

THE ENGAGED SCHOLAR

MICHIGAN STATE
UNIVERSITY

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Professor Gretchen Birbeck combines research and clinical practice in Malawi and Zambia—page 12.



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Michigan State University
Kellogg Center,
Garden Level
East Lansing,
Michigan 48824

Phone: (517) 353-8977

Fax: (517) 432-9541

E-mail: outreach@msu.edu

Web: outreach.msu.edu

Editor

Linda Chapel Jackson

Writers/Editors

Amy L. Byle
Linda W. Currier
Lisa M. Eldred
Catherine A. Gibson
Carla J. Hills
Adina A. Huda

Graphic Designer

Brian P. Cools

Reviewers

Nicole L. Blanken
JoDee K. Fortino
Ghada Georgis
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Sarah J. Swierenga

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UNIVERSITY OUTREACH AND ENGAGEMENT

Hiram E. Fitzgerald

Associate Provost

Diane L. Zimmerman

Director, National Center for the
Study of University Engagement

Patricia A. Farrell

Director, University-Community
Partnerships

Burton A. Bargerstock

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Information Technologies

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Director, MSU Usability & Accessibility Center

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Director, Michigan State University Museum

Michael Brand

Executive Director, Wharton Center for Performing Arts

Robert A. Esperti and Renno L. Peterson

Co-Directors, Estate and Wealth Strategies Institute

Foreword

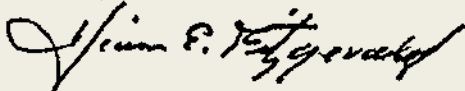
THE ENGAGED SCHOLAR focuses on collaborative partnerships between Michigan State University and its external constituents—partnerships forged for mutual benefit and learning, with an emphasis on research. This premier issue is framed within the context of President Lou Anna K. Simon’s “Boldness by Design” address to the Sesquicentennial Convocation, September 8, 2005.

Michigan State University is a community of scholars dedicated to advancing knowledge through its discovery, application, dissemination, and preservation.

Throughout its 150-year history, the University has been deeply committed to public scholarship, working collaboratively with community partners to solve socially significant problems. MSU faculty and staff are engaged in scholarship-focused outreach activities throughout the world. Some are engaged through community-based applied research and evaluation, through technical assistance and consulting, or through partnerships with agencies, organizations, and communities. Some extend their teaching to nontraditional students at off-campus sites or by technology-delivered distance education. Some provide clinical services. Many engage their students by incorporating service-learning and other civic engagement opportunities into their courses. Others develop and curate managed-learning environments, exhibitions, and demonstrations. All share a common commitment to public scholarship, working collaboratively with community partners to address issues of public concern within the context of the University’s mission.

The Engaged Scholar features vignettes that illustrate the breadth and depth of MSU’s engagement with society. *The Engaged Scholar* is a story book, containing adventurous tales of university-community partnerships that enhance experiential learning opportunities for students, that enrich community, economic and family life, that increase and diversify opportunities for research and creative activities, that expand the University’s reach throughout the world, and that engage society in the process of its own transformation. Civic engagement, public scholarship, campus-community partnerships—these are the hallmarks of the land-grant university in the 21st century and of the engaged scholar.

Sincerely,



Hiram E. Fitzgerald

Associate Provost for University Outreach and Engagement



Throughout MSU’s 150-year history, the University has been deeply committed to public scholarship, working collaboratively with community partners to solve socially significant problems.

Hiram E. Fitzgerald
Associate Provost for University
Outreach and Engagement

What Is an Engaged University?

The Michigan State University Model

At Michigan State University, outreach and engagement are woven into every facet of academic life. The MSU model for working with communities encompasses the notion that engagement is embedded in the scholarly tradition—the generation, transmission, application, and preservation of knowledge. Outreach is not a separate “service” activity detached from teaching and research. It is part of the core academic mission of the University.

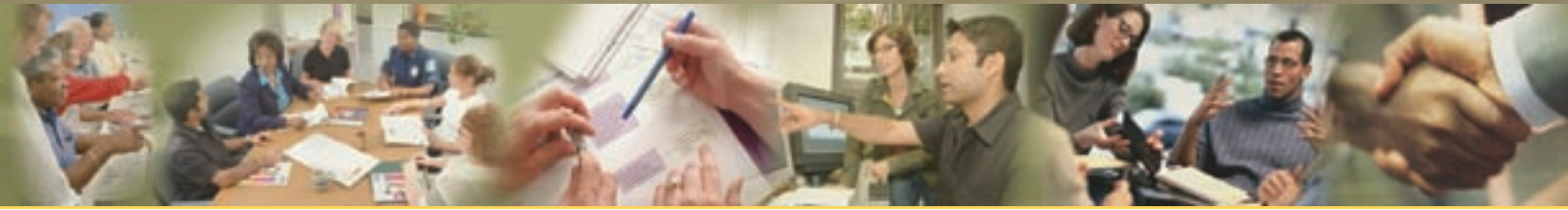
ENGAGEMENT IS EMBEDDED IN SCHOLARSHIP	
Examples of Traditional Academic Activity	Scholarly Engagement Activity
University faculty provide instruction to undergraduate and graduate students in campus classrooms and laboratories.	Engaged TEACHING occurs when... <i>...credit and noncredit learning opportunities are taken off campus, online, and to community-based settings to increase access; or when service-learning experiences advance students' knowledge about social issues while contributing to the immediate goals of a project.</i>
University faculty members pursue research studies according to their various professions and interests, and publish results in academic books and journals.	Engaged RESEARCH occurs when... <i>...a collaborative partnership conducts an investigation for the direct benefit of external partners; outcomes of the research lead to improved, evidence-based practice.</i>
University faculty and students undertake departmental or college administrative duties and serve on committees.	Engaged SERVICE occurs when... <i>...a faculty member summarizes current research literature about an issue for working professionals or community organizations, offers research-based policy recommendations to legislators at a committee hearing, or provides medical or therapeutic services to the public.</i>

Since the early 1990s, Michigan State University has been deliberate and purposeful in defining, planning, implementing, and assessing its outreach work. The scholarship of engagement has, in fact, become a signature area of the University.

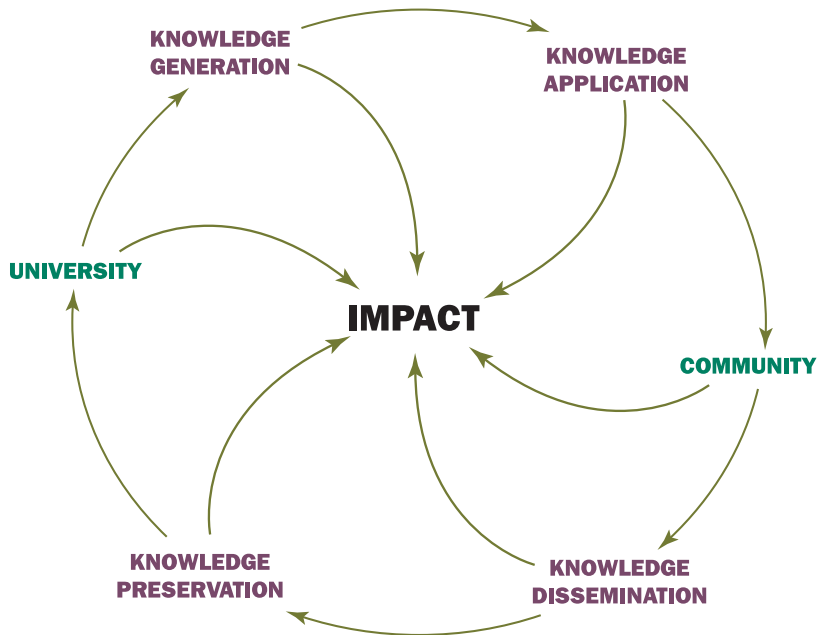
In practical terms, this means striving to ensure that engagement efforts are mutually beneficial for all partners—community, faculty, students, and others—and that all are able to participate in the design, operation, and evaluation of projects. It also means giving careful attention to the process of developing relationships and favoring multi-disciplinary approaches to problem-solving. Pragmatic, or outcome-based, scholarship is a given. Above all, the opportunity to participate in building communities, whether of place, profession, or interest, brings pleasure and satisfaction to our work.



The opportunity to participate in building communities, whether of place, of profession, or of interest, brings pleasure and satisfaction to our work.



OUTREACH AND ENGAGEMENT KNOWLEDGE MODEL



“Outreach is a form of scholarship that cuts across teaching, research, and service. It involves generating, transmitting, applying, and preserving knowledge for the direct benefit of external audiences in ways that are consistent with university and unit missions.”

Model derived from Provost’s Committee on University Outreach. (1993).
University outreach at Michigan State University: Extending knowledge to serve society.

How MSU Engages with Communities

- Every college and major administrative unit at Michigan State University engages with communities.
- Concerns addressed by MSU partnerships include cultures and societies, business and industry, families, community development, preK-12 and higher education, foods and fibers, government and policy, health, labor, the environment, and public safety.
- Organizational partners may be businesses or industries, human service agencies, nonprofit organizations, foundations, government offices, neighborhood centers, research think tanks, school districts, or medical clinics.
- Engagement may take the form of research, expert assistance, credit or noncredit learning opportunities, events and information for public audiences, service-learning, or clinical services.
- Partnerships range from rural to urban and local to international.
- Much of MSU’s engagement work addresses issues of racial, ethnic, gender, or other diversity and is carried out by diverse faculty teams.
- Student engagement enriches the learning experience and instills civic values for the next generation.



Engaged Teaching and Learning Enhance the Student Experience

Curricular engagement involves faculty, students, and community in mutually respectful collaborations that enhance the well-being of the community, deepen student learning, and enrich the scholarship of the University.

Photo by David D. Cooper



WRA 135 students working on a brochure for the Refugee Development Center in Lansing.

CENTER FOR SERVICE-LEARNING AND CIVIC ENGAGEMENT

MSU's Center for Service-Learning and Civic Engagement provides beyond-the-classroom learning opportunities that are integrated with students' academic programs. Students who participate in service-learning enrich their academic knowledge with real-world applications and develop personal, professional, leadership, and citizenship skills. The service may be connected to a specific MSU course or academic major (curricular), or may simply be related to a personal passion (co-curricular).

Service placements can be as short as one afternoon or as long as a semester or academic year. From summer 2005 through spring 2006, the Center for Service-Learning and Civic Engagement received and accommodated **11,235** student applications for service positions.

Contact Karen McKnight Casey, Director, (517) 353-4400 or caseyk@msu.edu for more information.



● Public Life in America (WRA 135): The Service-Learning Writing Project

David D. Cooper
Writing, Rhetoric, and American Cultures
College of Arts and Letters

From MSU's inception in 1855, applying knowledge has been core to its mission. The University's goal is not solely to send its graduates into the world with a basic skill set and a diploma, but also to encourage them to use their interests to become active participants in the work of democracy. Students are presented with opportunities for involvement through the Center for Service-Learning and Civic Engagement (CSLCE) and a plethora of student organizations.

A large number of students do, in fact, get involved through either the CSLCE or the study abroad program—the CSLCE alone placed over 11,000 students in service assignments in the 2005–2006 school year. However, some still slide through their undergraduate careers with little to no understanding of academic civic involvement.

Hence the Service-Learning Writing Project, created in 1992 by David Cooper, professor in the department of Writing, Rhetoric, and American Cultures. Generally, service-learning courses are introduced at the uppermost curricular level and slowly percolate down. Cooper, however, decided to root service-learning in the general education curriculum first and slowly move it upwards into a full academic program. After establishing a first year writing course, he designed a gateway course in a new major track in professional writing (Writing in the Public Interest).

Cooper then added an elective junior seminar in the American Studies Program on Civic America, and finally developed a senior capstone course—a process he calls “the four seasons of deliberative learning.”

Originally Cooper had intended to do a simple introduction to the culture of civic life, but in 2002 his focus shifted toward an active pedagogy that challenged his students to plan, design, participate in, and moderate public forums. This refocusing led to further development and refinement of the first year writing course WRA 135: Public Life in America, which unites intellectual content, writing instruction, community-based service-learning, and deliberative democracy to create an active civic learning experience.

Each WRA 135 class is unique. Some classes participate in a number of smaller projects, but most undertake a single, large-scale community writing assignment resulting from a collaborative partnership developed either through the CSLCE or through the interests of the faculty member teaching the class.

A recent faculty member, for example, was interested in animal rescue efforts. His class project was a collaboration with a local racehorse rescue organization named CANTER: Communication Alliance to Network Thoroughbred Ex-Racehorses. Student writing projects included a newsletter for the organization.

Other professors have focused on issues of social justice or education. Cooper's particular interests lie in cultivating students' public work skills and the deliberative practices of democracies. One project he led required three different semesters to complete. In the first semester, students researched and wrote policy briefs on issues involving health, the environment, technology, and social policy. The second group of students compiled these briefs into a handbook, *Generation Y Speaks Out: Public Policy Perspectives through Service-Learning*, which was then presented to Michigan legislators in a public forum by students taking the course in the following semester.

Although Cooper no longer directly teaches the WRA 135 course, he remains heavily involved in the project and still coordinates the faculty who teach the course. The lessons learned through his experiences with the course have greatly affected his own academic career and his view of the University's threefold mission of teaching, research, and service. For Cooper and the faculty and students of Public Life in America, there are no boundaries among the three. ●

Many MSU graduate and undergraduate courses use community-requested projects as a learning laboratory. The Small Town Design Initiative is one example of how the process works.

The Small Town Design Initiative

Warren J. Rauhe
Landscape Architecture Program
Colleges of Agriculture & Natural Resources and Social Science

The notice on the library's community information board says the University is working with the neighborhood association to improve the neighborhood's physical design. There will be a meeting at the recreation center in two weeks.

A surprising number of people turn out for the meeting—maybe 100 or so. Warren Rauhe, a professor from MSU's landscape architecture program, explains that he is here to listen to community members create, through their words, a "picture" of what they want their neighborhood to look like in the next ten years. The idea is to turn the words into visual images that will help the community articulate a plan for revitalization. He calls this process the Small Town Design Initiative, and adds that since 2001 it has helped 50 communities in more than 30 Michigan counties plan for more inviting commercial districts and attractive living spaces.

In this first meeting, Rauhe asks three questions. First, he asks: "What are you proud of in your community?" People start calling out phrases that a student writes down on a flipchart:

Compassion. We take care of each other.

Open porches. We can interact with our neighbors.

The diversity of people in our neighborhood.

Feedback loop: Students listen to a brainstorming session at a community meeting, come back with design ideas at the next meeting, listen to comments, and revise.



As the list gets longer, the room is full of positive energy. Then a new sheet of paper goes up and Rauhe asks: "What are you sorry about in your community?" The residents appear deflated. A litany of negatives follows:

Boarded up buildings.

The drug dealers and prostitutes.

Not enough assistance for seniors.

Rauhe moves on to his final question: "If you were to float over your community in a hot air balloon 10 years from now, what would you like to look down and see?" The positive energy returns and the responses come almost faster than the note-taker can record them:

A hardware store and a grocery shop.

More coffee shops and restaurants.

A retirement home.



Community members decided this bus stop had the potential to be a friendlier and more inviting space...

“The STDI provides an excellent service-learning opportunity and capstone experience for MSU landscape architecture students, while at the same time allowing for research opportunities in the area of community participation.”

Warren Rauhe

Based on these responses, Rauhe, another professor, and about 20 university students gather a set of images from other communities that attempt to capture this community’s “vision” for revitalization and bring them to a second meeting. As Rauhe presents each image, people call out comments:

I like how they’ve used trees to separate the traffic from the pedestrians.

Too futuristic for us.

That’s close. Let’s build it.

At the third meeting the audience is presented with a set of design boards, each showing the neighborhood transformed in some way. The students present slides of their work and talk about what they’re trying to achieve with each design. After the presentations, the community members walk around the room, carefully reviewing each design and writing down their comments on cards.

During the following months, community members review the designs at various locations around the neighborhood and on the Web site of the residents’ association. They review hundreds of images, provide hundreds of comments, and attend more meetings. The students continue to refine the images as they receive comments.

At the final meeting, Rauhe shows 30 or so “before” and “after” images of key locations in the neighborhood that will guide future design plans. A local developer expresses an interest in turning one building into mixed-use housing. A nonprofit that assists newcomers is interested in turning a former grocery store into a micro-enterprise that will provide jobs and job training for its clients.

The residents’ association is raising money for the necessary technical studies. But a lot of work still needs to be done. Undertaking some small projects that show immediate results would be a good start, Rauhe says. The association’s chairperson asks for committee volunteers. Many people raise their hands. ●



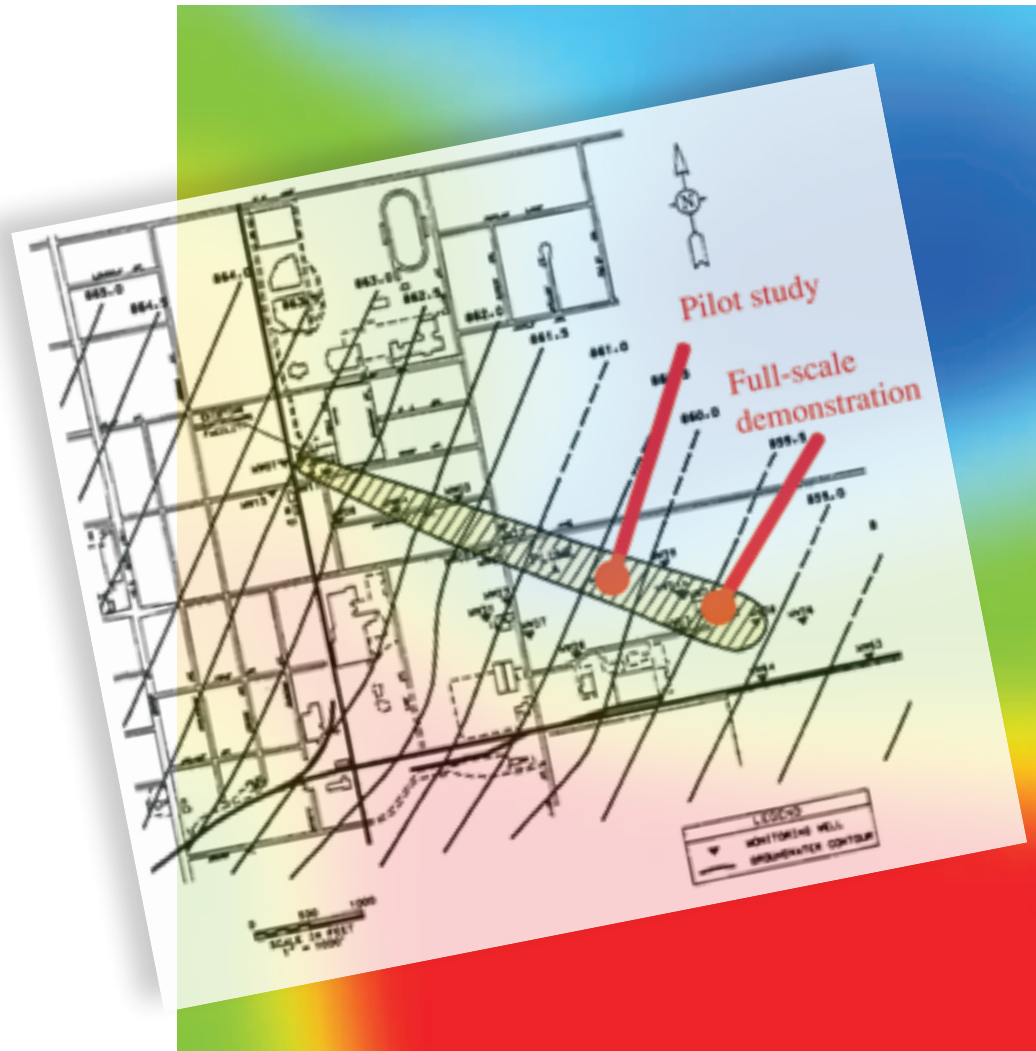
Students prepared illustrations to present options for change...



A full-scale overhaul of the site might look like this.

Engaged Research Enriches Community, Economic, and Family Life

Michigan State University's community-based research partnerships increase the capacity of faculty and communities to address a wide variety of societal issues. Direct gains for community partners can include better technologies, policies, organizational capacities, and other improvements. Benefits for faculty partners include opportunities for new areas of research or pedagogy, new intellectual property, and scholarly work about the project. At their best, these partnerships involve shared goals, expertise, and resources, and result in mutually identified benefits.



Detail of a map of the St. Joseph Aquifer below Schoolcraft, Michigan. The oblong shape represents a plume of carbon tetrachloride contamination.

UNIVERSITY-COMMUNITY PARTNERSHIPS

University-Community Partnerships (UCP) is a department of University Outreach and Engagement that facilitates community-based research and evaluation partnerships.

If you are an MSU faculty or staff member, UCP can help you:

- Establish partnerships with community groups
- Collaborate with faculty and staff from other departments on community-based research
- Find support for community-based research initiatives

If you are a community partner, UCP can help you:

- Locate faculty and staff to work on community issues
- Learn about evaluating programs based on outcomes
- Incorporate evidence-based practice into your program

Contact Patricia A. Farrell, Director, at (517) 353-8977 or farrellp@msu.edu for more information.

● Hazardous Waste Remediation: The Schoolcraft Project

Michael J. Dybas
Center for Microbial Ecology
College of Natural Science

Carbon tetrachloride is a highly toxic substance. If Michigan's Department of Environmental Quality (MDEQ) identifies a concentration of five parts per billion in a water source, it condemns the water as unsafe to drink and requires the responsible party to remediate the problem.

Forty years ago, about 15–25 gallons of carbon tetrachloride were dumped into the St. Joseph Aquifer below Schoolcraft, Michigan. By the early 1990s a toxic plume (or leakage pattern) had penetrated a mile long, a tenth of a mile wide, and 80 feet deep into the aquifer. The plume had begun to threaten lakes and drinking water sources in the direction of the aquifer's flow.

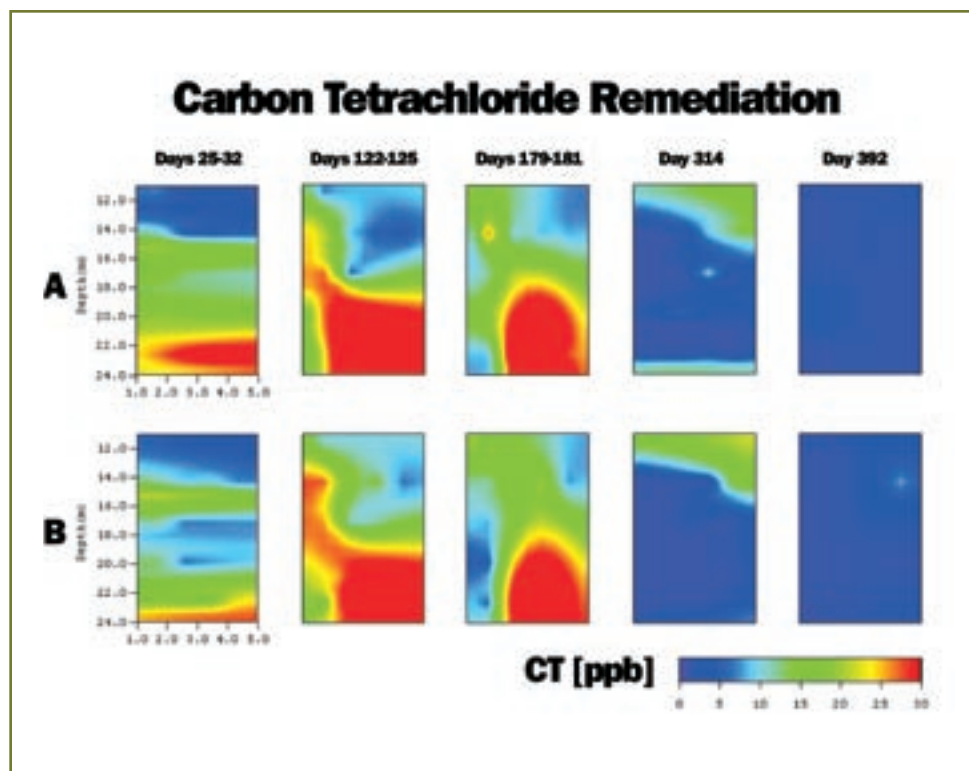


Monitoring progress at the field site.

The conventional method of detoxifying the site would have involved using large volumes of air or activated charcoal filters to strip out

the carbon tetrachloride—at a cost of five to six million dollars and more than 25 years of work. This air-stripping process is inefficient as well as expensive. It merely transfers some of the pollutants to the atmosphere and produces another pollutant, chloroform, as a byproduct.

Researchers Craig Criddle (Stanford University), Mike Dybas (MSU), and their team of engineers, geologists, and microbiologists had a better idea.



Charting progress: Reds/yellows indicate presence of carbon tetrachloride. After 392 days it has all but disappeared.

In 1988 Craig Criddle, who was then a graduate student and is now an associate professor of environmental engineering at Stanford University, discovered a microbe (*P. stutzeri* KC) that could transform carbon tetrachloride into carbon dioxide and other inert compounds without producing chloroform. As he later recalled, “We had some old aquifer material sitting in a bucket at the back

of a cooler...I set up an enrichment [growing medium] for it...Within two days a surprising thing occurred... Pearly white balls formed, and there was no detectable carbon tetrachloride. Best of all, there was no detectable chloroform. At the time I didn't think we had isolated anything unique.”

continued

continued from page 9

Dr. Criddle was still exploring the idiosyncrasies of his microbe when he visited Michigan State University in 1991. The MSU group discovered that *P. stutzeri* KC's precise growing requirements could easily be achieved by adjusting the pH of the medium—a finding that Dr. Michael Dybas, the current project investigator, referred to as “the heart of the technology.”

A graduate student who had been a hydrogeologist on the Schoolcraft plume cleanup told Criddle about the project. Working with the Schoolcraft community and MSU Extension, Criddle's team successfully tested their bacterium on a groundwater and sediment mix from the St. Joseph aquifer.

The question then became, would the microbe be able to colonize itself onsite? First, the physical, geological, chemical, and other characteristics of the aquifer were studied. Next, modeling and cost analysis confirmed that a biocurtain (system of closely spaced wells) to span the plume and deliver the *P. stutzeri* KC solution, was technically feasible and economical. A pilot biocurtain system was then designed and constructed—delivery and monitoring wells were built, tracers were used to record the flow of materials inoculated into the groundwater, and the culture was adjusted as its performance was monitored.

P. stutzeri KC proved to be a highly cost-effective, ecologically sustainable solution that shows promise for generalizing to other situations. With funding from MDEQ, the team is currently addressing other, larger and more complex plumes in the aquifer. ●

● Evaluating a K-12 Philanthropy Curriculum: Learning to Give

Diane L. Zimmerman
National Center for the Study of University Engagement
University Outreach and Engagement

Robert Floden
Institute for Research on Teaching and Learning
College of Education

Learning to Give (LTG) is an innovative educational initiative that seeks to pass on the traditions of a civil society to the next generation by infusing academic content about philanthropy into the core curriculum of schools. With funding from the Council of Michigan Foundations, an interdisciplinary MSU team is working with the LTG staff and steering board to evaluate the program.

Drawing by Learning to Give student



LTG employs a comprehensive set of strategies—curriculum development, in-service teacher training, pilot testing, and Web-based dissemination. Results from the evaluation research over nine years indicate that the program has helped teachers to transform their roles. It is also giving K-12 students a solid foundation in the basic concepts of philanthropy and the common good. LTG students participate in voluntary service to their community at a rate of involvement almost twice that of most school children.

The MSU team began working with the project as formative evaluators when it was just beginning. The LTG staff and steering board found the collaboration so useful that they expanded the contract to include outcomes evaluation and test development. This longevity and expansion of goals is evidence of the value placed on MSU's role in the success of the project.

The evaluation partnership also received academic notice when it was named as an “Exemplar” of outreach research by the National Committee on Institutional Cooperation's Committee on Engagement.

Originally Michigan-based, the LTG project started moving toward a national roll-out in 2005. ●

“My students were finally able to make a connection to what we were doing in the classroom and their local community. Many of them for the first time in their lives had the feeling that they were a valued member of the community.”

– LTG teacher

● Music and Wellness

Frederick C. Tims
Music Therapy Program
College of Arts and Letters



Frederick Tims believes that the healing force of music is near-universal—and, with collaborators from medicine, biochemistry, psychiatry, psychology, music, and other disciplines, he is gathering the evidence to support his observations.

Dr. Tims, who directs the Music Therapy Program at MSU's School of Music, has worked with persons suffering from Alzheimer's disease, healthy retirees, cancer survivors, and violence-prone youth. He has seen first-hand the power of music to make a difference in people's lives. Senior citizens experience less depression, anxiety, and loneliness; autistic children become more communicative. At-risk youth learn to listen to each other and work together, skills that translate into other areas of their lives. Stress hormones are modulated in positive directions.

While few would dispute the psychological benefits of music in a general or spiritual sense, Tims' goal is far more specific. He wants to quantify the effect—to find out why it works. "I hope to see my profession develop better models to explain the mechanisms of how music therapy works, so we can use it to improve quality of life for all people," he said.

Tims and his multidisciplinary teams have conducted numerous studies of the physiological and psychological changes that result from participating in music therapy.

For one federally funded study a team of physicians, biochemists, psychologists, and music therapists looked at the effect of active participation in music on veterans suffering from Alzheimer's



Surgical team for Ambient Music Project, Alegent Health, Omaha, NE.

disease. The research team was able to document changes in norepinephrine, melatonin, and human growth hormone (hGH), which led to more normal sleep patterns, increased feelings of well-being, and less stress. Melatonin levels remained elevated for at least six weeks after the music participation ended. The vets in the study were able to learn new songs and remember them from session to session, improvise music spontaneously, and socialize more with their peers.

"Toward the end of this study," said Tims, "one of the vets—who was in the later stages of Alzheimer's and did not even recognize his family members when they came to visit—called me by name, saying 'This music is doing wonders for me and these other guys.' The vet then named a song he asked me to help him remember and teach to the others in his group." Tims is presently engaged in an exciting research endeavor with Chip Davis (founder of Mannheim

Steamroller and American Gramophone Recording) and Alegent Health Systems in Omaha, Nebraska. Davis wanted to give something back to his community and Alegent wanted to research innovative patient interventions with music. How did they find Tims? "I got googled," said Tims. "They asked me to join in the collaboration, along with Dr. Durant Begault, a psychoacoustical expert with NASA."

The study is measuring pain perception, patient and surgeon satisfaction, anxiety, rapidity of healing, and neuroendocrine (stress hormone)

production among 226 major spine surgery patients receiving ambient music before, during, and after surgery. About half of the data have been collected and data analyses will begin soon. This interdisciplinary team involves surgeons, anesthesiologists, nurses, and hospital research personnel. After the first several surgical patients experienced the ambient music, the lead anesthesiologist remarked that he was amazed at how relaxed the patients were before being put to sleep for the surgery. ●



Box that delivers ambient music to surgical patients.

A Global Model Expands International Reach

Michigan State University's international outreach initiatives are among the largest and most vital in the country, guiding undergraduate and graduate students in study abroad programs, and developing international opportunities for MSU faculty and researchers.

MSU actively works to make international resources and expertise available to off-campus audiences including educators, government agencies, the business community, and the general public.

Photo by Tom Lehr



A patient's mother (left) discusses treatment issues with Monica Sapuwa, R.N. (center), of Queen Elizabeth Central Hospital, Blantyre, Malawi, and Gretchen Birbeck (right).

INTERNATIONAL STUDIES AND PROGRAMS OFFICE

MSU's Office of International Studies and Programs ensures a thorough cross-coverage of priorities through:

- Six thematic centers focused on development, business education and research, agriculture, health, education, and women/gender relations.
- Five geographic area studies centers focused on Africa, Asia, Canada, Europe, and Latin America.
- Language study units including the Center for Language Education and Research as well as centers and departments focused on specific languages and cultures.
- Support units for students and scholars focused on international volunteering, study abroad, international Extension training programs, Peace Corps opportunities, visiting international professionals, English tutoring, and more.

Contact Jeff Riedinger, (517) 355-2350 or email info@isp.msu.edu for more information.

● Epilepsy Treatment in Zambia: Assessing Cultural Factors

Gretchen L. Birbeck
International Neurologic and Psychiatric Epidemiology Program (INPEP)
College of Osteopathic Medicine and College of Human Medicine

Epilepsy has long been recognized as a stigmatizing disorder. Most people with epilepsy reside in the developing world, but little is known regarding the impact of epilepsy-associated stigma in this environment. In sub-Saharan Africa, traditional belief systems and lack of access to anti-seizure medication may worsen both the burden and the stigma of the disease. The development of culturally appropriate programs for decreasing this burden requires more knowledge of how people with epilepsy experience their condition and society's understanding of epilepsy. Many people in the region access care through traditional healers rather than through the formal medical system, so the conceptualization of epilepsy and epilepsy care by these healers also deserves assessment.

To understand the social and economic consequences of epilepsy-associated stigma in Zambia, Birbeck's project is conducting focus groups of adults with epilepsy and the parents of children with epilepsy, ethnographic interviews with traditional healers, a survey of social groups influential in the lives of people with epilepsy, and a case-control study of people with and without epilepsy seeking medical care from the same source. This contextual framework will guide the development of effective, community-based interventions aimed at improving the lives of people with epilepsy in the region.

Partners on this project include the University of Zambia in Lusaka and a number of Zambian hospitals and health service agencies. The work is ongoing.

Dr. Birbeck is also interested in how cultural factors of developing countries influence health care delivery for other common neurologic conditions. In addition to the Zambia study she is investigating cerebral malaria (a suspected risk factor for epilepsy) in Malawi and HIV treatment issues in rural areas of Zambia. She recently completed additional training in epilepsy to further this work. ●

In sub-Saharan Africa, traditional belief systems and lack of access to anti-seizure medication may worsen both the burden and the stigma of the disease.

International Neurologic and Psychiatric Epidemiology Program

MSU recently established a new international program that will study neurologic and psychiatric disorders in developing countries.

Problems like epilepsy, cerebral palsy, dementia, and neuropathies are far more common in developing countries than in the US. Yet clinical specialists, who are trained to provide care for people with nervous system disorders, and researchers, who can conduct studies to understand the high rates of these problems, are almost nonexistent in less developed regions of the world.

The office of the Provost, the Colleges of Osteopathic Medicine and Human Medicine, and several MSU departments provided funds to support the new International Neurologic and Psychiatric Epidemiology Program (INPEP). INPEP will foster research and training programs to improve our understanding of why neurologic disorders are so problematic in the developing world, identify opportunities for prevention and treatment of these devastating conditions, and work with local researchers and healthcare professionals to improve both care to patients and in-country research capacity. Current INPEP studies include neurologic injuries among cerebral malaria survivors in Malawi, the social and economic impact of epilepsy-associated stigma in Zambia, and the epidemiology of psychiatric disturbances and drug dependence in over 30 countries. Dr. Gretchen Birbeck directs the program.

● On the globalEDGE: globaledge.msu.edu

Tomas Hult

**Director, Center for International Business Education and Research (MSU-CIBER)
Eli Broad College of Business and Graduate School of Management**

When it comes to international business, Michigan State University has the global edge. This is no idle boast—search engines Google, Yahoo, and AOL all give MSU-CIBER’s globalEDGE Web site a No. 1 ranking (based on the search term “international business,” as of July 20, 2006). The site receives over 3 million hits a month, with 75% of the traffic coming from business executives worldwide who spend on average about 14 minutes in each globalEDGE session.

The most visited section of globalEDGE is the “resource desk.” Maps, key statistics, and links to country-specific news and resources are compiled for about 200 countries. Powerful features such as comparing countries using multiple statistical indicators are also available. In addition, more than 5,000 international business resources have been evaluated, categorized, and made available in the global resources section.

Other areas of the site offer an in-depth “news and views” page that includes a message forum. The “academy” section targets course content, announcements, research, and career resources. The “diagnostic tools” provide intelligence-based decision support systems for business executives.

Tomas Hult, director of MSU’s International Business Center, oversees the continued development and maintenance of globalEDGE. Hult matter-of-factly states, “Our objective is to be the world-leading provider of international business knowledge to practitioners, public policy makers, academics, and students.” To achieve this objective requires a staggering amount of work. A team of approximately 20 people—undergraduate and graduate student assistants, faculty, academic specialists, graphic artists, and computer programmers—work on the site daily, with others from the center helping out as needed.

The project also benefits from several partnerships. Numerous world-leading textbook publishers in the field of international business build globalEDGE exercises into their textbooks, allowing students to utilize globalEDGE as a powerful research tool to get an in-depth look at a given specialized topic. In addition, globalEDGE operates as a content provider for some of its partners’ Web sites; examples include the American Marketing Association and the Academy of International Business.

From its beginning as a single Web page in 1994, globalEDGE has expanded to be the most comprehensive international business resource online. In order to keep up the impressive ranking and effectiveness of the site, the team is working on many additions and improvements. Hult states that “Our users demand customization to their liking. It is not enough to provide vast amounts of resources; we also need to customize those resources to our users’ needs so that the knowledge they seek is at their fingertips as soon as they enter the globalEDGE world.” ●

globalEDGE™ connects international business professionals worldwide to a wealth of information, insights, and learning resources on global business activities.



Strategic Investments

Increase Opportunities for Research

Outreach research projects may be evaluation studies, policy analyses, demonstration projects, or other forms of applied research—any new scholarly knowledge developed in collaboration with external constituents for mutual benefit and capacity building.

An institution-wide commitment to supporting engaged research is essential for its success, since the work is both time- and resource-intensive. In addition to the usual demands of project management, it requires a tolerance for relationship building and a willingness to accommodate the priorities, administrative considerations, and schedules of others. Reporting requirements may double or triple as community partners, funders, and scholarly colleagues all seek answers to different questions.

Michigan State University continuously affirms and re-creates the value it places on applying knowledge to serve society by giving it priority at top administrative levels and exploring ways to better assist the faculty members and their partners who undertake this work. Current strategies for encouraging engaged research at MSU include seed funding programs, awards, and other incentives.

MSU faculty members often summarize research results for policy, practitioner, and community audiences.



● Promoting Emergent Literacy

Nell K. Duke
Department of Teacher Education and Department of Counseling,
Educational Psychology, and Special Education
College of Education

It's never too early to read to a child. Now Michigan policy makers and MSU literacy experts have teamed up to promote reading to our youngest citizens in child care settings.

The Promoting Emergent Literacy in Licensed Care Project, led by Nell Duke of MSU's Literacy Achievement Research Center, produced a DVD and booklet designed to help educate child care staff about children's learning experiences from birth through five years of age. The materials were presented to the Michigan Department of Human Services for distribution to 20,000 licensed child care providers across Michigan.



Promoting emergent literacy helps give children the foundation they need for success in school.

The effort is a result of groundbreaking State of Michigan policy that requires all licensed child care centers to include at least 30 minutes a day of developmentally appropriate literacy activities. Typically, child care requirements have focused on issues of safety and staffing rather than curriculum.

“One of the challenges,” Duke said, “was to help child care providers understand ways to foster emergent literacy development—for 30 minutes and beyond. How do you introduce books to infants and toddlers? How do you make print a part of everything from mealtimes to pretend play? Our first steps were to identify age-appropriate literacy activities and ways to include them in daily activity. We also showed the video to teachers and early childhood experts during various stages of its development, and used their feedback to make adjustments.”

“Children learn more from birth to age three than any other time in life,” said Michigan Department of Human Services director Marianne Udow. “Our challenge is to ensure that every child born in Michigan reaches kindergarten with the intellectual and emotional foundation necessary to succeed in school.”

Funding sources included MSU Families and Communities Together (FACT) Coalition, MSU Literacy Achievement Research Center, MSU School of Social Work, W.K. Kellogg Foundation, and the Child Day Care Licensing Division of the Michigan Department of Human Services. ●

Innovations in University-Community Research: The FACT Coalition

MSU's multidisciplinary Families and Communities Together (FACT) Coalition links University researchers and resources with community partners. FACT supports the health and well-being of Michigan's children, families, and communities through an annual grant program and other collaborative opportunities.

FACT, in partnership with the MSU Community Vitality Program, University Outreach and Engagement, and MSU Extension, awarded about \$500,000 in research grants to University researchers and their community partners as part of the 2005-2006 Innovations in University-Community Research Collaborations program.

The Innovations program is designed to prepare MSU researchers to be more competitive as they seek federal and foundation research grants.

MSU faculty, research staff, and Extension staff are eligible to apply for Innovations funding. All projects must be collaborative and must include MSU faculty from more than one department or unit, as well as off-campus Extension staff or representatives of community organizations.

Contact Patricia A. Farrell, Associate Director, (517) 353-8977 or farrellp@msu.edu for more information.

● Evaluating Services for Survivors of Domestic Violence

Cris M. Sullivan
Department of Psychology
College of Social Science

As a community psychologist, Cris Sullivan believes that research should be informed by community engagement. “Social change should always be a focal point of our work,” she said. “I am fortunate to have collaborations with some outstanding agencies and organizations.”

Dr. Sullivan is recognized nationally for her research on violence against women. She has generated more than \$10 million for MSU in research funding, primarily from the National Institute of Mental Health, the Centers for Disease Control and Prevention, and the U.S. Department of Justice.



Some of Turning Point’s programs are very simple. The Second Hand Rose resale store in Mt. Clemens supports the organization’s mission through revenues earned from community donations. Survivors can “shop” for free.

One of Sullivan’s long-standing partnerships is with Turning Point, Inc., a service agency based in Mt. Clemens, Michigan, that offers programs and resources to help victims and survivors of domestic violence, sexual assault, and homelessness regain control of their lives.

Suzanne Coats, executive director of Turning Point, is a nationally renowned advocate who shares Sullivan’s passion for demonstrably effective community intervention programs.

Their most recent collaboration involves a five-year National Institute of Mental Health grant (with MSU faculty members Rebecca Campbell, Deborah Bybee, and Celia Wills) to develop a research infrastructure within Turning Point that will support a wide variety of research studies pertaining to effective mental health services for survivors.

The two partners also co-wrote *Outcome Evaluation Strategies for Sexual Assault Service Programs: A Practical Guide*, which has been enthusiastically received nationwide.

Sullivan and Coats received the inaugural MSU Outreach Scholarship Community Partnership Award in 2006. ●

Honoring Engaged Research: The Outreach Scholarship Community Partnership Award

Michigan State University inaugurated the Outreach Scholarship Community Partnership Award in 2006. The annual award provides University-wide recognition of highly engaged community-based research collaborations that positively impact both the community and the scholarship. Every year, one award is conferred upon an MSU researcher and his or her designated partner; each receives a stipend of \$1,500. Award recipients are recognized at the University’s annual Awards Convocation in February.

See outreach.msu.edu/funding.asp for more information about funding opportunities for outreach research.

2006 Honorees...



Cris M. Sullivan



Suzanne Coats

Clear Values Strengthen Stewardship

Photo by Adina Huda



STEWARDS OF OUTREACH: MSU Associate Provost for University Outreach and Engagement Hiram Fitzgerald and former Vice Provosts for University Outreach Robert Church and James Votruba discuss future directions at MSU's Benchmarking University Engagement Conference.

As a land-grant public research university, Michigan State has a covenant with society that entails unique responsibilities and expectations. In her first President's Address, on February 11, 2005, Lou Anna K. Simon spoke about the values implicit in those expectations:

- **We have a responsibility to serve as a catalyst for realizing upward mobility—the American dream—and for advancing the state and nation's economic competitiveness and quality of life.**
- **We have a special responsibility to listen and respond to society's needs and to shape an intellectual agenda that addresses the issues facing global society today while anticipating and shaping the issues of tomorrow.**
- **And we have a responsibility—an expectation—that we will marshal our intellect and our will to assure that our value to society globally and to those whose lives we touch directly will continue to grow and to appreciate over time, no matter what circumstances we face.**

Good institutional stewardship encompasses both the articulation of core values—as Dr. Simon has done here—and the development of strategies for translating those values into action.

In turn, these action strategies are carried out according to values of their own, called standards of practice. As MSU faculty members work with communities and interest groups, they strive to respond to societal needs, actively participate in finding and sharing solutions, and build problem-solving capacity in constituent groups—for the benefit of all. Evaluation based on outcomes contributes to scholarship while providing real-world answers.

Responsive, participatory, capacity-building, mutually beneficial, evaluative—these are the values that drive the University's long-range strategic partnerships.

● Biomechanics: Designing for Life

Robert P. Hubbard
Department of Mechanical Engineering
College of Engineering
Department of Osteopathic Surgical Specialties
College of Osteopathic Medicine

Robert Hubbard has achieved international acclaim for his bioengineering research on human spinal mechanics and product development. With his background in mechanical engineering and collaboration from osteopathic physicians, Dr. Hubbard and his students developed biomechanical models and measurement technologies to represent human torso shape and movement that are being used to design and assess new products in automotive and office seating, most notably the LEAP® office chair of Steelcase. Hubbard also invented the HANS® head and neck support, which is mandated in major car racing series around the world.

In 1985, he founded Biomechanical Design Inc., a SmartZone startup company. Of his work and the company, Hubbard said, “Bioengineering problems are interdisciplinary. Several years ago, I decided to reach beyond traditional academic boundaries and try to influence people by helping design products that provide biomechanical benefits.”

His work for product development beyond academia has been the basis for his research and teaching, with many basic and applied studies that have been funded predominantly by Michigan companies. Twenty years ago, he started a class that now draws approximately 120 engineering and 80 marketing students who work in teams to identify unmet market needs, and define, prototype, and market test new products targeted to those needs. ●



Photo by Harley J. Seeley, IMC Image & Design Group

Robert Hubbard in the LEAP® chair that he developed.

Lansing Area SmartZone

MSU has joined forces with the cities of Lansing and East Lansing to establish the Lansing Regional SmartZone. The goal of the SmartZone is to grow technology-based commercial opportunities in the Lansing area by commercializing research and development efforts of corporations, private research institutes, and the University.

MSU faculty provide much of the research expertise; the SmartZone facilitates its commercial development.

A program of the Michigan Economic Development Corporation, SmartZones attract businesses by providing incubator space, entrepreneurial expertise, exposure to potential markets, access to capital, and other incentives. SmartZone collaborations include universities, industries, research organizations, government, and other community institutions.

Contact Paul Hunt, Associate Vice President for Research and Graduate Studies, (517) 432-4499 or pmhunt@msu.edu for more information.

● Developing Energy Alternatives

Harold Schock
Automotive Research Experiment Station (ARES)
College of Engineering

With gas prices rising daily, Dr. Harold Schock, director of the ARES, lately has found more people interested in what he has to say about the intricacies of internal combustion engines. His research focuses on sophisticated diagnostics to quantify flow and combustion processes. The goal is to improve efficiency, for example, by figuring out how to collect wasted heat energy from the exhaust and convert it to electricity that can be used by a hybrid vehicle.

Schock has predicted that “we have at least 30 more years of pumping gas in store for us. For the foreseeable future, in terms of the environment and the economy, fossil fuels will be tremendously important.”

Whether the Earth’s fast-dwindling supply of hydrocarbons can outlast Schock’s 30-year prediction remains to be seen. For the present, Schock’s money is still on the internal combustion engine, and continuing to tinker with its parameters. “There’s probably more computational power in an automobile today than there was in the rocket that took the men to the moon,” he said. “You can buy a car for \$20,000 that’s a fantastic piece of equipment. It has better fuel economy than cars did 20 years ago by a factor of at least two, with equivalent power and better safety. For general transportation purposes, it’s still a wonderful means of getting around.” ●

New Energy & Automotive Research Laboratories Under Construction

A \$10 million facility that will focus on research to improve automobile engine efficiency, reduce vehicle emissions, and seek alternative energy sources is under construction at Michigan State University. In the new laboratories, researchers will identify ways to realize greater fuel efficiency and develop new biobased fuels. Nearly half of the financial support for the Energy & Automotive Research Laboratories was provided by individual and corporate donors, including Ford, General Motors, and Consumers Energy. The new facility is an expansion of an existing research center, MSU’s Automotive Research Experiment Station (ARES).

“Of the 83,000 research and development jobs in the U.S. auto industry, nearly 60,000 are in Michigan. This new facility will help to keep it that way.”

Eann Patterson
Chair
Department of
Mechanical Engineering

The Outreach and Engagement Measurement Instrument (OEMI)

Michigan State University has developed an online survey to collect data about outreach and engagement activities undertaken by MSU faculty and academic staff across their teaching, research, and service. One of the first surveys of its kind, the Outreach and Engagement Measurement Instrument (OEMI) has generated interest from universities across the United States and internationally.

Each year respondents are asked to report on scholarly activities conducted for the direct benefit of audiences external to the University. Among other things, they indicate the issues that their work addresses; the geographic location of the work; external funding generated, both for the University and its partners; and impacts on both the community and their own scholarship.

In 2005, the University utilized data collected through the OEMI both for its own ten-year re-accreditation self-study* and for its contribution to a pilot study of a new engagement classification undertaken by the Carnegie Foundation for the Advancement of Teaching.† MSU was one of only 14 institutions invited to participate.

The OEMI is already being adapted for national use. It has been pilot tested by other institutions, and is being offered to other universities as an institutional research tool of the National Center for the Study of University Engagement (NCSUE), which is located at MSU. In coming years, the NCSUE plans to develop the first national warehouse of outreach and engagement data.

Contact Burton A. Bargerstock, (517) 353-8977 or oemi@msu.edu, for more information.

* <http://www.accreditation2006.msu.edu/>

† <http://outreach.msu.edu/carnegiereport.pdf>



About University Outreach and Engagement

University Outreach and Engagement (UOE) is a campus-wide central resource dedicated to helping academic units to construct more extensive and effective engagement with communities. Working closely with academic departments, research centers and institutes, and MSU Extension, UOE advocates for and facilitates outreach initiatives. It is the charge of the Office to ensure that MSU's outreach efforts are internally coordinated, externally linked, responsive to important societal issues, and consistent with its mission and policies.

Several university-wide programs are affiliated with University Outreach and Engagement:

- **National Center for the Study of University Engagement** plays a national leadership role with respect to conversations about the scholarship of engagement.
- **Community Evaluation and Research Center** provides a hub for university-based evaluators and conducts participatory program evaluation in the areas of education, youth development, early childhood, health, and community development.
- **Center for Service-Learning and Civic Engagement** provides curricular and co-curricular service-learning and engagement opportunities for MSU students and helps faculty integrate service-learning into their courses.
- **MSU Usability & Accessibility Center** provides leadership in evaluating new interface technologies to ensure that they are useful, usable, accessible, and appealing to a broad audience.
- **Michigan State University Museum** reaches a broad public audience through collections, field- and collections-based research, public service and education programs, traveling exhibits, and innovative partnerships.
- **Wharton Center for Performing Arts** offers a wide range of educational programs suited to a variety of learner needs.
- **Estate and Wealth Strategies Institute** is a nonprofit organization dedicated to developing strategies for wealth, estate, business, and charitable planning.

**University Outreach and Engagement • Michigan State University
Kellogg Center, Garden Level • East Lansing, MI 48824**

**Phone: (517) 353-8977 • Fax: (517) 432-9541
Web: outreach.msu.edu • E-mail: outreach@msu.edu**

UOE also provides administrative and other support services to MSU faculty, students, and community partners through the following departments:

- **University Outreach and Engagement Administration** provides financial management, human resources, and facilities support to the UOE departments and initiatives.
- **University-Community Partnerships** facilitates research collaborations between MSU faculty and community-based partners to address a wide variety of societal issues.
- **Communication and Information Technologies** provides public access to information about university-wide outreach initiatives through portal Web sites, as well as consulting and product development services for Web sites, databases, publications, graphic design, event management, and technology.

Contact University Outreach and Engagement at (517) 353-8977 or e-mail outreach@msu.edu to learn how you can become more active in the MSU engagement enterprise.

The Engaged Scholar is published twice yearly by University Outreach and Engagement, Michigan State University. Upcoming issues will feature stories about:

- **Families, Work, and Health (Spring 2007)**
- **The Arts, Culture, and Economic Development (Fall 2007)**

If you would like to be added to our mailing list, send a request to outreach@msu.edu.

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University Outreach and Engagement
Michigan State University
Kellogg Center, Garden Level
East Lansing, Michigan 48824

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