

PIPELINE

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

The CSE Capstone Experience: Transforming Students into Professionals

Walk into CSE's Capstone Lab a week before the end of the semester and the atmosphere is electric. Teams of students huddle around computer monitors, planning last minute strategies. It's the final hours before their projects are due. This is CSE 498, Collaborative Design, the course that sends students into the working world as professional software engineers. The bottom line: If you don't deliver, you don't graduate.

Working with corporate clients, student teams start the semester with nothing more than the statement of a challenging problem. In the fifteen short weeks that follow, they must architect, build, test, and deliver a working software solution, from scratch. It's a tall order. There are no textbooks, no hints, and no posted solutions. "It's a creative environment that forces CSE seniors to draw on everything they've learned during their time at MSU," says Wayne Dyksen, CSE professor and the instructor for the course.

Throughout the year, Dyksen works with corporate contacts to explore and develop potential capstone course projects. After forming teams on the second day of class, students are given a few paragraphs about their project along with corporate contact information. From then on, the students are on their own, interacting directly with their clients through e-mail, instant messaging, wikis, weekly conference calls, and often on-site meetings.

Daniel Fiordalis, a senior from Kalamazoo, Michigan, particularly likes the course because



The Auto Owners Exposition Award, which honors the CSE capstone team with the best overall Design Days performance, went to Team 2 for work on the Boeing Company Poseidon Executor 2008. From left: Wayne Dyksen, CSE professor, and team members Scott Walenty, Nick Thrower, Steve Emelander, and Tom Stark.

"it's so hands-on." Stephanie Cook of Midland, Michigan, enjoyed the experience of interacting with the team and the client. "You have to learn how to deal with individual personalities and work ethics to make it happen," says Cook. Team members Fiordalis, Cook, and Matt Grabow from Troy, Michigan worked on a project for The Toro Company, developing software that allows home owners to control their sprinkler systems from their PCs. They recently tested their system on Dyksen's home sprinkler system and they

were excited to see it work. "We had to invent everything. There was no existing code base," says Grabow.

Students and their clients like the fact that the course offers experience with actual business problems. "We are learning how to problem-solve in the real world. No one else had a solution. We had to research solutions and decide which one was best," says Clayton Boylan from East Grand Rapids, Michigan. Boylan and two other team members worked on a vendor

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Computer Science and Engineering at MSU is celebrating forty years as a department this year. This milestone gives us reason to reflect on how the computer science discipline has progressed over the past four decades. Consider how computer science has become essential for an innovative and productive economy. The discipline has produced critical infrastructures within our society that touch all of our lives each day. Computer Science at MSU has played a role through its contributions to research, education, and service. Much of our successes have been built upon the shoulders of the faculty that founded the department. Professors Richard Dubes, John Forsyth, Harry Hedges, Julian Kateley, Glen Keeney, Carl Page, Richard Reid, Helen Spence, Bernie Weinberg, and others provided the fundamental basis upon which those who came later have further advanced the department.

Now, imagine what will occur in the next decade. While it is very difficult to predict what will have the greatest impact, you may get a glimpse of some exciting future innovations if you spend some time exploring the hallways of the department. View the graduate student research posters on the walls and see examples, such as research on automatic face recognition and aging, concepts of digital organisms, data mining within social networks, sensor networks with sensors that hop, software engineering for adaptive computing systems, and many more. The work in the department provides insight to innovative research and educational programs for the coming years.

Computer science at Michigan State has made significant advances in the past 40 years. It is exciting to imagine what will come. I hope that many of you will be able to visit the department on October 3, 2008, when we will celebrate the department's 40th anniversary. It is a time to reconnect with alumni, faculty, and friends, and celebrate the accomplishments of 40 years. 🌸

CSE Capstone Experience (continued)



From left, Colin Nemchik and Austin Drouare discuss their project with Satish Udpa, dean of the College of Engineering.

tracking system for Auto Owners Insurance Company.

As part of the coursework, each team produces a 15-minute video about their project, which is then posted on the Web for clients to view. The video is both a final demonstration of the project as well as a marketing piece. "It's challenging," says Ken Davidson, who worked on the Auto Owners Insurance Company's project. "We wanted to show our project in real time, but had to speed it up a little."

Dyksen says that the corporate clients value the videos and are amazed at their professional-level quality. The capstone project videos can be found by following the "Archives" link on the course homepage www.cse.msu.edu/~cse498.

For this course, Dyksen finds himself playing a role different from that of a traditional professor. "For me, it's something like parents sending their kids off into the world. You have to fight your natural tendency to want to show them exactly how to do things; instead, you have to let go and let them do it on their own. Our students are very capable and meet any challenges posed by their clients with very little help from me."

All of the CSE seniors have been involved in design projects throughout their undergraduate studies, from their first programming course on up. CSE has a rich tradition of problem solving throughout the curriculum. In the fall of 2008, the college began an innovative cornerstone course for all incoming freshmen, who are given hands-on design experience from day

one.

Corporate clients value the capstone experience and their own participation in it. "We gave students an open-ended research problem. The student team had to prove that their solution would work and they did," says Dean Craven, a CSE graduate who is now vice president of research and development at TechSmith, which is located in Okemos, Michigan. For the spring 2008 semester, the TechSmith team built a Linux screen recorder designed to interface with existing TechSmith software.

In addition to completing a major design project from scratch, the capstone course includes topics such as job searching, resume writing, interviewing, career building, and professional ethics. Dyksen considers it a compliment and a privilege when students stop by his office to discuss job offers and their future.

Dyksen believes that the CSE capstone experience provides an excellent foundation for strong alumni relations. "The launching of a career through this course builds the beginnings of loyalty to the department, the college, and the university." 🌸

– Jane L. DePriest

Corporate Clients Enthused about Projects

Capstone teams complete projects for a variety of companies and organizations. For the spring semester 2008, those organizations and projects were:

- Auto-Owners Insurance Company:** Vendor Tracking System
- The Boeing Company:** Poseidon Executor 2008
- Ford Motor Company:** Ford Sensor Showroom
- IBM:** POWER Hypervisor Testing Suite
- MATRIX:** Distributed Checksum Calculation for KORA
- Microsoft:** MUD, A Web-Based Multi-User Drawing Surface
- Motorola:** Advanced Network Fault Management
- Sircon:** Workflow Editor for AutoPilot
- TechSmith Corporation:** Screen Recorder for Linux
- The Toro Company:** WPF-Based Interface for Irritrol

40 Years of MSU Computer Science



Lawrence W. Von Tersch, founding director of the MSU Computer Laboratory, professor emeritus of electrical engineering, and dean emeritus of the College of Engineering, works on the MISTIC computer.

Join us this fall to celebrate 40 years of computer science at MSU. The activities are planned for October 3-4, which is Homecoming weekend. We hope to have social events, a keynote speaker, poster workshop, student group showcase, lab tours, and a history show. Of course, we will also join the Engineering tailgate party prior to the football game on October 4. (www.egr.msu.edu/homecoming/)

How You Can Take Part

To make this celebration a success, we need your help. We would like photos, facts, anecdotes, and any information about the department's history over the last 40 years. We would also like to find people who can help plan some of the events. Please send us an e-mail at csealumniassociation@cse.msu.edu. A new Web site and a logo celebrating the 40th birthday were developed by Yi Huang, a CSE PhD student. To view the new site and keep up-to-date on plans, visit <http://www.cse.msu.edu/40years/>.

As part of our celebration, we asked Kevin Ohl, a CSE alumnus who has been an active participant in CSE activities since his graduation, to write a few comments about computer science and engineering over the years. 🌟

An Alum Looks Back

By Kevin Ohl ('78, MBA '81)
Executive Partner, Crowe Chizek and Company LLC



When Dr. Mutka asked me to pen a few thoughts about the department's 40-year anniversary, I first expressed surprise that it could be 40 years.

Then, I worried about what I would write. Finally, as memories flooded my mind, I worried about how to fit my thoughts into the limits of this newsletter.

Forty years. That's a long time in dog years, and an eternity in computer years.

In the early days, computing at MSU took place on massive systems built with wires and vacuum tubes. The footprint (a term popularized more recently) of these systems was tremendous, but the computing power in the initial computer system assembled at MSU was less than that found in the music chip of today's greeting cards!

In today's environment, it is incomprehensible to think:

- That we once had a major celebration when the department received a CRT that operated at 300 baud (that's not a typo folks).
- That students once submitted computer programs via punched card, and retrieved

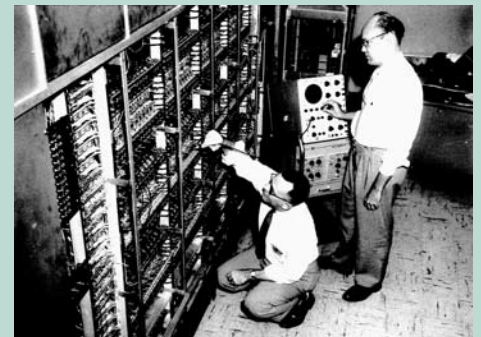
their printed outputs a couple of hours later. (Some classes limited you to four "runs" per day!)

- That the Computer Center (next to the Administration Building) really did house computers at one time. Also, that the most access people had to the computer room was the ability to peer at the computers from behind the glass wall of the "viewing room."

What is understandable is that the founding members of the CSE department could not have envisioned the impact of their early research and instruction. Further, I would guess that most recent alumni and students are not fully aware of the rich heritage and history from which the CSE department comes. Faculty, such as Carl Page, Dick Reid, Dick Dubes, Glen Keeney, and Helen Spence are a few of the original pioneers of the department. While they set the foundation from which CSE rose, it is also important to note that many faculty have continued the founding members' legacy with leading edge research and innovative teaching. While it is amazing to see how computer science has evolved from its early days, I am certain we will be even more awestruck to look back in as short a timeframe as 10 years from now.

If you have not been back to campus since graduation, I hope the department's anniversary

celebration gives you reason to return. Whether you can visit that weekend or not, don't be a stranger to MSU and CSE. Regardless of when you graduated, I think you will be impressed with what is going on in CSE at MSU. 🌟



Lawrence W. Von Tersch (left) and Martin Glen Keeney, associate professor emeritus in computer science, work on MSU's first mainframe computer, powered by vacuum tubes and programmed in machine language using punch tape or Hollerith cards for input.



In another vintage photo, Richard Reid, professor emeritus, and founding chair of the computer science department, works on the mainframe computer.

Faculty and Staff Pipeline

Mutka Officially Named Chair of CSE



In March 2008 Satish Udpa, dean of the College of Engineering, officially appointed **Matt Mutka** as the chairperson of the computer science and engineering department.

Mutka had been serving as the acting chair of the department since fall. The decision to appoint him was based on input from faculty in the CSE department.

Mutka joined MSU in 1989 after graduating from the University of Wisconsin, Madison in 1988 and spending a year at the University of Helsinki as a visiting scholar. Mutka's research interests include mobile computing, sensor networks, and networking for teleoperation of robotic systems.

2008 Withrow Distinguished Scholar Award



Betty H. C. Cheng, professor of computer science and engineering, received the Withrow Distinguished Scholar – Senior Award at the college's annual awards luncheon in March. This

award is given to a faculty member who has demonstrated excellence in scholarship, has been in service to the university for more than five years, and holds the rank of professor.

Cheng is internationally recognized for her direct influence on the design of high-assurance systems. An overarching goal in her work is to provide a bridge between informal software development, such as that arising from industry, and mathematically based techniques that enable automated processing, including the ability to analyze for correctness. Her long-standing, mutually beneficial relationships with industrial collaborators have been a key ingredient to her

success. She investigates methods for building reliable, maintainable software for onboard control systems such as those in cars, trains, and patient care technology.

She is extremely active in service to the professional community, currently sitting on the editorial boards of three journals and serving on the organizing committees of the top conferences in her field. Over the past 17 years, she has obtained nearly \$9 million in funding from various external sources. She was a 2007 recipient of the MSU Distinguished Faculty Award, and previously was selected for the Withrow Teaching Excellence Award.

Cheng is active in many dimensions of educational scholarship. Upon arrival at MSU, she established software engineering as a new area of undergraduate and graduate education. She is a founding director of the highly successful Software Engineering and Network Systems (SENS) Laboratory. She also defined a new paradigm for the department's capstone course. By leveraging her industrial contacts, she has obtained real-world projects for her students, bringing in customers from high-profile companies. She is currently leading a university-wide initiative to develop a multidisciplinary training experience in high-assurance systems for undergraduates.

In addition, Cheng was recently awarded a new three-year grant from the Ford University Research Program to support the project "Model-Driven Approach to Detecting and Mitigating Unexpected Feature Interaction."

2008 Withrow Teaching Excellence Award



Richard J. Enbody, associate professor of computer science and engineering, received the Withrow Teaching Excellence Award at the college's annual awards luncheon in March. This

award recognizes faculty and staff who have

demonstrated excellence in instructional and scholarly activities and rendered distinguished service to the university and the student body. Selection is based primarily on nominations from students. This is the second time Enbody has been the recipient of this award.

Students describe Enbody as a great teacher and mentor who fosters active communication in the classroom, creates a comfortable learning environment, and serves as a continuous source of support for student groups. He motivates students with his own enthusiasm. His method of starting lectures with "what's going on in the world of engineering" serves as an effective transition into the class material. He inspires excitement about programming and has worked to create an engaging and accessible curriculum for the introductory course he teaches. "He goes out of his way to provide students with helpful information. He brings a sense of humor and a passion for his work to the classroom."

Phi Kappa Phi Excellence Award

Wayne Dyksen, professor of computer science and engineering, and **Mark Kornbluh**, professor and chairperson of the department of history in the College of Social Science, were presented with the Phi Kappa Phi Excellence Award in Interdisciplinary Scholarship for the work of MATRIX: The Center for Humane Arts, Letters & Social Sciences Online.



Burton A. Bargerstock (center), director of communication and information technology for University Outreach and Engagement, presents the award to **Wayne Dyksen** (left) and **Mark Kornbluh**.

This all-University award recognizes scholarly teams working across disciplinary boundaries and is given annually by the MSU chapter of Phi Kappa Phi, the nation's oldest, largest, and most selective honor society for all academic disciplines.

MATRIX has distinguished itself by building a significant track record of excellence in interdisciplinary research, instruction, and outreach. The center has assembled interdisciplinary teams of researchers involving almost all of the colleges at MSU, including Engineering and Social Sciences.

The research projects of MATRIX impact two important fronts. Besides making fundamental contributions to a variety of disciplines, such as research in digital archiving, the research projects have significant societal impact. Two examples are MATRIX's online projects: *Overcoming Apartheid* (<http://overcomingapartheid.msu.edu>) and *American Black Journal* (www.matrix.msu.edu/~abj).

Kornbluh is the founding director of MATRIX; Dyksen is an associate director. For more information on MATRIX see www.matrix.msu.edu.

Wojcik Retires from MSU



Anthony S. Wojcik recently retired from Michigan State University after 22 years of leadership and service. Wojcik received BS and MS degrees in Math-

ematics and a PhD in Computer Science from the University of Illinois, Urbana, in 1967, 1968, and 1971, respectively. He joined the faculty of the Department of Computer Science, Illinois Institute of Technology, Chicago, in 1971. He served as chairman of the department from 1978 to 1984.

In January 1986, he joined MSU's CSE faculty as professor and chairperson, serving as chairperson until August 1995. He served as associate dean for research and graduate studies in the College of Engineering from July 1998 through June 2002 and as director of the MSU CyberSecurity Initiative from August 2002 through December 2005. In October 2005, he joined the Office of the Vice President for Research and Graduate Studies as assistant vice president for research planning.

In addition to his academic appointments, he has been a member of the technical staff at Alcatel-Lucent (formerly Bell Laboratories), Naperville, Illinois. He has been formally affiliated with Argonne National Laboratory as a resident associate, initially with the Mathematics and Computer Science Division and most recently with the Decision and Information Systems Division.

His recent research interests have focused on the development and application of formal methods for the analysis and synthesis of computing systems. This work has included such topics as verification of hardware and software and the reengineering of digital systems. Additional research includes the application of artificial intelligence techniques to automated design and verification of digital systems, reliable hardware and software design, trusted computing, and software verification. His work has included support from the National Science Foundation, Argonne National Laboratory, and the Department of the Air Force – Wright Laboratory. Wojcik is a senior member of the IEEE and a member of the Association for Computing Machinery.✿

More information about faculty and staff accomplishments and research funding is available on the CSE Web site – www.cse.msu.edu.

ITEC Becomes Reality

Groundbreaking ceremonies for the Information Technology Empowerment Center (ITEC) in Lansing took place this winter and the center is expected to open in the former Holmes Street School this fall, after a \$2 million renovation. The goal of the center is to introduce technology to children to prepare them for careers in high-tech fields, as well as to train parents and professionals to be more tech savvy.

ITEC is a collaborative partnership between community, industry, and education. It provides MSU students with opportunities to volunteer or earn experiential learning credit, and it provides MSU faculty with opportunities to conduct research on how technology benefits learning.

George Stockman, CSE professor, Teresa Isela VanderSloot, CSE academic specialist, and Adam Pitcher, CSE systems staff manager and systems analyst, were instrumental in steering this project to completion and serve on the ITEC Board of Directors. For their efforts, they were recently named the College of Engineering recipients of the First Annual MSU Curricular Service-Learning and Civic Engagement Award.

Thirteen individuals representing eleven of the University's degree-granting colleges received awards at the Michigan State University Center for Service-Learning and Civic Engagement's 40th anniversary celebration on April 1, 2008.

Selection for the award was based on demonstration of innovative and/or sustained efforts in the areas of academic, curricular and/or co-curricular service-learning and civic engagement related to the mission and efforts of the college. ✿



From left: Hiram E. Fitzgerald, Associate Provost, University Outreach and Engagement, presents the MSU Curricular Service-Learning and Civic Engagement Award to George C. Stockman, CSE professor; Thomas Wolf, associate dean for undergraduate studies with the College of Engineering; Adam Pitcher, CSE systems staff manager and systems analyst; Teresa Isela VanderSloot, CSE academic specialist; and Satish Udpa, dean of the College of Engineering.

Student Pipeline

CSE Student Speaker at Spring Graduation



Keith L. Barnes of Detroit, a computer science major, presented the senior class address during the College of Engineering undergraduate commencement ceremony May 4, 2008, at the Jack Breslin Student

Events Center. There were 295 undergraduate candidates for degrees from the college.

Nandakumar Receives Two Outstanding Graduate Awards



Karthik Nandakumar has received two honors as an outstanding graduate student. He was named the 2008 Most Outstanding Graduate Student in the Department of Computer Science and Engineering

at an awards reception in March, and earlier in the month he was honored as one of three 2008 Fitch Beach Outstanding Graduate Research Awardees for outstanding research in a PhD program in the College of Engineering.

Nandakumar received his PhD in Computer Science with a 4.0 GPA in May 2008, under the guidance of University Distinguished Professor Anil K. Jain. His PhD dissertation is titled "Multibiometric Systems: Fusion Strategies and Template Security." He received his BS in Electronics and Communication Engineering from the College of Engineering, Guindy, Chennai, India (2002); MS in Computer Science and Engineering (2005) and MS in Statistics (2007) from Michigan State University.

He is the co-author of *Handbook of Multibiometrics*, and has published his research in the best quality journals in his field, including the *IEEE Transactions on Pattern Analysis and Machine Intelligence* and *IEEE Transactions on Information Forensics and Security*.

Besides his exceptional research, Nandakumar has mentored several undergraduate and graduate students in the Pattern Recognition

and Image Processing (PRIP) Laboratory. He has always been available to make presentations to visitors, from high school students to distinguished seminar speakers. Nandakumar is currently a research fellow at the internationally renowned Institute of Infocomm Research in Singapore.

CSE Student Earns Senior Award



Kirsten Partyka, a CSE senior, has been awarded the MSU Senior Class Council Outstanding Senior Award. These awards are presented to seniors who have exemplified both personal and academic

achievement at MSU. These students have demonstrated their dedication to Michigan State through their leadership and involvement on campus and in the community. Partyka was nominated for the honor by CSE professor Betty H. C. Cheng.

As a founding member of the MSU Women in Computing (WIC) student group, Partyka has been an advocate for women in computing careers. She has served on the WIC executive board as both Webmaster and Vice President. Partyka has frequently dedicated her time and technical skills to promote the group and its mission. In the past year alone, she has done so at MSU Science, Engineering, and Technology Day, WIC Girl Scout outreach workshops, and the College of Engineering alumni tailgate. She has spoken at the CSE Freshman Seminar course and helped to coordinate events for students interested in computing. She planned and presented material at a Linux workshop that was offered to all the students in the computer science department.

Partyka is an Honors College member and has participated in the IBM Speed Teams internship program. While pursuing her degree, she has worked as a technical editor for an online journal, a Web designer for a local business, and a Web programmer for the Eli Broad College of Business. She graduated with honors May 4, 2008.

CSE Students Honored

Nine CSE undergraduate students received awards at the College of Engineering Academic Awards and Service Recognition Reception on March 25th. These awards recognize outstanding academic performance at MSU. They are awarded to the top 3 percent of juniors and seniors in each department and to sophomores in the top 1 percent of their class. The Service Recognition Award is given to a student in the College of Engineering for exemplary service to the MSU community.

Senior Award Winners:

Keith Barber is a member of the Honors College and a section leader in the Spartan Marching Band. He spent a semester studying in Germany and is a recipient of the 2006/2007 Jeffrey & Kathryn Cole International Study Award. Barber has mentored elementary school children, been a peer mentor to CSE students, and served as a student ambassador for the College of Engineering. He is currently a software engineer at Red Cedar Technologies. After graduation, he hopes to pursue a career in industry. This is the third time Barber has been recognized for Distinguished Academic Achievement (2006, 2007, 2008).

Brian Beck performs in the Spartan Marching Band and is a member of the Tau Beta Pi Engineering Honor Society. He is a recipient of the Distinguished Freshman Scholarship Academic Achievement Award. He has worked as a professorial assistant in the department of electrical and computer engineering. Beck is currently a Web programmer for MSU MATRIX, the Center for Humane Arts, Letters, & Social Sciences Online. This summer, he will be a software development intern at Microsoft.

Derek Gebhard serves on the Department of Computer Science and Engineering's Computing Environment Committee. He has worked as a developer for the Michigan Department of Information Technology and is currently a part-time software engineer at TechSmith Corporation in Okemos, Mich. This summer, he is a technical intern for the IBM Extreme Blue team. He plans to earn an MBA at Harvard after completing his

undergraduate degree at MSU. This is the second time Gebhard has been recognized for Distinguished Academic Achievement (2007, 2008).

Matthew Newman is a member of MSU Audio Enthusiasts and Engineers (AEE). He is working remotely as an embedded systems software engineer intern at Colorado vNet, Loveland, Colo. This summer, he starts a position with Crestron, the number one company in home automation that also produces touchscreen control systems. This is the third time Matthew has been recognized for Distinguished Academic Achievement (2006, 2007, 2008).

Junior Award Winners:

Kareem Janoudi and Brett Lesnau.

Sophomore Award Winners:

Bing Shi and Ryan Ley.

Service Award Recipient:

Thomas Lavoy.

SWE Awards

Two computer science students received awards at the MSU Society of Women Engineers (SWE) 2008 awards banquet. Awards were based on outstanding leadership, community involvement, and academic achievement.


Kirsten Partyka was awarded the SWE Outstanding Senior Award. Partyka was vice president of MSU Women in Computing and webmaster for the Michigan Celebration of Women in Computing regional conference during 2008.



Bethany Wenzel received the SWE Outstanding Leadership Award. Wenzel is an active member of the group and serves as the SWE Webmaster. She is a software developer intern at TechSmith Corporation.

Girl Scouts Explore Computing Careers at WIC Workshop

MSU Women In Computing (WIC) conducted a computing workshop for the Girl Scouts of Michigan Capital Council on Saturday, March 15, 2008, in the Engineering Building. Twenty girl scouts created their own Web pages and learned about programming concepts using Carnegie Mellon University's free Alice software. The workshop also provided a brief overview of computing careers and Internet safety.

Women In Computing members Stephanie Cook, Kirsten Partyka, Meghan McNeil, Stephanie Ortiz, Gina Chernoby, and Marie Buckner helped Girl Scouts create Web pages and animated stories. Katie Simonds (BS '07) returned to campus to take part in the workshop and speak to Girl Scouts about her experiences working as a database administrator. Adam Pitcher and Kelly Climer, CSE systems analysts, provided support for the project. To view workshop photos, please visit <http://www.cse.msu.edu/gallery>. 

CSE Students Show Off Skills at Design Days

For students, Design Days is the fun finale of 15 weeks of work on projects. Spring 2008 is the second semester that the CSE department has participated in what is becoming a college-wide event. While all who completed projects and made presentations are winners, there were numerous special awards:

- **Auto-Owners Exposition Award**, which honors the CSE capstone team with the best overall Design Days performance: Team 2, The Boeing Company, Poseidon Executor 2008. Team members were Steve Emelander, Tom Stark, Scott Walenty, and Nick Thrower. The sponsor of this award is Auto-Owners Insurance Company of Lansing, Mich.

- **Chrysler Praxis Award**, which recognizes the team that engineers the software system that is the most technically challenging: Team 3, Ford Motor Company, Ford Sensor Showroom. Team members were Nathan Crosty, Austin Drouare, Colin Nemchik, and Devin Schnepf. The sponsor of this award is Chrysler LLC of Auburn Hills, Mich.

- **Crowe Sigma Award**, which recognizes the best overall capstone experience: Team 10, The Toro Company, WPF-Based Interface for Irritrol. Team members were Stephanie Cook, Dan Fiordalis, and Matt Grabow. The sponsor of this award is Crowe Chizek and Company LLC of Oak Brook, Illinois.

- **TechSmith Screencast Award**, which honors the team with the best project video: Team 6, Microsoft, MUD, A Web-Based Multi-User Drawing Surface. Team members were Rob Meyer, Sean Murphy, Charles Otto, and Kirsten Partyka. The award is sponsored by the creators of Camtasia Studio, TechSmith of Okemos, Mich.

The judges of these Design Days awards were Erica Ciupak, chief information officer, MSU College of Agriculture and Natural Sciences; Naim Falandino, software architect, Covisint; Brian Loomis, global architect, Microsoft; Matt Mutka, professor and chair of the CSE department; Kevin Ohl, executive partner, Crowe Chizek and Company LLC; Karen Wrobel, senior manager, Chrysler LLC.



Above, from left: Stephanie Cook, Daniel Fiordalis, and (far right) Matt Grabow receive the Crowe Sigma Award for the best overall capstone experience from Kevin Ohl, executive partner with Crowe Chizek and Company LLC.



At left: Ken Beall (left), a Design Days guest, talks with Steve Emelander about his CSE project.

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College Launches “Women in Engineering” Program

Nationwide, fewer women are enrolling in engineering programs. It’s a trend that the MSU College of Engineering would like to reverse. To that end, the college recently launched a new Women in Engineering (WIE) program. “Women are very underrepresented in the field of engineering. And the numbers are dropping,” says Judy Cordes, coordinator of the new program. “If we don’t recruit women into engineering, we won’t have enough engineers to fill the need in the future.”

Fewer women across the nation are choosing careers in engineering today. At the K-12 level, girls usually don’t consider engineering as a career choice simply because they aren’t familiar with what an engineer really does.

In some engineering disciplines — such as chemical engineering and the biomedical area — women are better represented. “But if you look at the classical disciplines of engineering, we have done a lousy job of communicating to women that it’s a good profession,” says Satish Udpa, dean of the College of Engineering.

The mission of WIE is to encourage women of all backgrounds to pursue careers in engineering, and to provide opportunities for academic, personal, and professional growth. The intent of WIE is to reach pre-college students, women who have been admitted to the college, and currently enrolled women. “It’s about getting women into engineering majors – hopefully at MSU – retaining them through graduation, and getting them working in the field of engineering or into graduate school,” says Cordes.

While WIE targets women, the program is open to everyone – men and women.

For more information, visit <http://www.egr.msu.edu/wie>.