teams.
International Day in Engineering

The College of Engineering celebrated International Day on October 14. Maggie Blair-Ramsey, coordinator of the popular Engineering Study Abroad program, organizes a presentation each fall in the main lobby of the Engineering Building to celebrate the diverse cultures that co-exist at MSU and in the surrounding community. This year’s event included a display of African art, along with dancing, singing, and story telling by performers representing Mexico, Russia, China, Cuba, and India.

The College of Engineering event was held in connection with the campus-wide observance of International Education Week, November 15–23. International Education Week is a joint initiative of the U.S. Department of State and the U.S. Department of Education to promote programs that prepare Americans for a global environment and attract future leaders from abroad to study, learn, and exchange experiences in the United States. In an August 25, 2003, letter to U.S. governors, Secretary of Education Rod Paige said, “The blending of international education into many subject areas should be happening as a matter of course . . . International education is for everyone.”


The Stars of Punjab

Amit Bhatia, electrical engineering senior, was one of the performers at International Day in Engineering. Bhatia (at far right in series of photos) and his dance partner, Preet Singh Sahni, a senior in finance at MSU’s Eli Broad College of Business, are part of a dance group called Sitare Punjab De (The Stars of Punjab). The group performs Bhangra, a lively music and dance form that originated in the Punjab region in North India.

The dance group formed three years ago as an outgrowth of a student group called the Coalition of Indian Undergraduate Students (CIUS), which puts on a yearly cultural program called Satrang for the MSU community. Bhatia says that he and his friends really like dancing. “It’s in my blood,” he says. When they discovered Bhangra dance competitions in Toronto and Detroit, a group of 16 Indian MSU students decided to enter. In the Detroit competition, “Bhangra Fusion,” held at the State Theatre, the MSU group won the public choice award. In the January 2003 inter-university competition, “Bhangra Nation,” in Toronto, the MSU group won the gold medal, competing against teams from schools like New York University, the University of Toronto, and Cornell University.

According to Bhatia, “Bhangra lyrics reflect the long and often tumultuous history of the Punjab. While Bhangra began as a part of harvest festivals, it eventually became a part of such diverse occasions as weddings and New Year celebrations.” Most of the MSU Bhangra dance group are from Punjab heritage. Bhatia has just graduated from MSU and returned home to New Delhi, India, where he will join the family business, a manufacturer of tin cans, mainly for the food processing industry.
International Students Visit Cedar Point

In 2003, for the first time, the Engineering Study Abroad program included a field trip for international students studying at MSU. On Tuesday, July 29, four students from Germany and two from Taiwan went to Cedar Point amusement park in Sandusky, Ohio, with Maggie Blair-Ramsey, coordinator for the Engineering Study Abroad program. The students enjoyed a break from the academic environment on campus and had a chance to socialize with other exchange students.

Blair-Ramsey says that in the future, field trips for international students may include one-day trips to Mackinac Island, Henry Ford Museum in Dearborn, or a cruise on Lake Huron.

Jan Gotza, Kaiserslautern, Germany: “It was a great idea to go to Cedar Point. It was a good opportunity to become acquainted with the other students and have fun together outside of MSU.”

Hung Chang Chen (Nick), Taipei, Taiwan: “The best part of Cedar Point was standing on the bridge of Snake River Falls, letting the water hurricane swirl around your head and hit you right in the stomach. I also took the chance of trying to make friends when I was waiting in line for the Millennium Force for an hour and a half. I talked to a guy who was very friendly. We shared lots of experiences and stories.”

Sacha Loitz, Kaiserslautern, Germany: “The trip was a great idea! I never experienced such crazy rides before. Going there with a group made it really fun.”

Melanie Gross, Kaiserslautern, Germany: “We went on a great ride with a lot of looping, but after standing in the long queue we needed some refreshment, because it was so hot. So we decided to find a ride that included water. We tried Thunder Canyon, but some of us managed to stay almost completely dry. So we went to Snake River Falls. All the signs said, ‘You will get wet!’ We did not believe it, but we should have. All of us were completely soaked. It was so much fun!”

Laura Dillon, professor and acting chairperson of the Department of Computer Science and Engineering, was program co-chair of the ICSE 2003 International Conference on Software Engineering held in Portland, Oregon, May 2003. The conference theme was "Scaling New Heights." ICSE brings together world leaders in software engineering research, practice, and education to present and discuss the most recent advances, trends, and concerns in software engineering.

Janie M. Fouke, dean of the College of Engineering, was co-chair of the June 2003 Symposium of the Bioengineering Consortium (BECON) of the National Institutes of Health (NIH). The symposium, “Catalyzing Team Science,” examined team approaches to biomedical research. Encouraging and rewarding participation or productivity in team environments is critical to advancing discovery and development in the field of bioengineering. The conference drew investigators, university administrators, managers of information dissemination, and funding agency representatives.

Anil K. Jain, University Distinguished Professor in the Department of Computer Science and Engineering and in the Department of Electrical and Computer Engineering, has been invited by the Association for Computing Machinery Fellows committee to become an ACM Fellow. The ACM Fellows Program was established in 1993 to recognize and honor outstanding ACM members for their achievements in computer science and information technology and for their significant contributions to the mission of the ACM. The ACM Fellows serve as distinguished colleagues to whom the ACM and its members look for guidance and leadership as the world of information technology evolves. For more about the Association for Computing Machinery, go to [http://www.acm.org](http://www.acm.org)

Jain also co-authored the *Handbook of Fingerprint Recognition*, an important resource for all biometric security professionals, researchers, practitioners, developers, and systems administrators. It was published by Springer in 2003. For more about the book, go to [http://www.springer-ny.com](http://www.springer-ny.com)

Hassan Khalil, a professor in the Department of Electrical and Computer Engineering, has been named a University Distinguished Professor, the highest honor bestowed on a faculty member by Michigan State University. Khalil, along with nine other MSU professors, was honored at an awards ceremony on October 30. Those selected for the title have been recognized nationally and usually internationally for the importance of their teaching, research, and public service achievements.

Khalil’s work focuses on nonlinear systems and control, and his work on stabilization of nonlinear systems exhibits mastery of sophisticated mathematical techniques and fundamental engineering issues. Much of his writing on singular perturbations is considered the standard for reference.

Individuals holding the professorship will receive, in addition to their salary, a stipend of $5,000 per year for five years to support professional activities. There are now 84 faculty members who have been named a University Distinguished Professor since the designation was established by the university and approved by the MSU Board of Trustees in 1989.

Phillip McKinley, professor of computer science and engineering, was program co-chair for the 2003 International Conference on Distributed Computing Systems held in May 2003 in Providence, Rhode Island. The conference is a forum for engineers and scientists in academia, industry, and government to present and discuss their latest research findings.

Ajit K. Srivastava, chairperson of the Department of Agricultural Engineering, has been honored with the 2003 Dennis Fenton
Graduate Alumni Award from the Cook College Alumni Association at Rutgers University and the New Jersey Agricultural Experiment Station. The award is given to alumni for outstanding accomplishments in their professional, civic, or volunteer work, which reflects dignity and distinction on Cook College at Rutgers, the State University of New Jersey. Srivastava received the award based upon his exemplary professional career in the area of machinery systems for food production and processing. The award was presented on October 25, 2003, at Rutgers.

**Thomas F. Wolff**, associate professor of civil engineering and associate dean for undergraduate studies, received a commendation in July 2003 from Commander Mark W. Connelly, LTC, for “dedication, expertise, and contributions as part of the Levee Seepage Task Force,” which assisted the Sacramento District U.S. Army Corps of Engineers in fulfilling their role of protecting the citizens of California from flood damage.

Wolff is a nationally recognized expert with more than 30 years of experience in the geotechnical engineering aspects of dams, levees, and hydraulic structures. He has consulted for, performed research for, and been employed by the U.S. Army Corps of Engineers and has worked on numerous water projects. He recently served as an independent technical reviewer for a national task force that reviewed and updated design criteria for levees and seepage control. Current criteria are based on studies from about 50 years ago, and derived primarily from experiences in the lower Mississippi valley. The updated criteria may lead to significant economic savings without compromising safety. In 1998, Wolff served on an independent review panel to evaluate seepage problems at Herbert Hoover Dike, a 150-mile-long structure surrounding Lake Okeechobee in Florida.
Meet Our New Faculty

Subir Biswas, associate professor of electrical and computer engineering, earned his Ph.D. at the University of Cambridge and his B.S. and M.S. at Jadavpur University in Calcutta. He has more than 10 years of industrial research experience in the networking industry. Prior to joining MSU, he was the principal architect for Tellium Optical Systems and the lead researcher on optical network restoration modeling, fault tolerant network design, network management, and advanced application development. Before Tellium, he worked at NEC Research Institute in Princeton, New Jersey, where he focused on wireless ATM, IP multicast, and IP traffic engineering problems. Biswas has published 40 journal/conference articles and book chapters and is a co-inventor on seven U.S. patents (granted and pending). He is a fellow of the Cambridge Philosophical Society. His current research interests include the broad area of wireless data networking, low-power network protocols, sensor networks, and wireless network security.

François Dion, assistant professor of civil and environmental engineering, earned his Ph.D. at the University of Waterloo in Ontario, Canada, and his B.Eng. and M.A.Sc. at the Ecole Polytechnique in Montreal. His general research interests are in the area of intelligent transportation systems, with more particular focuses on advanced traffic signal control systems, integrated control of transit and traffic operations, traveler information systems, information technology applications to transportation, and automated vehicle control systems. Additional interests include freeway and urban street traffic operations, intercity traffic, traffic simulation modeling, driver behavior modeling, modeling of vehicle fuel consumption and pollutant emissions, and environmental impacts of transportation projects.

Rong Jin, assistant professor of computer science and engineering, received his M.S. and Ph.D. degrees from Carnegie Mellon University. His research experience includes developing state-of-the-art machine learning algorithms for image classification/retrieval, camera motion detection, automatic title generation for textual documents, and information retrieval. His main research interest is statistical machine learning—the “tough” learning problems, such as learning “rare” concepts, learning with a small number of labeled examples, and learning with noisy and heterogeneous data; and the application of machine learning techniques to natural language processing, information retrieval, databases, and multimedia. His other research interest is information retrieval—the language modeling approach toward information retrieval; and supervised and semi-supervised approaches to learning a user’s profile and interests.

Nihar R. Mahapatra, associate professor of electrical and computer engineering, received a B.Tech. degree from the Indian Institute of Technology, Delhi, India, and an M.S. and Ph.D. from the University of Minnesota. Before coming to MSU, he was an assistant professor of computer science and engineering at the University at Buffalo–SUNY. His research interests include parallel and high-performance computing, computer architecture and VLSI, and dependability. He has published more than 40 refereed papers in leading journals and for conferences and workshops. He has received grants from the National Science Foundation, the Air Force, the University at Buffalo–SUNY, and IBM. He is a 2003 NSF Information Technology Research award selection panelist; a processor architecture track co-chair for the 2003 IEEE International Conference on Computer Design; a program committee member for the IEEE Computer Society 2004 Annual Symposium on VLSI; and a program committee member of the IEEE Transactions on Computers.

Hyungson “David” Ki, assistant professor of mechanical engineering, received his B.S. from the Pohang University of Science and Technology (POSTECH), Pohang, South Korea, and his M.S. and Ph.D. from the University of Michigan at Ann Arbor. Prior to joining MSU, he was a postdoctoral research fellow of mechanical engineering at the University of Michigan. His research interests include laser materials interaction/processing, laser micro- and nanofabrication, microscale heat transfer, and multiphysics/multiscale modeling of manufacturing processes.
member for the IEEE 2004 Great Lakes Symposium on VLSI.

Pradeep Ramuhalli, assistant professor of electrical and computer engineering, earned his B.Tech degree from J.N.T. University in Hyderabad, India, and his M.S. and Ph.D. at Iowa State University. His primary research interests are in the applications of signal processing and pattern recognition algorithms to industrial inspection and nondestructive evaluation (NDE). Other research foci are the development of solutions to inverse problems, especially in electromagnetics, data fusion algorithms, and pattern recognition and expert systems. He is the author of several journal and conference publications and is co-author of a chapter on microwave inspection in an upcoming edition of the *NDT Handbook* of the American Society for Nondestructive Testing.

Jonathan Shapiro, assistant professor of computer science and engineering, received his B.A. from Columbia University and an M.S. and Ph.D. from the University of Massachusetts at Amherst. His primary research interest is the application of economics to problems in networks and distributed systems, including the use of pricing mechanisms for distributed resource allocation and the role of incentives in promoting cooperation among self-interested network users. Other research interests include congestion control, privacy and security, electronic commerce, and peer-to-peer networking.

Pang-Ning Tan, assistant professor of computer science and engineering, received his M.S and Ph.D. degrees from the University of Minnesota. He worked as a research associate at the Army High Performance Computing Research Center from 2002–2003. His research experience includes developing spatio-temporal data mining techniques to help earth scientists discover changes in the global carbon cycle and climate system; developing robust algorithms for automatic detection and summarization of network attacks; and developing techniques to analyze how a Web site is being used by its visitors. Tan’s current research interests are data mining, intrusion detection, information retrieval, and machine learning. He has served as a program committee member for the IEEE International Conference on Data Mining (ICDM 2002 and ICDM 2003), the IEEE/WIC International Conference on Web Intelligence (WI 2003), and the Seventh Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD 2003).

S. Patrick Walton, assistant professor of chemical engineering and materials science, received his B.ChE. from Georgia Tech and an M.S. and Sc.D. in the Department of Chemical Engineering at MIT. At MIT he was awarded a Shell Foundation Fellowship and was an NIH biotechnology predoctoral trainee. Upon completion of his Sc.D., he joined the Stanford Genome Technology Center, receiving an NIH Kirschstein postdoctoral fellowship for his research. Walton’s research is focused on the engineering of active biomolecules through kinetic and thermodynamic design. In particular, his work focuses on the application of genomics tools to the measurement of DNA, RNA, and protein expression profiles, as well as the study of the protein and nucleic acid components involved in RNA interference.

Peixin Zhong, assistant professor of electrical and computer engineering, received his Ph.D. from Princeton University. He received his B.S. and M.S. in semiconductor physics and devices from Nanjing University, and his M.A. in electrical engineering from Princeton University. He was a faculty member in the Department of Physics at Nanjing University from 1992 to 1994 and did research on SiGe material and devices. Before joining MSU, he was a member of the technical staff with Lucent Technologies. He worked on research and development of FPGAs, MEMS-based optical switches, and broadband access networks. His research interests include the broad area of electronics design automation and VLSI. He is particularly interested in adaptable system-on-chip, low power electronics design with applications in wireless systems, Boolean methods in VLSI CAD, and configurable computing and FPGAs.
In Memoriam

Timothy M. Hoen, BS ME ’76, died August 11, 2003. He was a program manager at the Ford Motor Company’s Large/ Luxury Car Vehicle Center in Dearborn, MI, where he had worked since 1976. He earned an MBA in 1988. Hoen is remembered at MSU for his smile and his handball prowess. He is survived by his son Sean, three sisters, five brothers, and numerous nieces and nephews. He was predeceased by his daughter, Caitlin.

Terrence E. Monaghan, BS Civ Eng ’49, of Mount Clemens, MI, died May 21, 2003, at age 76. He was a U.S. Navy veteran of WWII. Employed by the Michigan Department of Highways, he designed the bridge across the Fox River at Seney, MI, and supervised construction of the bridge at Clinch Park in Traverse City. He worked for the asphalt firm Ward and Van Nuck beginning in 1955 and later became a principal owner. He graduated from the Detroit College of Law in 1963, passed the Michigan Bar, and was admitted to practice law in Macomb County. He served on the Mount Clemens City Commission for nine years and was Mayor Pro Tem for seven of those years. He is survived by Marion, his wife of 37 years; son, John; two brothers, James and Michael; sister Mary Ziegenhagen; and loving nieces and nephews. He was predeceased by his stepson, Todd Harris.

Russell M. Pickelmann, BS Chem Eng ’43, of Harrisville, MI, died July 25, 2003. He spent the majority of his career working for Dow Chemical Co. in Midland, MI. He was an avid amateur radio operator throughout his life. He is survived by his wife Mary and two sons, Mark and Paul.

James VanHaften, BS ME ’45, died July 17, 2003, in Midland, MI. He was employed by Dow Chemical Co. from July 1945 until June 1978. He is survived by his wife Esther, son Daniel, daughter Susan, and one grandson.

Edward A. Watjen, BS ME ’56, died June 13, 2003, at age 77. He served in the U.S. Navy during World War II. He was employed by Westinghouse and retired to New Bern, NC, in 1989. A member of First Presbyterian Church, he was an avid wood carver and craftsman. He is survived by his wife, Edna, sons Thomas and Andrew, a sister, Dorothy Watjen, and four grandchildren.

Two College of Engineering alums were among 23 alumni and friends of MSU recognized at the Alumni Grand Awards Ceremony on October 2, 2003. Hosted annually by the MSU Alumni Association (MSUAA), the event pays tribute to individuals who not only meet but greatly exceed the criteria for recognition by the MSUAA and the university.

Receiving Distinguished Alumni Awards were Paul Woodruff, BS ’59, MS ’61 (civil engineering), of Malvern, Pennsylvania, founder and CEO of Environmental Resources Management (ERM) from 1977 until his retirement in 2000; and Joseph M. Colucci, BS ’58 (mechanical engineering), president of Automotive Fuels Consulting, Inc., Clarkston, Michigan, and an international expert on vehicle emissions and fuel economy. The Distinguished Alumni Award is the highest award bestowed by the MSUAA.

For more about the Alumni Grand Awards Ceremony, visit http://msualum.com/events-new/2003/grand-awards/awards03.cfm
**CLASS NOTES**

**1930s**

**Leo Nothstine,** BS Civ Eng ’38, and his wife Rebecca (BA Education ’71) recently made a major gift to establish a charitable gift annuity that will be divided between an endowed scholarship in Medical Technology, an endowed scholarship in Nursing, and an existing endowed graduate scholarship they previously established in the College of Engineering. Now retired, Nothstine served as a faculty member in the College of Engineering for 35 years. The Nothstines divide their time between Traverse City, MI, and Naples, FL, and are active in both communities.

**1940s**

**Gerhardt R. Fitz,** D.O., ChE (attended ’42–’46), referring to p. 36, “Students Build Special Cycle,” in *Currents* 2:1 (Summer 2002), takes issue with our use of the word “tandem.” He writes: “I enrolled at MSC in January 1942 as a chemical engineering major. I volunteered in the Army via the enlisted reserve corps. By the time we went active, I was on [academic] probation. The Army sent me to lab school, introduced me to medicine, where I ended up. But I still remember the difference between ‘tandem’ and ‘side-by-side!’” After his service in the Army, Fitz was admitted to medical school without completing the last semester for his BS in engineering. He is a retired radiologist living in Port Charlotte, FL.

**George W. King** (formerly Koronski), PE., BS ME ’48, referring to pp. 12–13 in *Currents* 3:1 (Summer 2003), thinks that he crossed paths with Granville Sharpe in the blueprint room on the fourth floor of Olds Hall. He says he, too, got a job in the blueprint room through Aggie McCann, which helped with his dire finances. King had to leave school in 1941 to “earn enough to pay the bills,” but he came back to finish his degree in 1946. Following graduation, he worked for RCA, doing original testing on DuPont nylon. Then he was a project engineer on massive radar antennas in Greenland and Alaska. After that, he worked on satellites for the Air Force. Later, working as a consultant, he became involved with international patent licensing, which he continues to this day. He lives in Newtown, PA.

**1960s**

**Kenneth E. Bow,** BS Elec Eng ’62, was awarded the highest grade of fellow by the Institute of Electronic and Electrical Engineers. The honor recognizes excellence in power engineering and industrial applications. Bow, a resident of Freeland, MI, has worked for Dow Chemical Co. for 41 years. He is the chief scientist for the development of polymer and coated metal products for the wire and cable industry. He was recently honored with the Lighthouse Award for Lifetime Achievement by Dow’s Engineered Films and Laminates business.

**Lee Burgett,** PE., BS ’61, MS ’62, ME, a fellow of the American Society of Heating, Refrigerating, and Air-Conditioning Engineers, was installed as treasurer at the society’s 2003 annual meeting in Atlanta, GA. As treasurer, he serves on the board of directors and the executive committee, chairs the finance committee, and is vice-chair of the council that monitors ASHRAE chapter and regional activities. A resident of LaCrosse, WI, Burgett is an engineering consultant to the Trane Co. and other companies since his retirement last year from Trane as vice-president–new ventures. He has served on a number of ASHRAE committees and councils over the years, and is a recipient of the ASHRAE Distinguished Service Award.

**William C. Moody,** BS ’63, MS ’65, Civ Eng, was surprised to see “his” airplane on the cover of *Currents* 2:2 (Winter 2003). As “Flutter One,” he supervised the testing of “ship one” of the F/A-18E/F, at Patuxent River Naval Air Test Center, beginning in 1996. Moody was then a part of the Boeing/Navy Integrated Test Team. He is now the chief engineer for the F/A-18E/F. He has been with McDonnell Douglas (later Boeing Co.) since 1965 when he left East Lansing. Bill’s wife Carol (BA English, ’62) says, “The inside back cover [of *Currents* 2:2] has a photo of my father, Louis Otto, and his racing team of 1954. I can remember the photo being taken.” The Moodys live in Lexington Park, MD. wcpinxp @ameritel.net

**Fred W. Walstrom,** BS Civ Eng ’69, was elected to the board of directors of the Bank of Northern Michigan. He is the chairman and chief executive officer of Walstrom Marine Inc. of Harbor Springs, MI. A native of Harbor Springs, Walstrom is the current chairman of the Harbor Springs Planning Commission and a member of First Presbyterian Church in Harbor Springs.

**James K. Wight,** BS ’69, MS ’70, Civ Eng, received the American Concrete Institute’s Structural Research Award at their convention in Vancouver, British Columbia, in March 2003 for his co-authored paper, which advances the understanding of the seismic response of interior wide beam–column connections. A professor in the Civil and Environmental Engineering Department at the University of Michigan since 1973, he recently completed a six-year term on the external advisory board for his academic department. Wight is well known nationally and internationally for his work in earthquake-resistant design and seismic upgrading of concrete structures. He has served on numerous committees of the ACI and was elected a fellow in 1984. A past president of the ACI Michigan chapter, he received the Delmar L. Bloem Award in 1991; the Joe W. Kelly Award in 1999 for “outstanding efforts for the education of students in design of reinforced concrete structures”; and the Arthur J. Boase Concrete Research Council Award for Outstanding Accomplishments in Research, Teaching, and Service in the field of structural concrete in 2002. He has been recognized for “distinguished service” and “teaching excellence” by the U of M College of Engineering, and is a recipient of the State of Michigan Award for Outstanding Teaching. jwright@engin.umich.edu

**1970s**

**John P. Gyekenyesi,** PhD ME ’72, is head of the Structural Life Prediction Department at NASA’s Glenn Research Center in Cleveland, OH. A recent widower, he spends a lot of time traveling for NASA—visiting research labs, industry partners, and professional conferences. The focus of his work is aerospace engine structures.
Lansing.

■ David Joyce, BS ’78, MS ’80, ME, general manager for GE Aircraft Engines (GAE), Evendale, OH, has been named vice president of GAE Commercial Engines Operation and an officer of General Electric Co. Joyce recently led the company’s ARJ21 program win in China. The ARJ21 is the new regional jet being designed and built in China for which GE will supply engines. Joyce joined GE in 1980 and has held management positions in various divisions including Engineering, Quality, Customer Support, and Sales and Marketing.

■ Irene M. Mead, PE., BS Civ Eng ’75, is a partner in the law firm Honigman Miller Schwartz and Cohn LLP. She practices in the Regulatory Department (Lansing office), advising clients on liquor control issues. Prior to joining the firm she was Assistant Attorney General in charge of the liquor control division of the Michigan Attorney General’s office for more than five years. Before that, she was the Assistant Deputy Attorney General for Legal Operations in the Attorney General’s Executive Division for nine years. She is a nationally recognized expert on alcohol direct shipping matters. She is a graduate of the Thomas M. Cooley Law School in Lansing.

■ Elizabeth Shanahan, BS Elec Eng ’78, an electrical and software engineer in Chicago, has been named executive director of the Society of Women Engineers. A member for over 25 years, she has served the society in a variety of ways. Shanahan is also a member of the Institute of Electrical and Electronics Engineers and the Association for Computing Machinery. Most recently, she was the vice president of product management and marketing at Stellent, Inc., Chicago, IL. She is a member of the MSU Presidents Club.

■ Joellen Thompson, BS Civ Eng ’79, is the first woman to be named “Engineer of the Year” by the Michigan Society of Professional Engineers. In 1999, she was the first woman to be elected MSPE president. Thompson is the assistant water system manager for the city of Grand Rapids, MI. She enjoys solving problems, and was recently responsible for figuring out that a mysterious dent on the elbow of a pipe that connected to a storage tank was caused by an air bubble that had seeped in from a valve.

■ James Von Ehr, BS CSE ’72, was present in the Oval Office on December 3 as President Bush signed the 21st Century Nanotechnology Research and Development Act into law. The act authorizes $3.7 billion to fund nanotechnology research and development over four years, starting in FY 2005. Earlier, in May 2003, he had been invited by Senator George Allen to testify before the U.S. Senate Committee on Commerce, Science, and Transportation at a full committee hearing on S.189, the 21st Century Nanotechnology Research and Development Act. He gave an industry perspective on the bill and its potential effect on the budding nanotechnology field. Von Ehr is the founder and CEO of Zyvex Corporation in Richardson, TX. He serves his alma mater (MSU) as a member of the Strategic Partners Council for the Department of Computer Science and Engineering. A photo of Von Ehr in the Oval Office may be viewed at http://tinyurl.com/3xi2a (Von Ehr is second from right). The full text of Von Ehr's May 1, 2003, testimony is available at http://commerce.senate.gov/hearings/testimony.cfm?id=745&wit_id=2015. To learn more about Zyvex Corporation, visit http://www.zyvex.com/. For more about James Von Ehr, see page 30 in Currents 2:2 (Winter 2003).

1980s

■ Dean Altobelli, BS ME ’87, of Escanaba and Lansing, MI, has been elected a principal of the law firm Miller, Canfield, Paddock, and Stone, PLC. He is an attorney in the firm’s litigation, dispute resolution, and government regulation groups. Since joining the firm in 1993, he has handled lawsuits in state and federal courts and is experienced in business and governmental matters, including advising clients on federal and state laws. He served as a legislative assistant in the U.S. House of Representatives from 1989–90 and was a summer associate at Steptoe & Johnson, Washington, D.C., in 1992. He currently serves on the Board of Trustees for Lake Superior State University and on the board of directors for the MSU Varsity Alumni “S” Club. He is a member of the American Bar Association and State Bar of Michigan. At MSU, he was a two-time Academic All-American in football. Altobelli is a member of the MSU Presidents Club.

■ Blake Dilsworth, BS CEE ’84, became a principal with KPFF Consulting Engineers in 2001. He worked at Albert Kahn Associates from 1984 to 1989, then T. Y. Lin International, a bridge and building structural engineering firm, until 1996, when he joined KPFF, which is a structural and civil engineering firm. KPFF has offices on the West Coast and in St. Louis. Blake lives in San Rafael, CA, with his wife, Cindy (Merchandising and Management, Human Ecology ’85), and their three children. blake.dilsworth@kpff-st.com

■ Thomas W. Hague, BS Eng Arts ’83, holds the position of sales/account manager at S-Y Systems Technologies, a Siemens/Yazak joint venture in Dearborn, MI. tom.hague@systech-na.com

■ John Steven Haselow, BS ChE ’83, is president and owner of Redox Tech, LLC in Morrisville, NC. His company provides in situ soil and groundwater remediation in Georgia, North Carolina, and South Carolina. He and his wife Laura have a five-year-old daughter and three-year-old twin sons. haselow@redox-tech.com

■ Jan M. Hauser, PE., BS Elec Eng ’83, is manager of Finkbeiner, Pettis & Strout’s Novi, MI, office. He joined the firm in 1998 as director of business development for northwestern Ohio and southeastern Michigan and was named an associate in the firm in 2000. The nine FPS offices in Michigan, Ohio, North Carolina, and Virginia design water, wastewater, storm water, and transportation systems. Hauser is a certified F-1, S-1 water system operator in Michigan. He is a member of the American Water Works Association and the Water Environment Federation.
Marcia Lampela, BS ME ’84, engineering manager at BorgWarner Transmission Systems, Bellwood, IL, was elected treasurer of the Society of Women Engineers. The society was founded in 1950 to help women achieve their full potential in careers as engineers and leaders. Lampela has been with BorgWarner since 1990 as a program manager and as a product engineer at various levels. From 1984 to 1990, she worked for GE Aircraft Engines, Evendale, OH.

Carol Gremel Stovsky, MS CSE ’86, was named a partner with the Standley Law Group LLP located in Dublin, OH. She earned her Juris Doctorate from the Moritz College of Law at Ohio State University and was admitted to practice law in Ohio in 1994. She is additionally admitted to practice before the U.S. Patent and Trademark Office and the U.S. District Court for the Southern District of Ohio. A past chair of the Computer Law Committee of the Ohio State Bar Association, she is experienced in the preparation and prosecution of domestic patent applications pertaining to computer software and hardware, and in the registration of copyrights for computer programs.

1990s

Alexa Boorstein Albrecht, BS ME ’91, has relocated with her husband and one-year-old daughter from Carmel, IN, to the northern Chicago suburbs. Over the past few years she has made a career change with Eli Lilly and Company, moving into market research. She is beginning a new job as a business consultant for IMS Health in the Chicago area.

Lizette Chevalier, MS ’90, PhD ’94, CEE, associate professor of civil engineering at Southern Illinois University, Carbondale, IL, was named department chairperson in 2002. She is the first woman to hold this position. Chevalier joined the faculty in 1995 as an assistant professor and was promoted to associate professor in 1999. Her professional memberships include the American Society of Civil Engineering and the American Society for Engineering Education.

Joseph M. Fleming, BS ECE ’95, MS CSE ’98, recently received his commission as a naval officer after completing Officer Candidate School in Pensacola, FL, with distinction. He was trained in navigation, ship handling, engineering, naval warfare, and management.

Peter A. Kattula, BS Eng Arts ’94, an internal operations consultant for Masco Corp. in Novi, MI, was named vice-president of operational planning for Brass Craft, a Masco company in Livonia, MI. He joined Masco in 2000. From 1994 to 2000, he held various positions at Ford Motor Co., including materials and supply chain analyst, planning coordinator, and industrial engineer. He is a veteran of the U.S. Navy, having served as a flight deck launch troubleshooter in an F/A-18 aircraft squadron. He is a member of MSU’s Engineering Arts Alumni Advisory Board. pkattula@brasscrafthq.com

John Kostyo, BS CEE ’93, is working at the Philadelphia-based architecture, engineering, interior design, and planning firm, Kling. In 2003 he participated in an affiliation with Stubbins Associates, a Boston-based firm known for their work in higher education and health care design, as well as such projects as the Venetian Casino Resort in Las Vegas, Berlin’s Congress Hall, and Veterans Stadium in Philadelphia. Recent Kling projects include the FDA headquarters consolidation, Merck’s new Boston Research Center, and the University of Colorado Health Science Center.

Jennifer Marek, BS Mat Sci ’96, assistant lab director for Sherry Laboratories in Muncie, IN, has been named metallurgical director. She was a metallurgical engineer for Sherry from 1997–98, then became a metallurgical manager at American Axle and Manufacturing for two years. She returned to Sherry in early 2002. She is a member of ASM International and the American Society for Nondestructive Testing.

Jennifer Racine, BS ME ’96, joined the law firm of Godfrey & Kahn, S.C., as an associate in 2003. She will practice in the Madison, WI, office. She earned her law degree, cum laude, from the University of Wisconsin.

2000s

Eric Arnold, BS CSE ’02, works for Volition, a video game company whose hits include Red Faction, Summoner, FreeSpace, and Descent. He is currently on the programming team for a new, unannounced title. A native of Champaign, IL, Arnold is employed near his place of origin. On the job, he spends his time in a dimly lit room in front of a computer, breaking only briefly for food. He is delighted that someone is willing to pay him to fulfill his never-ending desire to create computer games. At home he spends his free time exercising, helping to run the youth group at his church, or working on his own games—for fun. Arnold was a founding member of Spartasoft, an MSU student organization devoted to video game development. Eric’s e-mail is earnold@insightbb.com. Volition’s Web site is at http://www.volition-inc.com/

Todd Hoppe, Eng Arts ’01, proposed marriage to his girlfriend, Robin Lileikis, (BA Business ’01), in June 2003 on the beach in Grand Haven, MI. He created a four-foot sand sculpture of Beaumont Tower “engraved” with their initials and a heart. Robin (who said yes) says, “We bleed green . . . and we also love Grand Haven.”
Responses to “Looking Back”

From Dianne Nelson Carpenter, Med Tech ’67

I asked my dad, Charles Nelson, who was a graduate in forestry in 1941, if he recognized any of the guys in the picture on the back of the summer 2003 Currents Magazine (Vol. 3, No. 1), which my husband (Robert E. Carpenter, civil engineering ’68) receives. He recognized Herb Helbig third from left in the back row.

EDITOR’S NOTE: When we contacted Thor Bank (electrical engineering ’41), the owner of the photo, to pass along the above information, he wrote: “Thanks for your e-mail reply. I found H. Helwig—not Helbig—in my copy of the 1938 Wolverine yearbook. He is shown on pages 85 and 260; on page 85, he is identified as a junior. Also, I was not able to find his name in the 1941 Commencement Program. I expect that is why Marvin Osborn and I were not able to put a name on that face. Incidentally he is No. 6 [unknown] in the back row of the class photo, not third from the left as given in D. N. Carpenter’s message. He is third from the right if you count Ira Backus and Wilton Norris in the middle row.”

From Lyle Wilcox, PhD EE ’63

I enjoyed your article “Responses to ‘Looking Back’” (Currents Magazine, Vol. 3, No. 1, Summer 2003). I studied for the Ph.D. in engineering in the 1956 to 1962 era. It was a time of great leadership at MSU with some of the most innovative thinking in the country. Jack Ryder, Von Tersch, Reed, and Weeg were always pushing the edge of new knowledge. The MISTIC was the tool forcing the development of new analytical techniques. It’s always good to look back at the mentoring that leads to successful engineering careers. In a sense, the early sixties in our engineering classrooms were approaching the rubric of today’s complexity and chaos.

What the Michigan State engineering program started in the early sixties, I carried on through my responsibilities as an engineering dean, assistant secretary in the Department of Energy, the president of a university, executive vice president of research at two corporations, and provost of a new college of integrated science and technology in Virginia.

Thanks for the opportunity to look back and reflect a little on how powerful the early years of the engineering student are in charting a course of career success for decades ahead. ☺

Let Us Hear From You!

NAME (INCLUDING MAIDEN NAME)

STREET ADDRESS

CITY / STATE / ZIP

IS THIS A NEW ADDRESS? ☐ YES ☐ NO

E-MAIL ADDRESS* 

TELEPHONE

CLASS DEGREE

OCCUPATION / JOB TITLE

EMPLOYER

BUSINESS STREET ADDRESS

BUSINESS CITY / STATE / ZIP

UPDATE

* ☐ YES. Publish my e-mail address so classmates can get in touch with me. ☐ NO. Do not publish my e-mail address.
Science, Engineering and Technology (SET) Day  OCTOBER 18, 2003

Undergraduate and graduate students in the College of Engineering, as well as faculty and staff, volunteer their time on SET Day to meet with high-school students and their parents to introduce them to potential careers in engineering, give lab tours, and answer questions. The event is held annually, usually in early to mid-October. Attendance averages about 1,200.

For more about SET Day, visit http://cvm.msu.edu/admis/set/

Former Astronaut Jack Lousma Speaks to Students

Jack Lousma, former astronaut and Michigan native, spoke to engineering students on November 4 about his career with NASA. He was spacecraft commander on the third orbital test flight of space shuttle Columbia, launched from the Kennedy Space Center, Florida, on March 22, 1982. Lousma’s visit to MSU was sponsored by students in the American Society of Mechanical Engineers (ASME), the Society of Women Engineers (SWE), the Society of Automotive Engineers (SAE), Residential Option for Science and Engineering Students (ROSES), and the Freshman/Sophomore Engineering Society, an MSU student organization.

ASME officers and members with Jack Lousma
BACK ROW LEFT TO RIGHT: John Remmler, Boris Lester, Craig Somerton (faculty adviser), Tim Strand, Neal Koenig. FRONT ROW: Ryan McCollum, Vaibhav Ekbote, Adam Zemke, Mark Ruiz, Jack Lousma, Jeremy Carter, Jessica Hollis, Jim Wilde.
IT’S THE 1980s: Who is this person and what in the world is he doing? If you don’t know the answer, but you feel creative, make up a humorous caption and send it in. We will print the best responses in the next issue of Currents Magazine. Contact us at editor@egr.msu.edu.