

inside OAKLAND



A newsletter for Oakland University colleagues

breaking NEWS

Senate boosts OU funding

The State Senate Higher Education Appropriations subcommittee has recommended increasing Oakland University's funding by \$20 per fiscal year equated students (FYES), or \$187,200. This amount is in addition to the governor's recommendation of \$39,798,120.

As part of phase two of the state budget hearings, the bill now goes to the House.

The winners are . . .

If you returned your Training and Development survey, you may be a winner.

The Quality Improvement Training Team has drawn four raffle tickets from those returned within the surveys. Winning numbers are 5634708, 5634064, 5635048 and 5634776.

Those of you holding winning tickets should bring them to the CIPO Office, 49 Oakland Center, to receive gift certificates good for \$50 at the OU Bookcenter. Overall, about 600 surveys were returned.

Engler to speak at prayer breakfast

Gov. John Engler will visit the Oakland University campus May 9 as the featured speaker at the 15th annual Rochester Area Prayer Breakfast, sponsored by the Greater Rochester Area Chamber of Commerce.

For information, call (810) 651-6700.

Pushing the limits

Renovated new home will move Honors College 'structurally as well as physically'

Oakland University's Honors College will celebrate its 20th year with a new look and location. An April 11 groundbreaking ceremony is planned for its new home on the lower level of Vandenberg Hall.

The university community is invited to attend the 4:30 p.m. ceremony on the campus grounds between Beer Lake and Vandenberg Hall. Honors College alumni and faculty emeriti are also invited.

An Honors College student suggested the theme, "Pushing the Limits," to reflect the philosophy of the 200-student program for highly motivated students who seek an unusually challenging education.

"Honors College students push the limits — academically and intellectually," says Brian Murphy, director, Honors College and associate professor, English.

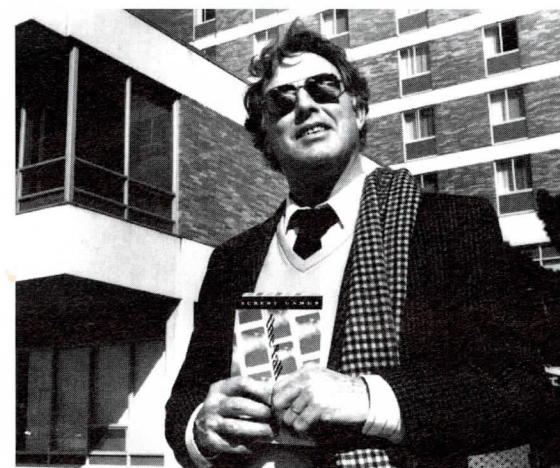
"We're not only moving physically, we're moving structurally," Murphy says, adding that the college's new space and design will fit its new role. At one time an academic unit within the College of Arts and Sciences, the Honors College is now independent.

"The Honors College is important as itself and as a symbol of the university and what we think academic excellence and commitment to students are all about," Murphy says. "The new facility will be a highly visible reminder of that. It holds the torch of Oakland University's original mission."

The new facility will occupy 1,100 square feet on the ground floor of East Vandenberg Hall,

facing Beer Lake. Though designs are not final, Murphy expects the new facility to feature a modern design with lots of glass. Renovations are expected to be completed by fall.

In addition to expanded office space, a multi-purpose conference/study room and computer laboratory are planned. The new facility will be named after the late Dr. Alvin R. Larson, a longtime Oakland University benefactor. A \$347,000 grant from the Oakland University Foundation



Brian Murphy, director of the Honors College, stands in front of Vandenberg Hall, site of the new Honors College facility.

makes the move possible.

The Honors College, now in Varner Hall, first opened in fall 1977. Oakland University is one of only about 30 percent of America's colleges and universities that belong to the National Collegiate Honors Council.

Putting nature to good use

From alternative fuels to zoology, Yang Xia details the A-Z applications of NMR imaging

Yang Xia believes it is the duty of scientists to unveil nature's secrets and make good use of them.

Xia, assistant professor, Physics, uses Oakland University's unique, Nuclear Magnetic Resonance (NMR) microscopic imaging to perform research in such areas as:

• The secret strength of silken spider webs.

• The way alternative fuels will react in gas tanks.

• How to control osteoarthritis and cartilage degradation.

• New ways to grow high-yield crops.

Xia showcased his efforts at the President's Colloquium Series April 3. Xia began his presentation with a video program on his work using NMR microscopic imaging to study plants and polymer flow. The segment was featured on the *Beyond 2000* television program on the Discovery Channel.

With NMR imaging, Xia says, scientists can quantitatively measure the vascular flow in plants — seeing how nutrients in plants are transferred through water. "NMR offers the only technique today to provide an accurate measure of a plant's vascular flow non-invasively," Xia says. "This work may eventually help produce high-yield crops, which, in turn, can help the world's economy enormously."

Industry applications for studying molecular motions are innumerable, Xia says. "Many companies are looking at pro-

ducing alternate fuels to replace gasoline for cars and we need to know how the various new fuels will react to the inside of a car. Using NMR imaging, we can use part of a real gas tank and soak it in various solvents and then study fuel penetrations and the dynamics of how the new fuels go into and react with the materials."

Velocity profiles using NMR imaging can also make for useful research, Xia says. "Cars use a lot of different tubings, transferring various oils and fuel throughout their systems, so it would be important to know the velocity profiles before a car manufacturer changes the design."

OU acquired the NMR spectrometer in June 1994 through support from multiple sources, including alumna and OU Foundation Director Jan Bennett '90, for whom Oakland's NMR laboratory is named.

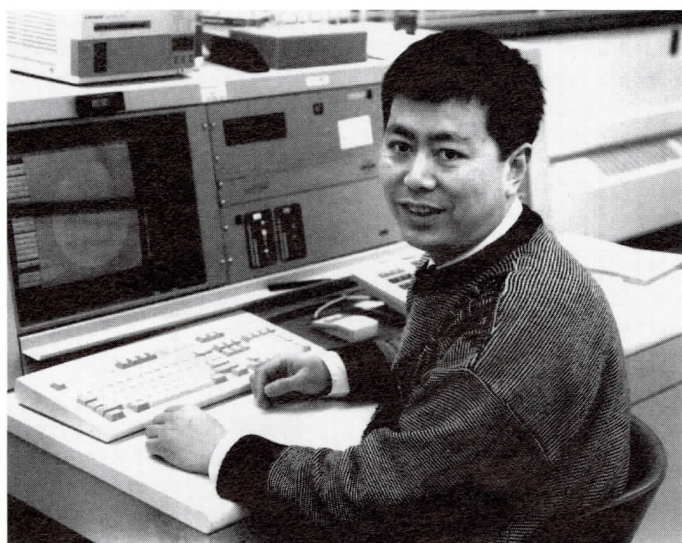
Development of NMR microscopic imaging has caused a scientific and technological revolution and useful work in this field is just beginning, Xia says. Over the years, Xia has been instrumental in adding microscopic imaging ability to Oakland's NMR spectrometer and writing new software to advance its data analysis capabilities.

"NMR imaging is useful for

science, engineering, industry, medical research and understanding nature," Xia says. "It gives you a picture of what you are looking at. It is also truly non-invasive so that you can get an internal photo without harming the object or sample you are looking at. And it offers rich molecular level contrasts so that we can see internal dynamic information. These features make NMR more useful than ultrasound, infrared, or X-ray tomography (CAT scans)."

Xia's recent work, which is aimed at controlling the degradation of cartilage using research based on NMR imaging, will be presented at the fourth annual meeting of the International Society of Nuclear Magnetic Resonance in Medicine April 30 in New York. His abstract was chosen over more than 2,100 potential presenters. Xia is also in the initial stages of a research partnership to study cartilage degradation with scientists at Henry Ford Hospital's Bone and Joint Center.

Since joining Oakland University almost two years ago, Xia has received funding for two NMR cartilage research projects, including a \$6,500 University Research Fellowship and \$11,000 from the Oakland University Research Excellence Fund.



Yang Xia

Program celebrates excellence

First Faculty Recognition to honor teaching, scholarship and service achievements

Interim President Gary Russi invites all full-time faculty to attend the First Faculty Recognition program at 3 p.m. April 19 in the Crocker, Oakland Center.

The program is intended to celebrate academic excellence in the areas of teaching, scholarship and service. It will also

publicly recognize some of the many talents and contributions of Oakland's faculty. Deans have nominated faculty for the program.

"Our talented and dedicated faculty is one of our greatest assets," Russi says. "They are very much valued for their dedication and innovation in creating a rich and resourceful learning environment. It is fitting that Oakland University formally acknowledge, encourage and support teaching excellence, scholarly productivity creative achievements and community service of our faculty."

The program will also feature brief remarks from four of OU's faculty: distinguished professors Karl Gregory, Economics and Management; Venkat Reddy, Biomedical Sciences and director, Eye Research Institute; 1995 Teaching Excellence Award winner Brian Murphy, English and director, Honors College; and 1995 Research Excellence Award winner Susan Wood, Art and Art History.



MONTH employee of the

..... a p r i l



Employee: Robin McGrath
Position: Executive Secretary
Department: Student Life
Length of Service: 18 years
University Service: District representative-UAW/TOP, Committee member, Expenditure Evaluation Task Force, Oakland Center Focus Group, WOCOU. Received the Link Award from CIPU in 1993

Plaudits:
"Robin has quickly assumed the student advocacy role and is a valuable channel through which students receive assistance."
"Robin prioritizes tasks and problems well, making sure that urgent issues get attention first."
"Robin is friendly and an empathic individual and projects this to distressed students who come to the Student Life Office for assistance."
"Robin exemplifies the kind of employee who merits receiving this award."

Employee of the Month nomination forms are available in all departments, ERD and CIPU. For more information, call Gail Ryckman at 370-3480.

Outreach programs in the spotlight

Veteran actor Phillip Locker has performed in close to 40 productions on the stage at Meadow Brook Theatre (MBT). But recently he's changed roles from one in the spotlight to one behind the scenes.

Locker was hired as associate director of MBT at the end of January to try new outreach programs and other venues for the theatre. Even though it's a temporary position, through June, Locker saw it as a great opportunity personally and for the theatre.

"When (MBT Artistic Director) Geoffrey Sherman came to me with a whole list of ideas for the theatre and said 'these are the things we need to do, care to take them on to see if they will work?' I was ready," Locker says. "We're probably the biggest theatre in the country that no one knows about."

To that end, Locker jumped at the chance for a temporary position to help boost the theatre's image and outreach and



The Piano Lesson actors Anthony Lamont and Elaine Graham at Pontiac Frost Elementary school.

make it more accessible to the community.

"Many people don't believe we're a not-for-profit organization," Locker says. "We're not the Schuberts or the Fischers who bring in big productions from out of town. We produce locally and try to keep prices down and make it affordable

for everyone."

Several short-term outreach programs have been a success. In February, Locker sent four actors to a Pontiac fifth-grade classroom to perform scenes from *The Piano Lesson* and hosted a Q & A with the students. In March, two Lake Orion high school students visited MBT to "job shadow" Sherman and actress Diana Van Fossen as they walked through a technical rehearsal of *Shadowlands*. This semester, OU theatre student Kristin Titsworth is directing a movement class after school for students at Will Rogers Elementary in Pontiac, as part of a collaboration with MBT.

"Next year, we hope to be more ambitious," Locker says.

Plans call for hiring and training various theatre artists — actors, lighting and audio techs and costume designers, among others — to run seminars in local Pontiac and Oakland schools to help interested students choose and direct a "full-blown play" that would be student-acted, directed and pro-

duced at the end of next season on MBT's stage. "We're applying now for some arts-in-learning grants," he says.

Another long-term goal for MBT is a program for production assistants. "We're hoping to have eight full-time assistants in design, lighting, etc., to help with our own theatre staff. The assistantship program would be for recent college graduates and to help them get experience in theatre. In return, we would gain some much needed assistance at Meadow Brook."

Establishing a playwright forum "would be a dream," says Locker. That idea, bringing in local playwrights and providing

them with a forum to read and help develop their new plays would give MBT a boost in another arena, he says. "In the future, we could then possibly produce some of those new plays."

Locker directs the comedy thriller, *Corpse!*, which runs April 18 through May 12, and ends the theatre's 30th season.



Lake Orion High School Senior and aspiring actress Jennifer Ripari with MBT actress Diana Van Fossen during a recent "job shadowing" experience.

REGISTER campus

Welcome to INSIDE OAKLAND. This newsletter is published monthly by the Publications Department: Vicky Billington, Sheila Carpenter, Ted Coutilish, Lynn Metzker and Rick Smith. (810) 370-3185. E-mail: coutilis@oakland.edu

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Printed on recycled paper



new faces

Stacey E. Cheff, assistant research manager, University Relations
Taizu Ann Clemens, executive secretary, University Relations
Nina Geisler, medical aide, Counseling Center
Lynnette Kennedy, fund raising consultant, Meadow Brook Theatre

retirements

Connie Cummings, financial assistant, Budget and Financial Planning
Patricia Petry, administrative secretary, Political Science
Harold Zeplin, professor, Psychology

tsgwnn

March recipients:
Bill Macauley, Laura Schartman, Claudia Archer, the Student Programming Board

April recipients:
Tom LeMarbe, Bill Kendall, Michelle Piskulich, Darlene Radcliff

of distinction

Oakland University co-sponsored the Oakland Press Regional Spelling Bee March 23 and four faculty members were on hand to help out. **Dave Downing**, College of Arts and Sciences; **Renate Gerulaitis**, German and Modern Languages and Literature; and **Jan Schimmelman**, Art and Art History, served as judges for the contest. **Jane Briggs-Bunting**, Rhetoric, Communications and Journalism, served as pronouncer.

Daniel N. Braunstein, Management and Marketing, is serving as an external examiner for doctoral and master's degree students at the University of New South Wales (UNSW), Australia. In March, he completed certifications for two students who will now obtain their graduate degrees during the current fall semester (the seasons, including academic terms, are opposite in the southern hemisphere). Braunstein spent the last academic year as a visiting professor of information systems management at UNSW.

Michael Hung, Mechanical Engineering, has been awarded a

\$55,000 contract by Ford Motor Company to conduct research on "Development of Automated Fringe Interpretation for Double Pulsed Holography/ESPI for Noise."

Subramaniam Ganesan, Computer Science and Engineering, was awarded \$1,000 from the University Research Committee to hold a workshop on "Design with Field Programmable Logic Devices" this summer.

Michael Vigilant, Meadow Brook Theatre, was recently featured in *The Detroit News* for his songwriting abilities. Vigilant has written song lyrics for 10 plays distributed nationally by Pioneer Drama Service and Contemporary Drama Service publishing houses. Among his works are *Battle of the Psychos* and *Phantom of the Op'ry*.

Barry S. Winkler, Biomedical Sciences, Eye Research Institute, has been invited to give a series of lectures in Japan in September in conjunction with the 12th International Eye Congress of Eye Research in Yokohama and the Satellite meeting of Retinal Degeneration in Sendai. At ROHTO Pharmaceutical Co. in Osaka, he

will speak on *Bicarbonate Dependence of Transendothelial Fluid Movement and Control of Corneal Thickness*. He will speak on *Substrate Utilization and Energy Production in Retinal Neurones and Muller (Glia) Cells* in the Department of Ophthalmology at Osaka University. In the Department of Ophthalmology at Osaka University, Winkler will talk on *Mechanisms Governing Ascorbic Acid and Glutathione Homeostasis in Retina and Pigment Epithelium*. He will also present his work at the Congress and Satellite meetings.

Michael Riley, Biomedical Sciences, Eye Research Institute, collaborated with Winkler. Collaborators include Professor Michael V. Riley (corneal studies) and the following Oakland University students (retinal studies): Matthew Arnold, Melinda Cardella-Geb, Denise Sliter, Melissa Brassell and Diana Wilson.

Ronald Sudol, Rhetoric, led a daylong workshop for prospective teachers of Advanced Placement courses in English in a program sponsored by the College Board at Purdue University.

No hard hat required

Susan Aldrich is heading Oakland University's multimillion-dollar campus construction and renovation projects

Susan Aldrich is going to Cancun, Mexico, for a little rest and relaxation this month.

A smart plan.

As the person responsible for overseeing the largest construction boom on campus in more than 40 years, Aldrich will need to stick close to home during



Susan Aldrich

the upcoming vacation months.

"It will be a critical time," says Aldrich, assistant vice president, Capital Planning and Design. "The challenge for the spring and summer is keeping everything going so it starts on time, stays on schedule and moves forward."

As a woman working in a traditionally male-dominated field, her sense of humor has come in handy.

More than once Aldrich walked into a construction trailer and has been stared down by an all-male crew.

Yet she has made her mark.

Aldrich has more than 17 years of experience in the planning and construction field. And she's been successful and has accomplished most of her goals without ever putting on a hard hat.

"I know enough about construction to be conversant in it," Aldrich says. "I can look at a project and know what it will need, but I couldn't go out and inspect something."

"As a manager, I base my decisions on my skills and the skills of my people. My management style is participatory team-building. I try to empower my employees. I say, 'here are your projects, go work on them, but let's brainstorm, too.'"

Aldrich's background includes many projects similar to the ones she is

now managing. Oakland's Science and Engineering Complex is under construction, and on the horizon are a new Athletic and Recreation Center, a new OC food court, a revamped Honors College and renovations to the university's first home, Meadow Brook Hall, to name but a few capital improvements.

As director, Facilities Planning, for Cal State-Fresno,

Aldrich managed more than \$106 million in campus improvements, including \$35 million in improvements to engineering, education, science and music buildings, and a revamped student union, bookstore and food service facilities.

Aldrich has also helped build two baseball stadiums and a football stadium, and was project manager for a major municipal industrial park and a \$45-million downtown development program. Paul Bissonnette, vice president, Finance and Administration, who worked with Aldrich at Cal State and recommended her for Oakland, says "Susan has had extensive experience in public institutions. While most people see the work Susan does with buildings, one of the most important issues she works on is long term data collection from which academic policy is derived. It tells us about the use of our classrooms each day and each hour by type and size of room. This process can save the institution millions of dollars and allow students greater access to classes that would be otherwise lost without a systematic approach to the problem."

Aldrich says helping Oakland University plan its growth will be exciting. She knew OU would be undergoing major physical plant changes when she was hired last June, because she had worked as a special consultant for Oakland on the Rec Center for a few months at the beginning of last year.

Preparing for the busy months ahead, Aldrich has strongly suggested to her staff to take an early vacation, or one late in the season.

In the fall, when many of the projects will be complete,

Aldrich hopes to reward herself with a trip to Switzerland.

"Switzerland is a wonderful place to go hiking," Aldrich says. And a great place for rest and relaxation.

Susan Aldrich:

A closer look

Education: B.A., UCLA-Los Angeles, geography and urban studies, magna cum laude; M.A., Ohio State University, city and regional planning.

Home: Renting a house in Birmingham with husband Gregory, a planner for Wayne County.

Life philosophy: "We're all in this together."

#1 Fun: Traveling. Has been to (former) Yugoslavia, Greece, Switzerland, France, Germany, Austria, England, Spain and the Netherlands.

Can't live without: The newspaper comics, especially "Sally Forth."

For fitness: Walking, hiking and cross country skiing.

Favorite reading: "Mysteries. Though I'm trying to improve my reading level and am now reading Henry James."

Major dislike: Television, except for a weakness for *Star Trek: The Next Generation*.

Music: Keeps her office radio tuned to a classical music station.

bits and PIECES

Innovation in human service arena

Rewarding Innovation and Effectiveness for Nonprofits in an Age of Diminishing Resources is the theme of an inaugural two-day symposium at Oakland University May 3-4.

A host of experts will speak on a variety of topics to improve human services delivery — from mobilizing communities, to welfare reform, to job bank programs — including Fred Grandy, a former four-term congressman with a prior acting career — most notably known for his role in the television series *The Love Boat*, president and CEO, Goodwill Industries International, Interim President Gary D. Russi, retired Ford Motor Executive Vice President and OU Board of Trustees member Lou Ross.

Called the Tina Milidrag Symposium '96, the event is co-sponsored by the School of Business Administration (SBA) and the Judson Center, a nationally acclaimed human service agency in Royal Oak. The symposium includes a nation-wide call for papers from academicians to address a social service issue of their choice, with monetary awards for the top three finalists. Papers accepted will be included as articles in a book to be published jointly by Judson

Center and Oakland University.

Says John Tower, interim dean, SBA, "The focus of this symposium keys on exactly the kinds of concepts we strive to impart to our students."

Cost for the symposium is \$150 and registration deadline is April 18. For more information, call 3286.

A nickel raise

Effective April 1, the

rate of reimbursement for business use of your personal car is 31 cents

per mile — up from 26 cents, according to Thomas Evans, controller.

Eating behavior modification

Oakland University's Meadow Brook Health Enhancement Institute (MBHEI) is sponsoring a 10-week program for help in controlling eating behavior and weight and how to achieve a desirable body contour. The program begins April 16 and meetings will be held from 6 p.m. to 7 p.m. Tuesdays. Cost is \$50 for MBHEI members and \$100 for the general public. For details, call Yvonne Moses, registered dietitian, 4523.



Cliff notes

E-mail is a preferred means of communication for many folks on campus and is also one of the single largest uses of OU's computer systems. According to a recent update from Paul Amaranth, manager, User Services, the system has 8,000 active mail users who send about 23,000 messages on weekdays, and about 12,000 messages on weekends. The university uses a single mail server named cliff.acs.oakland.edu that handles all incoming, outgoing and internal e-mail for the university. "The mail system volume continues to increase at about 10 percent per year," Amaranth reports.

Where have all the dinosaurs gone?

An award-winning dinosaur expert will be guest speaker at the annual new member initiation and dinner of the Oakland University chapter of Sigma X, the international scientific research society.

Dr. Peter Dodson, professor of anatomy at the University of Pennsylvania School of Veterinary Medicine, will speak on "Gone But Not Forgotten — The Disappearance of the Dinosaurs," April 30. The event begins at 5:30 p.m. in the OC Gold Rooms with a social hour,

followed by dinner and the lecture. Admission is \$20 and includes dinner. For details, contact Sheldon Gordon, Biological Sciences, 3559.

Join the Magic Kingdom Club

With vacation season fast approaching, why not take a "magic" trip this year? University colleagues are eligible for free membership in Walt Disney's Magic Kingdom Club, which offers discounts at Disney's many attractions and hotels, Epcot Center, MGM Studios and Anheuser-Busch theme parks. For details, contact Susan Cee, ERD, at 3480.



Summer holidays

Mark your calendars for those much needed paid vacation holidays.

Monday, May 27, Memorial Day, will be a university holiday as well as Thursday, July 4, Independence Day. Friday, July 5, the university will be closed and colleagues are expected to use personal time, vacation time or excused time off without pay. Monday, September 2, Labor Day, will be a university holiday.

get to **KNOW**

A feature for and about university colleagues



SHARON CAMPBELL
Media Relations



PETE HOVLAND
Athletics



KRISTIE SCHULT
Educational Resource Lab



GARY MOSS
Academic Skills Center

Do you have children? What are their names and ages?

Yes. Danielle, 14, and Monica, 4.

No.

No.

Jelani, 2, and Shomani, 11.

What was your favorite childhood toy?

Barbie Dolls.

My skateboard.

My dolls.

My English racing bike.

What are your favorite after work clothes?

Jeans and T-shirts.

Baggy sweats. You know, the same thing I wear to work.

Sweats.

Sweats.

How will you spend Easter/Passover?

Go to church, attend the Easter program for children and have an Easter egg hunt.

I'll be on the road recruiting swimmers in Orlando, Florida.

With my family.

Go to church and have a big family dinner.

Do you have a hobby?

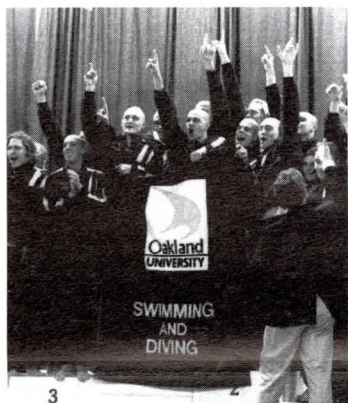
I read fiction, novels and short stories.

Fly fishing.

Crafts, sewing, painting and crochet.

Golf, softball and fishing.

calendar of **EVENTS**



Oakland University men's swimming and diving team made a big splash with its third consecutive NCAA II championship March 16. The Pioneers out swam second place University of California-Bakersfield, 869.5-640, giving the team its fourth all-time championship (the first was in 1980). Photo courtesy of The Oakland Post.

People with disabilities who need special assistance to attend any of the events listed may call the sponsoring unit or the Office of Equal Opportunity at 370-3496.

APRIL

- Meadow Brook Hall tours, 1:30 p.m. daily and from 1 p.m.-5 p.m. Sundays (last tour begins at 3:45 p.m.). Admission. Gift Shoppe also open. Call 370-3140.
- 3 - President's Colloquium Series: Yang Xia, Assistant Professor of Physics, 11:30 a.m., Oakland Center Gold Rooms.
- 3 - Women, Culture and the Challenges of Development, 2:30-4 p.m., Gold Room A, Oakland Center.
- 11 - University Board of Trustees meeting, 3 p.m., Oakland Center Gold Rooms.
- 12 - May 12 - Student-Faculty Art Exhibition, Opening reception April 12, 5 p.m.-7 p.m., Meadow Brook Art Gallery, 370-3005.
- 13 - Ties that Bind: Families in Film, 14th Annual Women's History Month Film Festival, 8:45-4:30 p.m., 156 North Foundation Hall.
- 16 - Eating Behavior Modification Program for Weight Loss, Meadow Brook Health Enhancement Institute, 10-week program, Tuesdays 6 p.m.-7 p.m., Fee, 370-3198.
- 26 - Secretaries Briefing, Building on your Empowered Role, 8 a.m. - 4 p.m., O'Dowd Hall. 370-3033.
- 26 - Meadow Brook Theatre Luncheon on the Aisle series, Corpse!, 11:30 a.m., Admission, 370-3318.
- 27 - Meadow Brook Theatre Fun for Kids series, Al Simmons, 11 a.m., Admission, 370-3318.

MAY

- Meadow Brook Hall tours, 1:30 p.m. daily and from 1 p.m.-5 p.m. Sundays (last tour begins at 3:45 p.m.). Admission. Gift Shoppe also open. Call 370-3140.
- 18 - Opening Night, Corpse! Meadow Brook Theatre. Runs through May 12. Admission. 370-3300.

safety **SAYS**

What are the other possible causes of Sick Building Syndrome (SBS)?

Causes include overcrowding (i.e. high carbon dioxide levels), off-gassing from materials such as new carpet and furniture, tobacco smoke, microbiological agents (e.g. mold, mildew, fungus etc.) and outside pollutants which become "entrained" (carried into) in the buildings' ventilation air-intake systems (e.g. carbon monoxide from idling cars/trucks). Some of these possible causes can be "tested for" easily (e.g. carbon dioxide, smoke and carbon monoxide); others constitute a very lengthy process of elimination, may take months or years to investigate and often the precise cause(s) is (are) never established.

Why do we see SBS now more than we had before?

We see SBS more primarily because of energy conservation strategies which surfaced during the energy crisis in the 1970s. At that time, ventilation requirements were changed to conserve fuel, and in many cases buildings were built or modified to become virtually air-tight. This can lead to lack of proper ventilation, causing pollutants to accumulate and pose health and/or comfort problems to building inhabitants.

What do I do if I have indoor air quality concerns?

Contact Rikki Schwartz or Thomas Zalucki in the Office of EH&S (4196; e-mail at rbschwar or zalucki). Zalucki will obtain preliminary information and follow-up with a site visit.

Follow the leader

Unmanned line-of-sight convoy system drives home engineering expertise at Oakland

The assignment: Develop a vision-based, line-of-sight software program that will allow an unmanned vehicle to follow another (manned) vehicle.

The task:

Assigned to Ka C. Cheok, associate professor, Electrical and Systems Engineering, from the Tank-Automotive Armament Command (TACOM) in

Warren, Michigan.

The timeframe: Two weeks
Result: Two unmanned vehicles successfully crossed the test track at TACOM, under the watchful eye of army engineers and a film crew from the Discovery Channel; Cheok and his Oakland University colleagues

accomplished in a few weeks what would usually take months to complete.

Imagine a convoy of several 6,000-pound vehicles heading for dangerous terrain. Instead of having human drivers, the vehicles are controlled with video cameras, various sensors and computer programs so that no lives are lost.

Engineering Professor Ka C. Cheok and TACOM have collaborated for several years on such an unmanned vehicle leader-follower convoy project aimed at perfecting the steering and navigation of "Hummers" — high mobility multipurpose wheeled vehicles (HMMWVs) — the Jeep-type trucks used by the U.S. military personnel.

These vehicles, with their perfect steering and navigation capabilities, may also be used by a variety of organizations. Police departments could use them to patrol unstable neighborhoods. Fire departments could drive them into the middle of raging fires, water tanks spraying. And the same technology may eventually be used for home robotics, a mechanical golf caddy and even for on-

board automotive security systems that would take over the navigational controls of a car should a driver fall asleep or become ill at the wheel.

Cheok jumped on the opportunity to devise an in-line-of-sight system that would allow an unmanned HMMWV to autonomously follow a leader HMMWV.

The project required a quick deadline so that a video crew from the Discovery Channel could film the experiment as part of a documentary on automated highway systems.

Cheok and his research crew, working under a cooperative research and development agreement with TACOM, developed a working computer visual pattern recognition system in record time.

"TACOM was impressed with our capabilities," Cheok says. "The tough part is to make it work as robust as it can. Although it may not appear so to a human driver, the tasks of driving a ground vehicle are extremely complicated. That's because of the highly complex environment that constantly changes with

scenarios and missions. A human driver acquires and sharpens his driving skills through training and experience, whereas the accomplishment of a computer-automated task that can capture and cover the same scope and driving strategy is much more difficult."

Cheok's next research project includes three leader-follower vehicles. The School of Engineering and Computer Science has three HMMWVs and related on-board computer hardware, provided by TACOM, for student and faculty research. One of Oakland's HMMWVs was on display last month at the International Society of Automotive Engineers Congress, Detroit.

Cheok plans to continue research to develop a set of artificial intelligent-based "preview, predictive and perceptive control strategies" that can capture the human intelligence present in the task of driving a vehicle. The first step, he says, will be to design and conduct virtual computer simulation of the concepts. Actual experimentation of the autonomous robotic vehicles will follow.



One of Oakland's HMMWVs (high mobility multipurpose wheeled vehicles) cruises campus.

taking the INITIATIVE

A monthly supplement to *Inside Oakland*

about this ISSUE

Taking the Initiative, a monthly supplement to *Inside Oakland*, shows the Oakland University Strategic Plan 1995-2005 in action to Oakland faculty, staff, students and friends. Read *Taking the Initiative* for news about Strategic Plan "initiatives"—projects and programs moving Oakland toward its vision and strategies . . . and the 21st century.

Initiatives in the making
Next month, *Taking the Initiative* will present the following topics:

New name, new approach: The Office of New Student Programs capitalizes on the word "new."

Turn on the cable: CNN and MTV are rippling through the residence halls.

Cool news: Vandenberg's got it. Air conditioning, that is.

Student success courses: For new students, this orientation program spells success.

Growing by degrees

In response to business and industry needs, Oakland plans three new graduate degrees

Graduate students interested in industrial applied mathematical sciences (including statistics), accounting or industrial software development may have three new degree options at Oakland University: Ph.D. in applied mathematical sciences, Master of Accounting and Master of Science in software engineering.

In the final approval stages, the proposed degrees reflect Oakland's commitment to academic excellence and response to business and industry needs. Here is a brief summary on each:

Doctor of Philosophy in Applied Mathematical Sciences

"Partnerships with industry are an important aspect of our program," says James H. McKay, chair, Department of Mathematical Sciences, College of Arts and Sciences. According to McKay, the collaborative nature of Oakland's program in applied statistics has made it one of the top four or five programs in North America.

For example, some 40 graduate students in applied statistics have held positions as Ford

Cooperative Scholars since the program began in 1985. These students participate in projects designed to improve the quality and productivity of Ford

products under the joint supervision of Ford personnel and faculty consultants. The selected cooperative scholars receive a 12-month stipend and work 120 days a year at a Ford site. Their graduate educational program is closely coordinated with their industrial responsibilities and learning experiences. In addition, the department administers an award-winning program in applied statistical methods for Ford.

The Ph.D. in applied mathematical sciences will give these students — and many others — the opportunity to advance their professional qualifications to a significantly higher educational level as well as prepare them to solve major industrial problems. The degree has been designed to enhance Michigan's industrial competitiveness and hence help meet state goals.

The degree will offer specializations in continuous mathematics, applied discrete mathematics and applied statistics. Admission requirements include a bachelor's degree with a major in the mathematical sciences, engineering, computer science, the physical sciences, the biological sciences or the health sciences. Degree requirements include 90 credits beyond the bachelor's, including 15 courses, exclusive of dissertation research credit, with at least eight specialization courses.

Master of Accounting

Two factors drive the creation of the School of Business Administration Master of Accounting degree: accounting students' desire to pursue higher degrees and pending changes in the educational requirements for CPA certification.

"People are our only resource in this competitive environment and we see advanced degrees as an important factor in our continuing recruiting process," noted Michael P. Cenko, partner, Price Waterhouse LLP, Detroit, and member, SBA Accounting Advisory Board. "Also, more and more states are adopting the 150-hour program for accounting majors which will place more emphasis on advanced degrees."

In a five-year period, students are able to earn both the B.S. in Accounting and a master's of Accounting.

The program, which combines business core courses, accounting requirements and accounting electives, has four goals:

- 1) To prepare students for positions in public accounting firms, business and nonprofit organizations.
- 2) To maintain and increase enrollment in the undergraduate program and develop the graduate program and graduate offerings.
- 3) To provide students with the educational requirements necessary to take the CPA exam.



All three degrees are expected to be approved this academic year, says James H. McKay, chair, Department of Mathematical Sciences and the Senate Budget Review Committee.

- 4) To further develop the accounting program to be worthy of continuing accreditation status.

Eligible students can choose from professional, cost management or accounting systems tracks. Degree requirements consist of 11 courses (32 credits): seven accounting classes (two required and five elective); one nonaccounting class; and three electives, two of which will be nonaccounting.

Admission requirements include general admissions requirements for graduate study, a bachelor's degree or equivalent and the Graduate Management Admissions Test (GMAT). Evaluation of Oakland undergraduates interested in the program will begin during their junior year.

Master of Science in Software Engineering

Oakland's proximity to high-tech industry and business makes it a logical provider for software engineering education. In the late 1980s, the Department of Defense funded the Software Engineering Institute (SEI) at Carnegie-Mellon University to influence software engineering curriculum development.

Oakland's proposed M.S. program in the School of Engineering and Computer Science is based on the 1991 SEI curriculum recommenda-

tions, specifically aimed at government and industry concerns. It also follows the Institute of Electrical and Electronic Engineers/Association of Computing Machinery recommendations for software engineering curricula. A number of institutions, including Carnegie-Mellon, U.S. Air Force Academy, University of Scranton and George Mason University, have implemented similar programs.

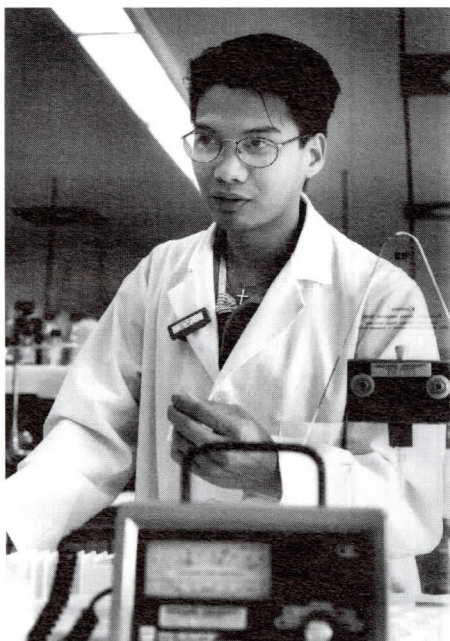
The M.S. in software engineering will prepare Oakland students for careers in business and industry as well as enhance the skills of students already engaged in software engineering careers.

The SECS began to consider the degree when officials at the Tank & Automotive Command expressed interest in such a program, followed by officials at Chrysler, EDS and General Dynamics.

Admission requirements include a bachelor's degree, with preference given to computer engineering, computer science, mathematics and engineering majors; an undergraduate GPA of 3.0 or better in area of major and science, engineering and mathematics courses; and other specific requirements. Degree requirements include 32 credits of approved courses with a 3.0 or better cumulative GPA.

In the final approval stages, the proposed degrees reflect Oakland's commitment and response to business and industry needs.

A research-minded university



Yee H. Do, recipient of the 1996 OUAA Undergraduate Student Research Grant, is a biochemistry major working with Chemistry Professor Denis M. Callewaert on Cytotoxic Function of Isolated Human Lymphocyte Populations.

At Oakland, undergraduate student research is more than a valued tradition

Bucking the national trend at most colleges and universities, Oakland University

undergraduates have the opportunity to "roll up their sleeves and discover the joys and tribulations of research," says Chemistry Professor Denis M. Callewaert.

Undergraduate research opportunities range from grants awarded annually by the Oakland University Alumni Association (OUAA) to collaborative student/faculty presentations and papers.

"Undergraduate research is a long-standing tradition at Oakland University," says Donald A. McCrimmon, director, Grants, Contracts and Sponsored Research. "We have a faculty that understands this tradition and we recruit new faculty who understand it as well."

Natural science in action

The University Research Committee selects recipients of OUAA undergraduate student research grants, limited to \$300

each. Yee H. Do, the 1996 recipient, is working with Callewaert on Cytotoxic Function of Isolated Human Lymphocyte Populations.

"Yee has already participated in studies that have characterized a unique type of human lymphocyte — natural T cells," Callewaert says. "Results of some of his work were presented at the 9th International Congress of Immunology in San Francisco last July."

"In my field, tumor immunology, undergraduate researchers are especially rare," Callewaert says. "Yee and others who are contemplating medical research have a fantastic opportunity to find out what it's like at a fairly early stage in their careers."

The Department of Chemistry also awards several Thompson scholarships each semester to encourage students to pursue research careers. Each scholarship provides tuition and fees for one to two credits of CHM 290.

At Oakland's 20th Conference of Student Research in the Biological Sciences March 20, three undergraduate students, their presentations and their advisers included: Nidhi Khattree, Estradiol Regulation of p53 Tumor Suppressor Protein in Human Breast Cancer Cells, Virinder K. Moudgil, adviser; Melanie Radomski, Effect of Predators on the Spatial Affinity and Activity of Wood Frog Larvae, Keith A. Berven, adviser; and Mary Whitcher, Distribution of Fibroblast Growth Factor Receptors (FGF-Rs); During Vasculogenesis and Angiogenesis in Neo-natal Retina, Feona M.

Hansen-Smith, adviser.

"The undergraduate research involvement in the Department of Biological Sciences is a major contributing factor in Oakland's strength in biomedical sciences," says Virinder K. Moudgil, department chair. "Department faculty and students have received national prominence for their research in organismic and cellular/molecular biology."

"Undergraduates work closely with faculty advisers as partners in research activities ranging from peer-reviewed publications, generating internal and external research grant awards to presenting the work at national and international research conferences."

The Howard Hughes Medical Institute, which invited Oakland as one of 200 institutions out of 1,200 eligible to apply for a major research grant, recently recognized the department's accomplishments.

"By conducting research early in their careers, students can acquire laboratory experience which will position them to gain acceptance to prominent graduate or medical schools or to obtain employment in industry," says Biomedical Sciences Professor Frank J. Giblin, a member of Oakland's Eye Research Institute (ERI).

Research diversity

"We've taken the lead from the sciences in terms of publishing with students," says John B. Cameron, professor, Art and Art History, who has worked with numerous undergraduates over the years.

Cameron and wife Janice G. Schimmelman, chair, Art History, and 20 art history students inventoried southeastern Michigan architecture for the Michigan Historical Division in 1980-85. Joyce Heymes '83 and Lynn Workman '85 served as

principal undergraduates on the \$150,000 project. John Bantel '85 and Wesley Hanks '87 helped prepare an index to History of Oakland County, Michigan, by Samuel W. Durant and H.B. Pierce.

Such research pays off.

"Many students working in my laboratory throughout the past decade have had the opportunity to present their research at national or international conferences," says Robert B. Stewart Jr., associate professor, Psychology.

"Involvement in such research provides students the opportunity to see science in action. I know my students have made an important transition when they express the sentiment that class demands get in the way of research requirements."

Undergraduate research abounds at Oakland in many other diverse areas as well, such as education, engineering and liberal arts. Fittingly, the university is the site for "Meeting of the Minds IV," a showcase for undergraduate research and student-faculty collaborations, to be held May 17 in the Oakland Center. The event is jointly sponsored by Oakland, University of Michigan-Dearborn and University of Michigan-Flint.

"In the classroom we can teach others what we learned in the lab," says Stewart, "and in the laboratory we can really learn those lessons we thought we understood back in the classroom. It's a circular rather than a linear process."

"The spontaneous smile or cheer from a student who just discovered that he or she has made a breakthrough in a research endeavor is a sign of education at its best," says Ka C. Cheok, associate professor, Engineering.

When it comes to placement and experiential learning...

The record speaks for itself

Working the Web

Oakland University students and alumni on the Information Super Highway can access information pertaining to on-campus recruiting, cooperative education and career resources via the World Wide Web at <http://phoenix.placement.oakland.edu>

Job listings, career information and research on potential employers are just a hypertext link away.

In record numbers, seniors and alumni seeking full-time employment, students pursuing career-related jobs and prospective employers flocked to the Department of Placement and Career Services during 1994-95.

Placement efforts pay off

About 800 Oakland students and alumni registered with the department in 1994-95. More than 350 students and alumni interviewed on campus with employers, more than 700 visited with employers during information sessions and open houses and some 500 attended career-information events.

Employer activity at Oakland increased by 53 percent from 1993-94, with 128 employer visits. Concurrently, student/alumni interviews increased by 47 percent.

Additional employment activities include employer requests for candidate referrals, candidate referrals and job listings for the department's job-vacancy

bulletin, Job Post, which increased by 134 percent, 91 percent and 38 percent, respectively.

Career-information events, such as the January Student of Color Career Fair and the March Leadership Career Fair, are also popular with students, says Robert B. Thomas, director, Placement and Career Services. Other similar events include the Health Careers Job Fair, Business/Engineering/Computer Science Career Information Day and SEHS/HRD Career Information Day.

A competitive edge

According to Thomas, students who work in their chosen fields versus at "fast food jobs" have a competitive edge when it comes to career placement upon graduation.

"Students are working in higher percentages," Thomas says. "If that work is career related and closely tied to their academic programs, it's more valuable from a placement point

of view. We develop the mechanisms to help them find these types of jobs."

The jobs come in the form of cooperative education and internships, also called "experiential learning." Nearly 200 Oakland students participated in co-op opportunities last year, collectively earning about \$1.67 million.

Available for students majoring in the School of Business Administration, School of Engineering and Computer Sciences and a few other selected majors, the co-op student headcount was up 6 percent over 1993-94, with notable increases in engineering and computer science (up 49 percent) and arts and sciences/other majors placements (up 14 percent).

Twenty-four new co-op employers came on board as well, making for a 20-percent increase.

Internships — around and around

About 160 students performed internships and AmeriCorps assignments in

1994-95, bringing in \$252,380 in earnings and \$652,633 in grant funds (compared with \$427,811 the year before).

The AmeriCorps Oakland Program, awarded to Oakland last year, contributed significantly to the increase in grant funds. Oakland's piece of a federal program is dedicated to reducing violence and increasing retention in Pontiac schools, and utilizes some 40 student interns. The interns receive a "living wage," an educational stipend and the opportunity to work with high-risk youth.

Internships through Placement and Career Services differ from those offered by specific academic departments in that they are primarily geared toward liberal arts students interested in the service professions or government employment.

Even more impressive is the 1994-95 graduating student survey indicated that one of every two students who used on-campus interviewing got hired through that process.