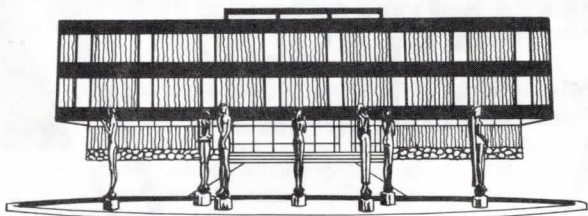


OAKLAND UNIVERSITY NEWS



July 1986

A publication for faculty, staff and friends

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Tuition Increase is First in Two Years

For the first time in two fiscal years, tuition has increased at OU. The Board of Trustees approved a tuition increase June 11 that takes effect with the summer semester.

The tuition increase was part of a 1986-87 fiscal year budget that has revenues of \$48,170,864 and expenses of \$49,389,418.

The tuition increase is the first since the 1983-84 fiscal year. Resident undergraduates will now pay an additional \$2 per credit and resident graduate students an additional \$4. The increases will generate an additional \$579,000 toward total tuition revenue of \$16.2 million.

"Oakland's record of efficiency is really unprecedented in the state," said President Joseph E. Champagne. "We receive about \$400 per student, on the average, less in appropriations than the comparable 12 public institutions, yet we believe we have not sacrificed quality. This is a tribute to the hard work, motivation and dedication of the faculty and staff who make this university as great as it is. To the students who will have to pay a little more this year, we pledge our

strongest efforts to be as efficient and as effective as possible with the financial resources you provide us. No one likes to pay more, but sometimes cost increases are inevitable."

University officials said the new budget represents a "modest" increase over the 1985-86 total of approximately \$46.6 million. Fifty-six percent of the net additions result from increased employee compensation and an additional 6 percent is in faculty positions that are needed as a result of record enrollment over the past year. An across-the-board inflation allowance is set at 4 percent, below the recently computed Higher Education Price Index of 6.7 percent.

The difference between revenue and expenditures will be covered by a \$1.3 million carryforward from the present budget. The budget assumes \$29,432,850 in state appropriations, or 5.4 percent more, during the state fiscal year of October 1-September 30. Converting this to the university fiscal year of July 1-June 30, the amount to be recognized is \$29,055,864, an increase of 6.94 per-

cent from 1985-86.

Under the new tuition plan, a resident first-year student or sophomore now pays \$47.50 per credit. Juniors and seniors pay \$54.50 per credit. Resident graduate students pay \$86 a credit. Fees were not increased.

Based on a 31-credit load over two semesters, a lower division resident undergraduate will pay \$1,658 (including \$185.50 in fees), or 3.88 percent more. An upper division undergraduate will pay \$1,875 (including \$185.50 in fees), or 3.42 percent more. A resident graduate student taking a 24-credit load over two semesters will pay a total of \$2,229 (including \$165 in fees), or 4.5 percent more.

The tuition changes are in line with Governor James Blanchard's request to limit the average increase to 4.3 percent. The new budget includes nearly \$30,000 more in student financial aid to help cushion the impact of the tuition increase.

During 1985-86, OU tuition and fees for full-time Michigan resident undergraduates

ranked fifth in comparison to the tuition and fees paid by similar students at the 14 other public colleges and universities. Officials expect OU to remain in its current position once all other universities set their tuition and fee schedules.

University officials said there is a possibility that the Legislature will increase the OU appropriation above the governor's recommendation. This would recognize the university's record enrollment growth, fund program revision requests filed by the university, and fund continued economic development associated with the Oakland Technology Park and other activities.

Officials also said that the first priority for any increase in funding would be to recognize the effects that increased enrollment has had on the Divisions of Academic Affairs and Student Affairs.

The budget and tuition rates were approved unanimously by the six members who were present. Absent were Trustees Ken Morris and Patricia Hartmann.

PCB Disposal Microbe May Solve Problem

Microbiologist Satish Walia hopes to develop a super microbe that will eat or degrade potentially toxic compounds like PCBs.

He has received a \$322,000 grant from the Environmental Protection Agency to further his research. Isolated strains of bacteria that will degrade PCBs have been identified, although most work inefficiently and slowly.

The key, Walia says, is to use genetic engineering in constructing hybrid microbial strains that are capable of quickly degrading and mineralizing a wide variety of toxic organic pollutants, including PCBs (polychlorinated biphenyls that are flame resistant liquids; they were widely used in industry until they were banned in 1976).

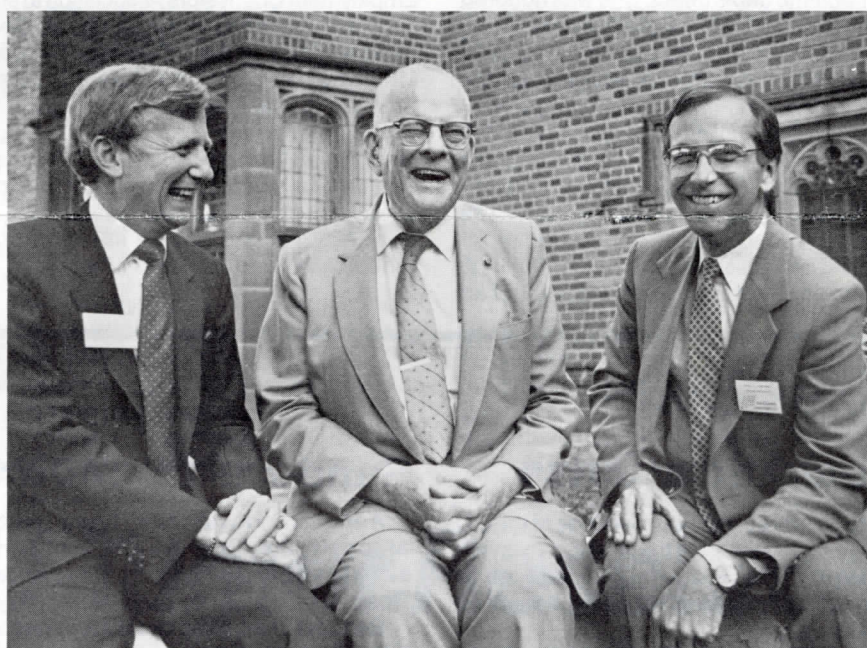
Halogenated organic compounds, of which PCBs are members, have been used or are still being used as pesticides, herbicides, lubricants, preservatives, and insulators. Over 50 million tons of these toxicants are discharged into the environment each year, Walia says, and they degrade very

slowly and pollute the air, water and soil.

The researcher says that while strains of bacteria that can break down PCBs have been identified, in most cases the degrading is slow due to incomplete oxidation and ineffective dechlorination of the biphenyl molecule. Walia is isolating those microbes that have the ability to degrade PCBs quickly, then he will clone the genes and try to construct a hybrid that will be capable of completely breaking down PCBs and similar potentially toxic organic compounds.

Walia says his research may aid in the elimination of environmental health hazards. Microbes would be particularly useful in areas where conventional treatments are less effective, like contaminated soils of abandoned factories, industrial wastewater, and riverfronts and lakes.

Students who have assisted Walia are Allan Kaiser, Tom Williamson, Tim McGuire and Sam Schillace. James Linton of the Michigan Department of Natural Resources also aided Walia.



The prestigious Quality and Productivity Research Conference June 3-5 at OU attracted 100 leaders, including W. Edwards Deming (center), the world's foremost authority on statistical quality control. Deming met with John Betti, Ford Motor Co. executive vice president, left; and President Joseph E. Champagne. Photo by Sharon LeMieux.



David Housel and a group of Michigan school children went to Washington to meet with President Reagan to discuss the Young Astronauts program.

'Astronauts' Blast Off for D.C.

It's not everyday you're asked to have lunch with President Reagan, so when the opportunity came, David Housel and a bunch of school children jumped.

The director of the Aviation and Space Center in the School of Human and Educational Services led a group of 10 elementary and junior high school students and eight teachers to Washington, D.C., on June 11-12. The pupils and their teachers were from the Birmingham, Utica, Sparta and Coldwater districts. They attended a June 11 lunch with President Reagan to share information about the national Young Astronauts program, which just completed its first official year.

Through this program approximately three million children learn more about math and science by studying NASA projects. Representatives from Young Astronauts programs from throughout the United States gathered in Washington to report their progress and share their experiences. Housel is Michigan coordinator of the Young Astronaut program.

Housel said one member of the Michigan delegation played a special role. Allyson Russo of Birmingham and representatives

from other states made a personal presentation to President Reagan before the lunch. They then joined the president and about 150 other children and teachers for the lunch and a 20-minute speech in the Air and Space Museum of the Smithsonian Institution.

The previous day was also special for the Michigan group. Besides touring national monuments, the group met with Senators Donald Riegle and Carl Levin of Michigan and John Glenn of Ohio. Glenn spoke to the group for a half hour and arranged for them to sit in on the hearing concerning the Challenger space shuttle disaster.

Housel also got a taste of what the Washington press corps is like. He was interviewed by Sam Donaldson of ABC News and reporters from *The Detroit News*, Gannett News Service, the Associated Press and Cable News Network. WDIV-TV in Detroit met the group at Metro Airport before its departure.

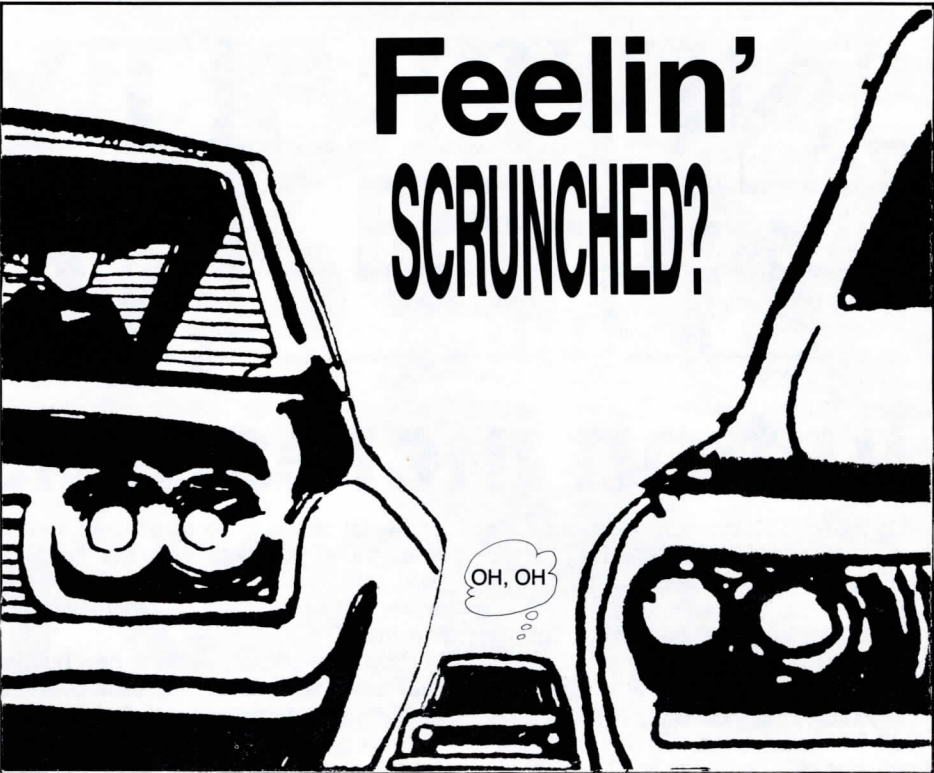
The cost of the trip was covered in part by the participants and the school districts, and by donations from the Michigan Aeronautics Commission, Chapter 99 of the Women Pilots Association, and Kal Aero, an airplane repair business.

Our People

Brief items about your achievements should be sent to the News Service, 109 NFH. Items are published as space becomes available.

- Donald C. Hildum, rhetoric, communications and journalism, is the author of 'Competence' and 'Performance' in Network Structure. It appeared in the March issue of Social Networks.
- Joan Rosen, English, led a presentation on creative writing to seventh and eighth graders at Washington Junior High School in Pontiac. She also judged an essay contest on the topic, Life in Pontiac: Past, Present, and Future, sponsored by the city of Pontiac 125th Celebration Committee and the Oakland Press.
- Egbert W. Henry, biological sciences, has received a \$4,000 grant from the Howard University-Rockefeller Foundation Program in Life Sciences Careers for high school students. Science-talented minority students in the tenth and eleventh grades at Pontiac Northern High School were selected for this program. They will learn laboratory research techniques with Sheldon Gordon and Arun K. Roy during the eight-week summer portion of the program.
- Henry was invited to address the Science Institute at the Herman Schreiber School in Brooklyn, N.Y., about Growing Food for People Living in the Cities. The 20th anniversary of the institute was sponsored by the New York City Board of Education in an effort to present role-model scientists to scientifically talented elementary school children of the Canarsie section of Brooklyn.
- Bandana Chatterjee, biological sciences, received an award for excellence in teaching from St. Joseph Mercy Hospital in Pontiac. Chatterjee frequently lectures to the pediatric department. She was honored at the annual dinner of the hospital.
- Carl F. Barnes, Jr., Center for the Arts, presented a paper, Modern Bibliographic Terminology in the Portfolio of Villard de Honnecourt (Paris, Bibliotheque nationale, MS Fr 19.093), at the XXIst International Congress on Medieval Studies held at Western Michigan University. Barnes also served as co-chair of six international Center of Medieval Art sessions on Current Studies on Cluny and was American coordinator of an

- exhibition of photographs of Cluniac sculpture organized by the British Museum for this congress.
- Wallis Andersen, rhetoric, presented two papers. Harry Bailly as Literary Critic (Harry is the "host" in Chaucer's Canterbury Tales) was delivered to the 19th annual meeting of the Michigan Academy of Science, Arts, and Letters, Medieval Studies Section. Her paper, Teaching Research Writing in a Word-processing Composition Class, was given at the fourth annual Conference on Computers and Writing held at the University of Pittsburgh.
 - Robert Fink, psychology clinic, spoke on The Personality and Family Dynamics of Gifted Children at recent meetings of MENSA, the Chippewa Valley Schools Parents Association and the Macomb County Inter-Agency Conference. Fink presented a workshop, Psychotherapeutic Approaches with Children, at the Macomb County Inter-agency Conference and at the Michigan State University Psychology Clinic. He has also had interviews published in the Oakland Press and the Observer & Eccentric newspapers on a variety of psychological topics.
 - Keith Stanovich, psychology, and R.F. West are co-authors of Robust Effects of Syntactic Structure on Visual Word Processing appearing in Memory & Cognition.
 - Roxanne Allen, psychology clinic, received an Award for Excellence in Programming at the American Association for Counseling and Development Conference in Los Angeles. This award was in recognition of her work as president of the Michigan Association for Specialists in Group Work. She has also won a doctoral research scholarship for 1985-86 from the National Employment Counselors Association to support her dissertation research, A Comparative Study of the Differences Between Methods of Computer-based Career Counseling Interventions. Recent presentations by Allen have included Stress Management at the Macomb County Adult Teachers Conference, Teenage Sexuality at the conference of the American Association of University Women and an interview published in Oakland Business Monthly.



If your car doesn't seem to fit, check to see that you're in the correct size space.

Lot Adds Spaces for 235

University officials are aware that the northwest parking lot has been Topic A since it was restriped, but add that many who object may not understand what has been done.

Repaving and restriping the lot has increased the number of spaces from 1,655 to

1,890 by decreasing their size. Architect John Solo Rio says that spaces had been nine-feet wide by 19-feet long with a 21-foot roadway between them.

The newly restriped lot now has two types of spaces: for compact cars and for full-size cars. The spaces for compacts are generally 8-feet-6 by 15-feet and large car spaces are 8-feet-6 by 18-feet. The lanes are still a minimum of 21-feet.

Tour Fee is Reduced

The management of Meadow Brook Hall and Sunset Terrace has issued a general invitation to all who work for Oakland University to visit the newly refurbished Sunset Terrace at a reduced fee of \$2.

Margaret Twyman, managing director of Meadow Brook Hall and Sunset Terrace, says she wants to make it possible for all who wish to see this former home of university presidents and of Matilda Dodge Wilson to do so before it becomes a conference center.

After recent restoration of Sunset Terrace to original condition, members of the American Society of Interior Designers furnished it in the style of the 1950s. It is open daily for touring, 11 a.m.-4 p.m. Monday-Saturday and 1-5 p.m. Sundays, from now until August 24. The general public is admitted for \$5 and group rates are \$4 per person.

Members of the OU community may present their university ID card to obtain the \$2 admission fee. For further information, call 370-3140.

Solo Rio says that by restriping the lot rather than building a new lot for the 235 cars that can now be accommodated, the university saved \$165,000 in construction costs.

Several plans were considered in revising the lot. The goal was to maintain the 21-foot lane to allow for two-way traffic. Smaller spaces for compacts reflect the national trend toward small cars.

The architect points out that the OU lot is still larger in terms of individual spaces and lane width than those found at many major shopping malls.

Spaces for compact cars are labeled. Solo Rio says it is not the intention of the university to issue tickets to persons who disregard the new system. Voluntary compliance is the key to making it work.

The new lot has 733 compact spaces and 1,076 full-size spaces. In addition, there are four compact and six full-size spaces for handicapped drivers, and 35 compact and 36 full-size spaces for car pool participants.

News Notes

Board Sets Dates

Regularly scheduled meetings of the OU Board of Trustees will begin at 5 p.m. in the Oakland Center, the board decided June 11. The monthly meetings will be on the second Wednesday.

The 1986-87 dates are August 13, September 10, October 8, November 12, December 10, January 14, February 11, March 11, April 8, May 13 and June 10.

Hurry to Register

It's not too late to register for summer semester classes, if you visit 100 O'Dowd Hall from 8:30 a.m.-6:30 p.m. July 3, 7 and 8.

Funding

- Details about the following external sources of funding are available from the Office of Research and Academic Development, 370 SFH, or by calling 370-3222. Unless noted, proposal due dates are unknown.
- Defense Supply Service**
Child development research; and family child-care training, July 16.
 - Health Resources and Services Administration**
Nursing personnel study, July 25.
 - Department of Housing and Urban Development**
Research the effect of group homes on residential property values.
 - Department of Transportation**
Transportation cost, July 17.

Sandoval Promoted

Anne Sandoval has been named associate director of the Office of Admissions and Scholarships by Director Jerry Rose.

Sandoval had been assistant director of FTIAC recruiting until her recent appointment.

Music on the Patio

Optimist Paul Franklin of CIPO guarantees that the sun will shine on Wednesdays for the annual Summer Patio Concerts at the Oakland Center. The remainder of this year's lineup includes the following:

- July 9, Theresa Mack, classical piano music;
- July 16, steel drums;
- July 23, Renaissance music with Anne and Rob Burns; and
- July 30, bagpipe surprise.

Spectators are invited to bring their lunch, friends and colleagues to the programs.

Job Listings

- Information about job listings is available from the Employee Relations Department, 140 NFH, or by calling 370-3480.
- Administrative secretary, C-7, Office of the Provost.
 - Custodian I, AFSCME, Residence Halls, cleaning.
 - Secretary I, C-4, School of Health Sciences.
 - Office assistant I, C-6, Office of Financial Aid.
 - Practicum lab coordinator, AP-2, School of Human and Educational Services, counseling.
 - Programmer analyst, AP-4, Office of Computer Services.
 - Assistant director of admissions/FTIAC, AP-8, Office of Admissions and Scholarships.

Kimonos on Block for Gallery

Bedsheets have given way to kimonos for Picnic on the Grass XIV, the annual fund raiser sponsored by the Meadow Brook Gallery Associates.

Rather than paint on sheets as in the past, this year artists created on kimonos donated by K mart Corp. The fund raiser begins at 6 p.m. July 12 in the Meadow Brook Hall gardens. The auction will be followed by the 8 p.m. Jean-Pierre Rampal concert at Meadow Brook Music Festival.

Michigan artists, including Adria Aronow, David Barr, Tyne Klewe and Aviva Robinson, have created colorful kimonos for the event. Silk-screened versions will be sold and the originals will be auctioned.

Tickets are \$75 each, or \$100 each for patrons, and are partially tax deductible. For information, call 370-3005.

Also assisting at the picnic will be the Wine Warehouse of Troy, providing champagne, and Givenchy, offering perfume samples.

University Will Miss Evarts

Department of English faculty member Peter Evarts left his mark in academia through solid research work and expertise in medieval literature.

The popular professor of English and rhetoric died June 15 following an asthma attack. He was 54.

Mr. Evarts joined the university in 1962 as assistant to the director of teacher education. He became a member of the English faculty in 1965. He served as chairperson of the Department of Rhetoric during its formative years (a department which through mergers became the Department of Rhetoric, Communications and Journalism). He was a special friend to students, working with them in programs such as Upward Bound and Early College Study.

As a scholar, Mr. Evarts was well known as a specialist in medieval literature who made numerous presentations and chaired sessions at the prestigious Medieval Academy at Western Michigan University. He also was the author of numerous publications.

"Members of the Department of English

have lost a loved colleague and friend," commented Robert T. Eberwein, chairperson of the Department of English. "Students have lost a respected, conscientious teacher." Added William W. Connellan, associate provost, "We will miss him greatly."

Before coming to OU, Mr. Evarts taught English in the Waterford and Pontiac school systems and humanities at the Detroit Business Institute.

The Tennessee native graduated from Pontiac Central High School in 1949. He received his bachelor's degree in English and education from Eastern Michigan University in 1953, his master's in English language and literature from the University of Michigan in 1958, where he also did post-master's study, and his doctorate in English language and literature from Wayne State University.

At the funeral in Clarkston, Richard C. Schaeffer, an English major and alumnus, con-celebrated the mass.

Mr. Evarts' family suggests that memorials be made to the American Lung Association.

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- James Llewellyn, senior editor and news director.
- Jay Jackson, staff writer.
- Ann Straky, photographer.

Cashing in Her Chips

Zohdy Finds Future Bright

It's a small world and getting even smaller, thanks in part to the work of people like Hoda Zohdy.

The assistant professor of engineering is an expert in integrated electronic devices and circuits and studies methods to make them even smaller. How small? Small enough to make a quarter seem like a Buick parked in your living room.

Zohdy, a native of Egypt, is a graduate of Cairo University and the University of Waterloo in Ontario. When she started her career, she considered bioengineering, but recognized the tremendous growth potential in electronics. One attraction for students, she notes, is that jobs for skillful people are plentiful.

"There is a demand for highly qualified electrical engineers, particularly in electronic devices," Zohdy says. "I know in universities there is a shortage and in industry, there is getting to be some, but there has always been a demand, at least for the past five to six years, and it's expected to stay for some years to come."

Zohdy is one of only a few women in the

field, in relative terms. At OU, she was the first female engineering faculty member. Being a pioneer is nothing new to her, however. She was the third woman to receive a doctorate at the University of Waterloo in electrical engineering. She was also the first woman to conduct sessions in the Institute of Electrical and Electronics Engineers' custom-integrated circuits conference in 1984 and '86.

Zohdy sees herself as a role model for women students and encourages them to enter electrical engineering. She is also adviser to the Society of Women Engineers in the School of Engineering and Computer Science. Her work with students was rewarded with a Link Award this year.

Those who enter the field find scientists laboring to further miniaturize an already tiny product. "Ever since 1947 (when the solid-state transistor was born) the accomplishments in the electronics industry have depended on making integrated circuits, or packing more devices in small volumes. If you look, for example, at the pocket calculator, and you imagine one using vacuum tubes, it would take the size of two rooms. Actually, with the integrated circuit, — the first was in 1958 — the price of microelectronics has decreased by a factor of one million because they pack more circuit functions in small areas to get more advanced electronic equipment," she says.

What is known as very-large-scale integration means incorporating more devices and functions in small areas. Manufacturing processes now are capable of creating silicon chips that contain hundreds of thousands of circuits.

"We can do things in the lab here that are classified as large-scale integration," she says. "For VLSI we don't have everything to do it here, but they do it in industry. That depends on the smallest controllable size in making the different devices."

"Now we can go down to a fraction of a micrometer. That's like packing thousands of transistors per chip. A chip is not the whole wafer, it is just part of the wafer. It's fascinating."

To get an idea of what a micrometer is,



Hoda Zohdy is one of only a few women in her field.

divide an inch into a million parts. Count off 39.4 of them and — presto — you've got one micrometer. Zohdy says manufacturing limitations mean that integrated circuits of 25 hundredths of a micrometer may be the limit.

"That requires sophisticated equipment. When they reach that, there is a demand to put more in a chip, to do more functions, and there is a way of getting over this physical limit. That's by making these devices in a three-dimensional vertical fashion," Zohdy says. Stacking devices requires layers of insulation between them (silicon-on-insulator structures).

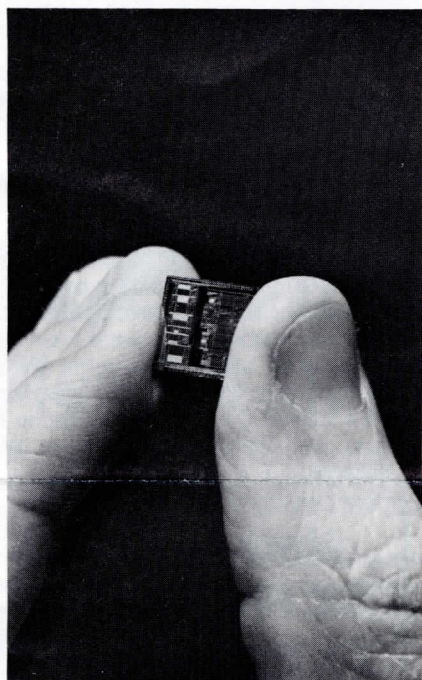
The circuits that can be made in the Dodge Hall laboratories are in the three to four micrometer range. The smaller devices require special clean rooms and equipment for manufacturing.

"Professor Tung Weng and I make some large-scale integrated circuits by

using the help of industry. We do some of the steps here and then at the General Motors Tech Center they do some of the processing steps so we can make our experimental devices and carry on with the analysis and the measurements," she says.

Zohdy is an expert in modelling and investigating new devices and has appeared at conferences to share her views. A recent project involved application of integrated circuits for the automotive industry. Others have involved investigating the problems associated with the silicon-on-insulator structures.

The IEEE has a quarter-million members worldwide and is the largest society for persons in the field. Zohdy has served the past four years on the Technical Program Committee — as the only woman among 40-some members — and chaired sessions for its conferences.



Tiny chips contain hundreds of integrated circuits.

Pets Benefit from OU Tumor Research

Research into removing malignant tumors from dogs and cats at OU is helping doctors at Ford Hospital learn new ways to treat their human patients.

In the meantime, household pets may be able to live longer because of the research. The OU program is unique in Michigan and one of only three of its kind in the United

States.

Fred Hetzel, associate professor of medical physics, and some of his students use a complex treatment program that incorporates a laser beam and a photosensitive drug. The first two treatments were done on male cats — Marbles and Pooh Bear. Eleven-year-old Marbles suffered from tumors under the third eyelid and in a gland of the third eyelid. Pooh Bear, 15, and going strong, had a tumor in the mouth that could be reached only by using fiber optics to aim the laser beam.

Hetzel says the drug is injected by a veterinarian and the treatment, which is painless to the pet, is performed three days later. Once the animal is under general anesthesia, the laser is aimed at the tumor for 30 minutes. In this case, the laser beam is generated at a certain wavelength to produce a reddish color, which causes the drug to react and release singlet (activated) oxygen. The oxygen kills the tumor cells but nearby normal cells reject the drug and are unaffected.

By the following day, Hetzel says, the tumor will respond and no further treatment will be required.

"The laser itself is not magical. In fact, any light source would work but the laser is concentrated and can be aimed precisely where needed," Hetzel says.

This experimental procedure is used on pets who otherwise could not be saved. Under ordinary conditions, Hetzel says, these pets would be put to sleep because the cost of radiation or chemical treatments for the malignant tumors would be prohibitive.

The first treatment was performed by Kathy Morris, DVM, of Morris Hospital in Redford. Assisting were Benjamin Bisgeier, DVM, a consultant to OU; James Mattiello,

a medical physics doctoral student studying with Hetzel; Laura Vandenhede, a biology major studying with Hetzel; and Cliff Snitgen, manager of the Clinical Research Lab in the School of Health Sciences.

All pets for the program will come to OU by referral only from local veterinarians. The trial period for this experiment will last five years if grant funding is awarded. Hetzel says from 500 to 600 animals could be treated.

"We can learn a lot and help the animal at the same time," he says.

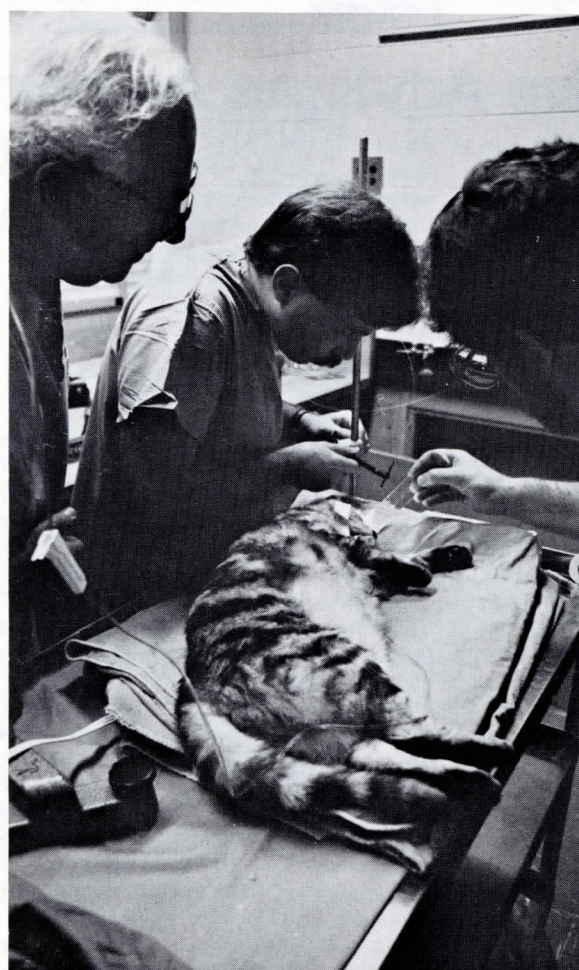
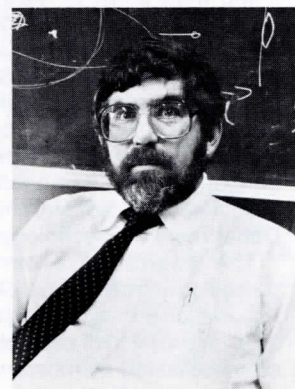
"The advantage for doctors is learning how the drug reacts on tumors that have not been treated previously. With humans, chemotherapy or radiation therapy are usually tried before a version of the light treatment is attempted."

Doctors will learn about long-term survival rates, whether animals that survive are disease-free, and what the patterns of failure are. Hetzel notes that not all animals will survive and that the experimental procedure is not a "miracle cure."

OU, Ford Hospital, Wayne State University and the University of Detroit are all involved in a wide-ranging cancer research program. The entities have applied for a \$5.6 million grant to fund basic research on the chemical, physiological and biological aspects of the drugs being used; to provide the experimental treatment of animals in the OU laboratory; and to provide clinical trials on humans at Ford Hospital.

Hetzel, who is also director of the Ford Hospital Division of Radiation Biology, says the Ford-OU link is a natural fit. "OU has the students and some resources and Ford Hospital has some resources. It's just more advantageous if we pool them."

Light treatment of tumors in animals may help humans. At left, Benjamin Bisgeier, DVM, student James Mattiello, and Fred Hetzel treat their first patient. Below, Hetzel discusses the unique treatment program.



OU Home to Quartet

The light music you hear wafting from the Center for the Arts may be coming from the Lafayette String Quartet, the recently named string quartet in residence.

Quartet members will appear on the 1986-87 Center Stage Series schedule, participate in the Arts at Noon recitals, and visit classes in area schools as representatives of OU. The members have also accepted teaching appointments as applied music instructors.

The musicians are Ann Elliott and Sharon Stanis, violin; Joanna Hood, viola; and Pamela Highbaugh, cello. The quartet formed at Indiana University and in the fall of 1984, the group took its name from Lafayette Boulevard in Detroit, which was near the home of one of the members. Their first official performance as the Lafayette String Quartet was in August 1985 at the Korsholm Festival in Vasa, Finland. The quartet members have also performed with the Renaissance City Chamber Players.

Elliott is a native of New Brunswick and graduated from Boston University in 1983, where she studied with her principal teacher, Victor Yampolsky. At BU, she was twice awarded the Certificate of Honor for

Outstanding Performance and won an award in 1982 for a concerto-aria composition. In 1981 Elliott won an award at the Canadian National Music Festival and later that year toured as a soloist with the Atlantic Symphony Orchestra.

Stanis is a Cleveland native and studied at the Cleveland Institute under Lynda and David Cerone. She received her bachelor's and master's degrees from Indiana University, where she studied with Henryk Kowalski and Roslav Dubinsky. She was also an associate instructor in chamber music and music history.

Seattle native Hood was an associate instructor of viola at Indiana University, where she received her master's degree. She has been a student of Abraham Skernick, Rostislav Dubinsky, Menahem Pressler, Stanley Richie and Isadore Tinkleman.

Highbaugh is from northern California and studied in Los Angeles with cellist Peter Rejto. She appeared with several orchestras, including the Repertoire Chamber Orchestra and the Loyola Marymount Symphony Orchestra. Highbaugh served as the principal cellist of the Los Angeles Institute



Quartet members are, front row: Ann Elliott and Joanna Hood; and back row, Pamela Highbaugh and Sharon Stanis.

Philharmonic Orchestra and later joined the faculty at California State University at Northridge. Before completing her master's

degree at Indiana University, she studied with cellist Raya Garbousava in Hartford, Conn.

Audrey Marriner Ends Long Career

The Division of Continuing Education is losing Audrey Marriner to retirement, but she will long be remembered for the programs she helped establish.

Marriner and her husband, Philip, are pulling up stakes this month and heading for Knoxville, Tenn., where the temperate climate caught their eye. In Marriner's final position as program manager, she helped establish such services as the Legal Assistant Program and started the former Cable TV Office. It served educational institutions and the public throughout Oakland County.

Marriner's first job in continuing education was in promotion; she then moved into course development. In 1975 her Legal Assistant Program came about and is still going strong. The longevity of the program is considered unusual for a noncredit course.

During her 17 years with OU, Marriner also assisted at Meadow Brook Hall, developing the Stately Dinners program and working in promotion.

Marriner also developed training programs for certified public accountants, scheduled conferences, and when cable TV franchises started, acted as the "catalytic agent" for a consortium to coordinate services. Higher education institutions may now present news items on all cable systems.

"I left that two years ago when the cable franchising process was complete," she says. "I came back to continuing education to do program development and the result of that is we have the university's first professional development program between a school — the School of Business Administration — and continuing education. It's a certificate program in personal financial planning."

The future of continuing education programming depends on competition from other institutions, professional groups and entrepreneurs. "Conferences are a difficult game," Marriner says.

Just as the university has grown over the

Audrey Marriner



past 17 years, so have continuing education programs. When continuing education first started its courses, finding rooms for them was no problem. Now students in evening credit courses compete for classrooms.

"This restricts the number of classes we can offer. It has us scrounging for space," she says.

Before coming to OU, Marriner earned her bachelor's degree in economics from the University of Michigan. Following a stint at Hudson's and raising a family, she went to Wayne State to earn a master's in social psychology.

"It's been a fun place to work in continuing education. Dean Lowell Eklund has been a very supportive superior, receptive to new ideas, allowing you to go ahead and give it a try. The whole name of the game for continuing education is being able to respond quickly to the needs in your local marketplace."

Her friends at the university say she has managed to do just that.

Pavilion to be Cooler

Users of the Shotwell-Gustafson Pavilion at the Meadow Brook Center will soon find the atmosphere a bit more pleasing.

The OU Board of Trustees has authorized air conditioning for the building, at a cost not to exceed \$200,000. It is estimated that annual operating costs for the air conditioning will be about \$18,000, to be covered by the operating budget of the facility. The equipment includes four roof-top air handling and cooling units.

Physicians Gather to Study Heart

Physicians seeking relicensure credits experienced as well as learned about prevention of coronary disease at the third annual Prevention of Coronary Heart Disease Symposium at Meadow Brook Hall.

The June 20 event included nationally known authorities from the Boston University Medical Center, the Ochsner Clinic in New Orleans, the University of Kansas Medical Center, the Cleveland Clinic Foun-

dation, Wayne State University and the University of Michigan.

They discussed the latest developments in treatment of coronary artery disease, hypertension, cholesterol regulation, benefits of nutritional and physical rehabilitation, treatment by therapy, and blood-vessel plastic surgery.

The symposium was sponsored by the Meadow Brook Health Enhancement Institute and Crittenton Hospital in cooperation with the Division of Continuing Education.

Program chairpersons were Fred Stransky, director, MBHEI; Rajendra Prasad, M.D., Crittenton Hospital and staff physician of the MBHEI Cardiac Rehabilitation Program; and Milagros C. Flores, M.D., Crittenton.

OU Ranks in Funds

OU ranked 149th of all colleges, universities and nonprofit organizations receiving Department of Defense contract funds in fiscal 1985. The university received \$548,000.

The figure was reported in the June 25 issue of *The Chronicle of Higher Education*. The Massachusetts Institute of Technology was first with \$360,104,000 and Atlanta University was 152nd with \$500,000. The paper listed only those institutions receiving at least \$500,000.

The *Chronicle* reported that a total of \$2.48 billion was awarded in 1985, up 17 percent from the previous year. The contracts covered research, development, testing, and evaluation for military projects and also included federal civil water-resource projects. The figures include contracts over \$25,000 and exclude funds for training.

The ranking shows that OU is fifth among Michigan universities. The totals and national rankings were: University of Michigan, \$5,994,000, 37th; Michigan State, \$2,075,000, 84th; Michigan Tech, \$1,239,000, 101st; and Wayne State, \$913,000, 120th.

Mark Calendar for Annual Picnic

The university faculty and staff picnic will be August 3 beginning at 5 p.m., followed by the Meadow Brook Music Festival performance at 8.

This year the Detroit Symphony Orchestra performance will be the music of Scandinavia, featuring violinist Viktoria Mullova with Paavo Berglund conducting.

The Office of the President notes that Emilie and Joe Champagne are looking forward to hosting this function, which is sponsored with the assistance of the OU Foundation, in order to recognize the important contribution of our valued employees.

Three Receive Advising Awards

Three faculty members have been honored by the Alumni Association for outstanding academic advising. The 1986 awards, presented at the June 7 commencement, were given to Alice S. Horning, W. David Jaymes and Lawrence G. Lilliston.

Horning is assistant professor and chief adviser in the Department of Rhetoric, Communications and Journalism; Jaymes is associate professor, chairperson and chief adviser in the Department of Modern Languages and Literatures; and Lilliston is associate professor and chief adviser in the Department of Psychology.

The awards have been funded and presented annually since 1980 by the Alumni Association and its arts and sciences affiliate as an expression of appreciation to arts and sciences faculty members who "go the extra mile" to provide academic advising. The awards consist of a framed certificate and \$500, which may be used for any professional purpose from receptions for departmental advisees to the acquisition of research materials.

Recipients for this year's awards were selected by a committee consisting of Professor John Cowlshaw of the Department of Biological Sciences, one of last year's recipients; Michael McClory, a 1980 history graduate; and Pearl Newcomer, a 1983 English graduate, all representing the

Alumni Association. Associate Dean Sheldon Appleton, arts and sciences, also served on the committee.

Nominations for the 1987 Outstanding Advising Awards may be sent to Appleton in 207 Varner Hall, or by calling 370-4569.

Offices Will Move

Campus Facilities and Operations is moving July 7-9 into four modular units south of Hannah Hall and west of the Barn Theatre.

The vacant space in North Foundation Hall will then be occupied by the Office of External Affairs, moving from 270-272 SFH, and Alumni Relations, moving from 266 SFH. Margo King, director of university relations, will move from 109 NFH into the former campus facilities area.

The Office of Developmental Affairs will remain in 268 SFH until completion of new facilities in the old Dodge Farmhouse. At that time, most units of Alumni Relations will move again from NFH into the farmhouse. In most cases, telephone numbers will be maintained.

Use of the SFH area is under consideration by the Division of Academic Affairs. Options include development of offices for the Ken Morris Labor Studies Center.

Events

CULTURAL

All summer — Meadow Brook Music Festival with classical and pop artists. Call 377-2010 for programs and prices.

July 7-August 2 — Meadow Brook Studies Program, Varner Hall. Fee required, but discounts are available to qualified students. Sponsored by the Center for the Arts and Oakland Schools. Call 370-3018.

July 7-August 4 — Dance and music workshops sponsored by the Center for the Arts. Call 370-3018.

July 9, 16, 23 and 30 — Summer Patio Concerts, noon, Oakland Center, sponsored by CIPO.

July 12 — Picnic on the Grass XIV, sponsored by the Meadow Brook Gallery Associates. Call 370-3005 for details.

CONFERENCES

July 18-20 — Upward Bound Alumni Reunion in honor of the program's 20th anniversary. For details, call 370-3218.

COURSES

The Division of Continuing Education has class schedules. Call 370-3120.

The Continuum Center offers workshops and seminars. Call 370-3033 for a brochure.

ETCETERA

July 3 and 7-8 — Late registration for summer semester, 8:30 a.m.-6:30 p.m., 100 O'Dowd Hall.

July 9 — OU Board of Trustees, 5 p.m., Oakland Center.

August 3 — Annual faculty and staff picnic, 5 p.m., Meadow Brook Music Festival grounds.

ATHLETICS

Until August 1 — Sports camps sponsored by the Department of Athletics. Register by calling 370-3190.

July 6 and 20 — All-American Teddy Bear Kite Fly/Picnic, Lepley Sports Center. Call 370-3190 for details.

TOURS

Until August 24 — Sunset Terrace Revisited will be held until the fall conference season begins. See the home decorated in the style of the 1950s. Reduced fee for OU employees.

Sundays — Meadow Brook Hall is open from 1-4 p.m. for browsers. No reservations needed. Call 370-3140 for details about this and other tours.

If it's open to the public or to the campus community, it should be listed here. Send items to the News Service, 109 NFH.