

ME@MSU

DEPARTMENT OF MECHANICAL ENGINEERING

Sen. Levin Visits Labs, Supports Research on Hybrid Engines

U.S. Senator Carl Levin, D-Mich., was impressed with the advances in technology made by researchers during a January visit to the Energy & Automotive Research Laboratories.

The facility, which was dedicated in August 2007, was funded approximately 50 percent by donors and 50 percent by the university. A bill supported by Levin will provide valuable funds to help evaluate hybrid powertrains that are currently being researched at the labs.

"It was a tremendous opportunity for us to showcase the technology we are involved in and it gave Sen. Levin the opportunity to see the research that he has been so supportive of," says Eann Patterson, chair of the Department of Mechanical Engineering.

Harold Schock, professor of mechanical engineering, said the technologies Levin saw could be used in vehicles in five to ten years.

"Some thermoelectric devices, such as small, gasless refrigeration systems, are in consumer use now," said Schock. "You plug it in the power outlet in your car and it cools down beverages. One of the new developments in cars is seats that have coolers so the seat doesn't get too hot, that's a thermoelectric device." Levin's interest in the work and the time he spent at the lab impressed Schock. "From a national perspective it shows that what we are doing is important and that he is willing to support us." ❁



Harold Schock (left) updates Sen. Carl Levin on the thermoelectric conversion project.

Jump Start for Graduate School

Research Intern Program Expanded

The summer months are a great time for undergraduates to experience internships, which are usually associated with industry. However, the Department of Mechanical Engineering in partnership with the College of Engineering offers a summer research intern program. "The goal is to get upperclassmen interested in graduate school and research by getting them into research labs and working with mechanical engineering researchers and faculty members," says Clark Radcliffe, professor of mechanical

engineering and this year's coordinator of the Mechanical Engineering Summer Research Internship Program.

The College of Engineering developed a research intern program some years ago as a recruitment tool to get high-quality students interested in graduate studies in the college, and the ME department has always participated. The original program was aimed at juniors, but was recently expanded to all upper-division students with at least one year of undergraduate studies left, which allows students to participate for two summers, if desired. Students must have at least

a 3.3 grade point average. Faculty members choose the students with whom they would like to work based on interests and qualifications. Research areas include biomechanics, automobile engines, biological tissue mechanics, robotics, bio-fluid flow, alternative fuels, composite vehicles, and other areas.

Last year the ME department expanded its program. "We wanted to develop more of a community spirit among the students and the faculty. The students worked in multiple buildings, including the main engineering building,

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from the Chair

EANN PATTERSON

The 2007-08 academic year has been extraordinarily successful for mechanical engineering at MSU. We kicked off the year with the dedication of our brand new \$10 million Energy & Automotive Research Laboratories in August. We are extremely grateful to the donors whose continuing support has made the project possible. It has been a tremendous stimulus to the department.

In October, not one but two of our colleagues, Gary Cloud and Roger Haut, were conferred with the title University Distinguished Professor for their scholarly achievements in the fields of experimental mechanics and biomechanics respectively. This is the highest title that the university can confer on faculty.

In January, we were delighted to host a visit by Senator Levin to our new facilities. He spent more than an hour meeting with faculty and discussing research on waste heat recovery using thermoelectric materials. We were honored and surprised to have an impromptu roundtable discussion with him on energy research and associated issues. A month later, Steve Shaw received a Distinguished Faculty Award from President Simon. You can read more about Shaw's achievements in this newsletter. While a number of our faculty have been formally recognized for their scholarship, the level of scholarly activity among our faculty as a whole has been increasing: the value of research grants and contracts

has risen by about 50 percent in the last three years and the number of papers published by our faculty in international journals rose by 30 percent in the same period. I would like to acknowledge the efforts of the entire faculty in bringing about the changes in the department that have made this level of research activity possible.

Our students continue to be star performers. Our ASME design team won the District Championship for the ninth time in the last eleven years, against competition from schools such as Carnegie-Mellon and the University of Toronto. The MSU Baja SAE Team took 4th place in the World SAE Baja Championship, while the MSU Formula SAE team has started the Race-for-a-Cause program to benefit the Make-A-Wish Foundation of Michigan.

In April we demonstrated the depth of our commitment to supporting creativity with an art exhibition and reception in the Energy & Automotive Research Laboratories as part of the MSU Year of Arts and Culture. The exhibition features work by local artists (at Okemos and Williamston High Schools) inspired by a cut-away Chrysler engine donated by Jack Withrow. Also during April, we were excited to finally give the go-ahead for the fitting out of a \$500,000 Combustion Laboratory within the Energy and Automotive Research Laboratories, specially designed to support the research of Professors Lee, Wichman, and Zhu.

As I write this message in May toward the end of this exciting academic year, we are implementing plans to introduce our Global Engineering concentration with opportunities for students to take credit-bearing courses in Europe, Korea, and Taiwan; we are also preparing plans to launch a new concentration in Enterprise Engineering. So I anticipate that 2008-09 will be just as exhilarating! 🌟

Jump Start (continued)

the research complex, and the composite lab. Professor Craig Somerton and I brought them together for a number of events throughout the summer," says Radcliffe. The staff and specialists helped create lunch meetings where students had an opportunity to make short presentations about their projects. They also received help with making oral presentations and were given additional information on library resources. They all attended an on-campus performance of a play with pizza provided by the program. There was also a tour of GM's Delta Assembly Plant.

In addition to undergraduate participation in the ME program, in 2007 graduate students who had been accepted for the fall semester were also invited to participate in the 10-week summer program. "This gives them a big jump

start on their graduate work, especially their thesis research. They have 10 weeks to immerse themselves in research without worrying about classes, getting an adviser, or assuming teaching duties," says Radcliffe. "They can get a significant amount of work done during the summer."

For 2008, the mechanical engineering department, under the direction of department chair Eann Patterson, significantly increased its budget to support the program, which helps to pay for more students. "Our goal is to double the number of students involved this year," says Radcliffe, who expects about 30 undergraduate and graduate students to be involved in the ME research intern program. As part of the recruitment effort, the ME department sent creative posters announcing the program to all the

colleges in the Midwest with an undergraduate engineering program. "This internship program is a good experience for students, and the faculty is enthused about working with these students," says Radcliffe.

The internship program is competing with industrial recruiters who also want summer interns. "We are all looking for high-quality students," says Radcliffe. "Our challenge is to develop a reputation that our program provides an excellent learning opportunity and students want to participate. We want to increase the number of students in our graduate program and also, at the same time, the quality of students involved. That's an advantage for our department." 🌟

– Jane L. DePriest

Motorola Foundation Youth in Energy and Environment

Project highlights global warming

The Motorola Foundation provides funding for projects carried out by students from the MSU mechanical engineering department at the Woodcreek Magnet Elementary School in Lansing, Mich. The school, which requires special admission, focuses its curriculum on math, science, and engineering. Teachers incorporate hands-on materials and activities to assist students in grasping technical concepts.

Each semester an ME student team works with a specialized curriculum to help students learn about new subjects. This is the team's capstone design project. The spring 2008 project focused on global warming and greenhouse gases and how they affect the environment. The ME student team used hands-on and interactive activities, Web-based learning, and in-class demonstrations to make the subject more "real" for the elementary school students.

"The challenge for our students in this project is to integrate all of the environmental information into the curriculum," says Craig Somerton, associate professor of mechanical engineering and faculty adviser for this capstone project. "Our students developed hands-on experiments and activities so that the Woodcreek students could actually see temperature changes. They also developed a fun crossword puzzle on global warming that would challenge even adults." Team members for the spring 2008 project were **Michael Booth, Brent Synder, Nicole Vidro, and John Woodruff.**

The focus in the past has been on developing a child's interest in engineering during middle school, but that is changing. "We need to get kids interested even earlier," says Somerton. "I know that we will get some good engineering students out of this school in the future." 🌻

Engine Inspires Art Collaboration



Students, faculty, and guests look over artwork at the reception.

to function in the "real" world, engineers need a broader understanding of arts and humanities to communicate with various audiences. To that end, the Mechanical Engineering Department collaborated with the art departments at Okemos and Williamston high schools.

Mechanical engineering encompasses many technical areas, including controls, vibrations, heat transfer, fluid dynamics, combustion, and design. However,

A Chrysler engine, donated by Jack Withrow (BS ME '54), was placed in Okemos High School for six weeks, then at Williamston High School. Under the guidance of art advanced placement teachers Rebecca Butler in Okemos and Paul Nilsson at Williamston, high school students created their impressions of the engine, energy, or wherever their minds took them with the engine as a catalyst for artistic expression. The results were a wide variety of artwork, some realistic, some very impressionistic. The artistic efforts are now displayed in the main hall of the Energy & Automotive Research Laboratories, so engineering students, researchers, faculty, and staff can enjoy the works and perhaps be inspired by them in their own work. A reception to honor the student artists was held April 17. 🌻

Design Days Showcase ME Student Projects



Michelle Raetz shows off her team's X-treme Orange Juicer that was designed for ME 371.

The Mechanical Engineering Department has been at the forefront of Design Days, which is the finale of 15 weeks of work. ME students are enthused about demonstrating their talents through design competitions, oral presentations, and posters.

The spring 2008 Design Days was held April 24-25 at the MSU Student Union, and this year other College of Engineering departments continued to join in Design Days activities, making it a college-wide event for student talent. "The electrical and computer engineering department partnered with ME several years ago for Design Day," says Craig Somerton, associate professor of mechanical engineering and coordinator of ME design projects. In the fall of 2007 the Department of Computer Science and Engineering joined in the activities, and this spring students from the applied engineering sciences program and the civil and environmental engineering department presented their projects during Design Days.

While the event showcases graduating seniors with their capstone design projects, other undergraduate students also participated in events. Middle school and high school students participated in the Dart Foundation Day on April 24. "Design projects and Design Days presentations give students an opportunity to practice their technical skills and develop skills in working with a team, communications, and leadership," says Somerton. "We want graduates who can lead, create, and innovate."

While all who completed projects and made presentations are winners, there are numerous specific awards. For

spring 2008 these are the top ME award winners:

ME 371 Kids' Choice – Pre-college students select the best design from the ME 371 class, which has teams of students design a simple mechanism to accomplish a repetitive task. The first place winner as judged by the pre-college students is Team 3. Team members are **Louis Cervone, Jacob Haf, Daniel Masterson, and Matthew Perelli.**

First Place ME 371 (as judged by faculty)– **Team 1;** team members are **Drew Darling, Lauren Heitzer, Ben Llewellyn, and Andrew Rogers.**

First Place ME 412, Heat Transfer Lab – For this project student teams designed, built, and tested a "passive" heat transfer device. The winning team includes **Cody Priess, Brian Smith, and Bryan Wagenknecht.**

First Place ME 471 Leonardo Da Vinci Scholar Award – For this project student groups designed and built a device that could ascend a two-meter vertical wooden pole, trigger a switch at the top, then return to the bottom in the shortest possible time. The winning group is Team 1; team members are **Kyle Elliott, Richard Hollern, and John Tysman.**

First Place ME 481 Oral Presentation and Poster Presentation – The winning team worked on the General Motors North American Engineering: Best Execution of a Zero Drag Automotive Brake System project. Team members are **David Klipfel, Cody Priess, Brian Smith, and Joshua Thomet.**

First Place ME 481 Edison Undergraduate Design Award – The winning team worked on the MSU Department of Chemical Engineering and Materials Science: Electron Microscope In-Situ 4-Point Bend Apparatus. Team members are **Darius Libiran, Steven Poon, Kyle Szytkiel, and Bryan Wagenknecht.** 🌻

Faculty and Staff @ ME

2008 Distinguished Faculty Award



MSU president Lou Anna K. Simon presents the Distinguished Faculty Award to Steven Shaw.

Steven W. Shaw, professor of mechanical engineering, was recognized at the annual university-wide Awards

Convocation in February. He received the

University Distinguished Faculty Award, which is given to individuals who have demonstrated sustained scholarly excellence in research, instruction, and outreach and have made widely recognized contributions to their field. Only 10 faculty members university-wide received this honor.

Shaw, who has been a faculty member at MSU for over 20 years, is recognized internationally for his research in nonlinear dynamics. His eclectic suite of contributions ranges from the extremely theoretical to the pragmatic. Valued by both the scholarly community and industry, his research has made fundamental and original contributions to the understanding of systems undergoing chaotic dynamics and nonlinear vibrations. His seminal works on dynamic vibration absorbers have been translated into contemporary practice in the automobile industry; this environmentally sensitive design protocol could be responsible for fuel savings of more than 20 million barrels of oil each year.

He is a fellow of the American Society of Mechanical Engineers and a recipient of the ASME Henry Hess Best Paper Award (1986). He also received the Society of Automotive Engineers Arch T. Colwell Merit Award (1997). He is a keynote speaker and an invited lecturer at international conferences. Shaw presented the inaugural Sethna Lecture for the Department

of Aerospace Engineering and Mechanics at the University of Minnesota (1994), and was a Westinghouse Distinguished Lecturer in the Department of Mechanical Engineering at the University of Michigan (1990). He has served in editorial positions for a number of journals, including the *Journal of Vibration and Acoustics*, the *Journal of Applied Mechanics*, and the *Journal of Sound and Vibration*.

Shaw is known for his excellent leadership of his department's mechanical systems group and his mentorship of undergraduate and graduate students. In 2002, he received the Withrow Distinguished Senior Scholar/Researcher Award from the MSU College of Engineering. His current research focuses on exploiting nonlinear behavior in MEMS for sensor and signal processing applications, and the development of order-tuned vibration absorbers for variable displacement automotive engines.

2008 Withrow Teaching Excellence Award



Thomas Wolff (left), associate dean for undergraduate studies, congratulates Giles Brereton at the Withrow Awards.

Giles J. Brereton, associate professor of mechanical engineering, received the Withrow Teaching Excellence

Award at the annual engineering 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 of the recipient is based primarily on nominations from students.

Brereton engenders the respect and admiration of his students, who consider him "an excellent teacher." "He takes his time teaching

and explains things so that everyone understands the material," was a comment from more than one student. At the same time, he is "extremely engaging and fun." Educating future mechanical engineers has given him the opportunity to put his own stamp on teaching in the College of Engineering. He is very organized, and his office/help-room hours are truly beneficial. "He makes sure that students understand the theory behind the application." One of his students says, "He is an excellent teacher who has a bright mind and a good way of transferring knowledge to his students." As a professor, he really is "amazing!"

2008 Alvah K. Borman Award



Craig Gunn, academic specialist for mechanical engineering, received the Alvah K. Borman Award at the American Society for Engineering Education's 2008 Conference for Industry

and Education Collaboration for his efforts in promoting cooperative education in engineering. A full-time academic specialist, Gunn created and maintains a communications program for the Department of Mechanical Engineering. He co-authored a textbook, *Engineering Your Future*, first published in 1999, which has been declared a best seller. He has served as an editor for the newsletters of three separate state, regional, and national cooperative education organizations and published more than 60 papers on engineering communication.

The award honors Alvah K. Borman, dean of graduate placement services, Northeastern University, for his numerous contributions to engineering cooperative education over many years, including the founding and editorship of the *CED Newsbriefs* from 1969 until his death 10 years later.

Research Update

Board of Visitors Gets Up-Close Look at Projects

ASME Award



Merle C. Potter has been awarded the 2008 James Harry Potter Gold Medal by the American Society of Mechanical Engineers (ASME) for his renowned impact on thermodynam-

ics through 42 years of outstanding teaching, through published textbooks, and through his research on energy consumption in dwellings and industrial plants. This award was established in 1980 in honor of James H. Potter, who as an educator made significant contributions to classical thermodynamics.

Merle Potter joined the MSU Department of Mechanical Engineering in 1965 and is now retired. During his years with the ME department, Potter was a popular teacher, and a positive presence in the department. He has been continuously active in textbook writing since his retirement.

Grant Funds New Hydraulic Press



Farhang Pourboghra, associate professor of mechanical engineering, will head up a team that will work with a 250-ton hydraulic press that is to be delivered to the

mechanical engineering department this summer. The National Science Foundation awarded the department a grant to fund the \$450,000 press, which will be used to experiment with adding polymers, plastic, and other synthetics to reinforce traditional metals. The press can also be used to train undergraduate and graduate students about the thermo-hydro forming process, which is more sophisticated than what can be accomplished with a traditional press. ❁

The Mechanical Engineering Board of Visitors, along with recently hired faculty, toured the Orthopaedic Biomechanics Laboratories (OBL) in Fee Hall this spring. The tour gave them a closer look at research projects being conducted under the supervision of Roger Haut, University Distinguished Professor in the mechanical engineering department, and to see the roles played by mechanical engineers. A total of 18 projects were presented with a main theme of post-traumatic osteoarthritis.

Eric G. Meyer, a mechanical engineering doctoral candidate who presented his research at the event, explained that “the methods range from cadaver, to animal, to explant models of the disease.” His research focuses on recreating knee and ankle injuries through a variety of loading conditions to identify the failure tolerance criterion. Meyer uses 3D motion analysis in order to investigate the subfracture damage that occurs in the cartilage and subchondral bone, which may lead to post-traumatic osteoarthritis in many patients.

Researchers from the Shoe and Motion Analysis Laboratory also made presentations during the tour. Undergraduate Jeff Laforge, first-year graduate student Mark Villwock, and Cliff Beckett, ME systems designer, talked about measuring the thermal characteristics of boots and shoes. The potential for lower extremity injury was evaluated by using a surrogate ankle to measure the torque on 16 different football field surfaces in combination with ten different types of football shoes. Laforge is also involved in projects with undergraduate student Kelly Peterson and graduate student Jerrod Braman, concentrating on identifying comfort improvements to high heels using an in-shoe pressure measurement system.

Kinesiology doctoral candidate Adam Bruenger presented his dissertation project on “Biomechanical and Physiological Comparison of Three Methods of Back Squatting,” with the help of Braman, who also worked on research run by athletic training master’s degree candidate Gregory Hawthorne entitled “The Comparison of Dorsiflexion Range of Motion Using an Ultrasound Heat Treatment Followed by Two Techniques on Triceps Surae Stretching.”

Dan Isaac, a master’s degree candidate, presented his research on traumatic injuries to the articular cartilage in the knee. He looks at the long- and short-term degradation of the mechanical properties of the cartilage. Isaac is part of the first lab to develop a model of osteoarthritis that allows researchers to study the progression of the disease, as well as methods of intervention.

Touring the OBL gave people an opportunity to see what type of research is being conducted and bring attention to its importance. “Dr. Haut has worked hard to establish a state-of-the-art facility that has made countless contributions to the biomechanical engineering community,” says Isaac. “This tour gave him and his students an opportunity to show how far they have come in this type of work.”

The graduate students work closely with researchers in many other fields outside of engineering including kinesiology, physical therapy and anthropology, physiology, osteopathic and veterinary medicine, and radiology. For more information on the projects presented, visit the Orthopaedic Biomechanics Laboratories Web site at www.obl.msu.edu. ❁

– Jaime Figlan

Students @ ME

2008 Academic Awards

Congratulations to the following students from the Department of Mechanical Engineering who were recognized at a College of Engineering reception in March for academic excellence and service to the community.

Outstanding Graduate Student Award:

Shahram Pouya.

Service Award: Emily Duszynski, Andrew Siefert, Krishna Vistarakula, and Adam Zemke.

Undergraduate Academic Achievement

Awards: Nathan Geib, Jeffrey Laforge, Benjamin Llewellyn, Justin Meeder, Sara Murawa, Adam Sneller, Christopher Sweeney, Eric Tingwall, Bryan Wagenknecht, Mathew Weir.

2007-2008 Ambassador: Amy Bittinger.

Trustees Honor ME Graduating Seniors

At its spring 2008 meeting, the MSU Board of Trustees recognized graduating senior **Bryan E. Wagenknecht** of Haslett, a mechanical engineering major and a member of the Honors College. He was among 22 students to receive this honor, all of whom had achieved a perfect 4.0 grade point average. Wagenknecht is the son of Larry and Amy Wagenknecht; he is a 2004 graduate of Haslett High School.

In December 2007, the MSU Board of Trustees recognized graduating senior **Brandon G. Gulker** of Holland, a mechanical engineering major and a member of the MSU Honors College. He was one of six students to receive the honor. Gulker is the son of Fred and Sandy Gulker and is a 2003 graduate of Holland High school. He had a 3.9814 grade point average.

Society of Women Engineers Awards

Emily Duszynski received an outstanding senior award at the Women in Engineering Awards



Banquet in February. The award is based on extracurricular and community involvement and academic excellence and is given to one senior from each major.

The Mechanical Engineering Award is sponsored by Shell Oil Company.

Sara Murawa and **Eva Reiter** received Outstanding Junior Awards, sponsored by Chrysler LLC and the Microsoft Corporation.

Student Exchange in Taiwan

Wei-Chung Wang, associate dean for research and graduate studies of the College of Engineering at National Tsing Hua University (NTHU) in Taiwan, visited the mechanical engineering department this winter to discuss details of an exchange agreement with NTHU's Department of Power Engineering. Under the agreement, undergraduate students will be able to go to NTHU from MSU and take ME classes with NTHU students, and graduate students from NTHU will be able to come to MSU for classes and research projects.

Baja Team Gears Up for 2008 Season

The **MSU Baja Race Team** is following up on its successful 2007 races with new ideas for the 2008 competition. Last year the team competed with two cars in all three Society of Automotive Engineering (SAE) sanctioned events, one of which requires the cars to be amphibious.

The MSU Baja team designed the 2008 car with a new approach. The vehicle's chassis is modified, making it stronger, while allowing room to run the team's first-ever four-wheel-drive system. Also incorporated into the new car is a completely redesigned braking system. The team's 2008 competition dates were May 1-3 at Tennessee Tech University; May 29-31 at Caterpillar's Edwards Demonstration Center, Edwards,



MSU's Baja Team competed with its car in several races this spring and summer.

Illinois; and June 11-14 at Ecole de Technologie Superieure, Montreal, Quebec, Canada. Keep up with MSU Baja news and competition results by visiting the Web site at www.egr.msu.edu/baja.

MSU Formula Racing Team at Auto Show



MSU Formula Racing Team members (from left to right) **Scott Williams**, **Drew Darling**, and **Paul Strefling** grind tubing for Car 51's chassis.

The **MSU Formula Racing Team** showcased its award-winning racecars at the 2008 North American International Auto Show (NAIAS) at Cobo Hall in Detroit in January.

The team displayed race car No. 41 (2006) and race car No. 9 (2007). Both cars placed in the top 10 at Formula SAE and Formula SAE West competitions in 2007. "MSU's approach to the competition is similar to the philosophies of many original equipment manufacturers when building concept and production vehicles," says Adam Zemke, operations consultant and manager for the MSU team. "The MSU cars are excellent showpieces of how collegiate education can be applied directly to the multitude of vehicles at NAIAS."

The MSU team also presented its Go Clean E85 development campaign during the show. Beginning with the 2009 MSU Formula SAE car, the team intends for all future MSU race cars to be powered by E85 ethanol-blended fuel. The MSU Formula Racing Team is a student-run organization. To learn more about the organization or its initiatives, visit www.msuformularacing.com.

Alumni @ ME

Team Puts Solar Car to the Test

Summers are a time for engineering students to test new skills, and a team of students from the MSU College of Engineering hope to have an opportunity to try something really exceptional. They plan to drive 2,400 miles across the United States and Canada in a car that they built — a car that runs without a single drop of gas. The car is named “Brasidius,” after a famous Spartan general. Brasidius, with the help of **MSU’s Solar Car Team**, is on track to join 26 other solar cars and student teams in the 2008 North American Solar Challenge this summer.

The Challenge is a nine-day solar car endurance race that begins July 13 in Dallas, Texas, and finishes in Calgary, Alberta. During the race, each UFO-like car will be driven in ordinary traffic at highway speeds. Brasidius will be propelled solely by renewable solar energy collected from its eight square meters of solar panels. MSU’s solar team is relatively new and will be up against teams with decades of experience. However, the team believes it will be an exciting competition and a good test of their vehicle.

Helping coordinate team activities is Norbert Mueller, ME assistant professor, who serves as the team adviser. To find out more about the solar car and to get the latest news about the car and events, visit the team’s Web site at www.egr.msu.edu/solar. ❁



Photo courtesy of Solar Car Team

Solar Car Team members (left to right) back row: Nick Paino, Zach Puplis, Ryan Blake, Rick Pocklington; middle row: Jackie Matheny, Lindsay Karn, Allen Eyler, Bryan Wagenknecht, Dave Cain, Arthur Matteson, Jeff Vanandel; front row: Dan West, Nick Schock.

Alum Spearheads Health Care Project



Photo courtesy of E. Lee White Photography

From left to right: Ronald A Williams, Aetna chairman and CEO; John Webb, ME alumnus and Aetna’s senior vice president for government/public sector and business alliances; and Earvin “Magic” Johnson, MSU basketball standout and now chairman and CEO of Magic Johnson Enterprises.

“Aetna has a great message, yet we needed a special way to deliver it. Through our research, we began to see that our company and MJE had complementary strengths, yet similar values. Ultimately, we found that Magic’s business endeavors made him the ideal messenger for the diverse communities that we serve.” The goal of this multiyear partnership is to empower individuals to ask questions, seek answers, and create a demand for high-quality health care that respects their cultural preferences.

For updates on how Aetna and Magic Johnson Enterprises are working together to address the pressing health issues of urban areas, visit www.communityvitality.com. ❁

College of Engineering alumnus **John J. Webb** (BS ’79 mechanical engineering), Aetna’s senior vice president for government/public sector and business alliances, is working to improve health care and reduce the number of uninsured, particularly among the employees of entrepreneurial and urban business owners. His efforts have resulted in a partnership with Magic Johnson Enterprises (MJE).

“Over a two-year period, I led a team that worked to identify the best partner for Aetna in our quest to impact health care at the street level,” says Webb.

College Launches “Women in Engineering” Program

Nationwide, the number of women enrolling in engineering programs is dropping. 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 under-represented in the field of engineering. And the numbers are dropping,” says Judy Cordes, coordinator of the new program in the College of Engineering. “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 the Web site at <http://www.egr.msu.edu/wie>. ❁

KEEPING IN TOUCH

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Endowments and Donations @ ME

Skellenger Office Dedicated



Gerald D. and Judith Skellenger, generous contributors to MSU and the College of Engineering, recently provided funding to support the Energy & Automotive Research Laboratories. In recognition of their support, a faculty office in the building is named in their honor. Both Jerry and Judith were on campus for the official dedication of the

Gerald D. and Judith Skellenger Office in the Engineering & Automotive Research Lab.

Jerry received a bachelor of science in mechanical engineering from Michigan State University in 1958 and a master's degree in what was then applied mechanics, also from MSU, in 1960. Upon completion of his graduate degree, Jerry went to work for General Motors, retiring in 2001. He had a long and prosperous career at GM, researching a number of alternate engine concepts and, during the last 15 years, focusing on the concept of hybrid vehicles. This period was highlighted by his direction of a five-year cooperative program with the U.S. Department of Energy and managing the Freedom concept vehicle built by General Motors. 🌱