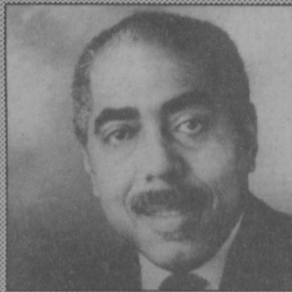


COMMENCEMENT



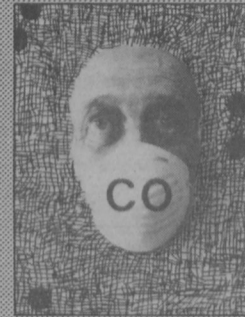
Journalist Nina Totenberg and two others to receive honorary degrees. See page 3.

DISTINGUISHED LECTURE



N.S.F. director speaks on "Science and Society," Monday, April 20. See page 5.

ART AND ENVIRONMENT



Celebrating Earth Day with art at the Union Art Gallery. See page 28.

UNIVERSITY AT STONY BROOK • SUNY • CURRENTS

APRIL 1992

VOLUME 10 NUMBER 3

FOCUS: REGIONAL IMPACT

Technology Transfer Promoting the Ties that Bind

By Carole Volkman

S

mudged print.

You wouldn't expect it to be a major economic villain, but it is. According to the U.S. Postal Service, smudged and blurry print on envelopes reduces efficiency by 50 percent nationwide. That's a number Stony Brook computer scientist Theo Pavlidis is convinced he can dramatically improve.

Pavlidis, who is credited with pioneering the two-dimensional bar code being developed at Symbol Technologies (Bohemia), is also one of the country's leading researchers in image analysis. Now he has turned his expertise toward solving one of the Postal Service's thorniest — and most costly — problems.

Pavlidis is one of approximately 150 Stony Brook faculty members who are conducting research under corporate — or, in this case, quasi-corporate — sponsorship. Like their colleagues at major research universities around the country, Stony Brook faculty are increasingly turning the fruits of their research toward the development of new commercially viable technologies.

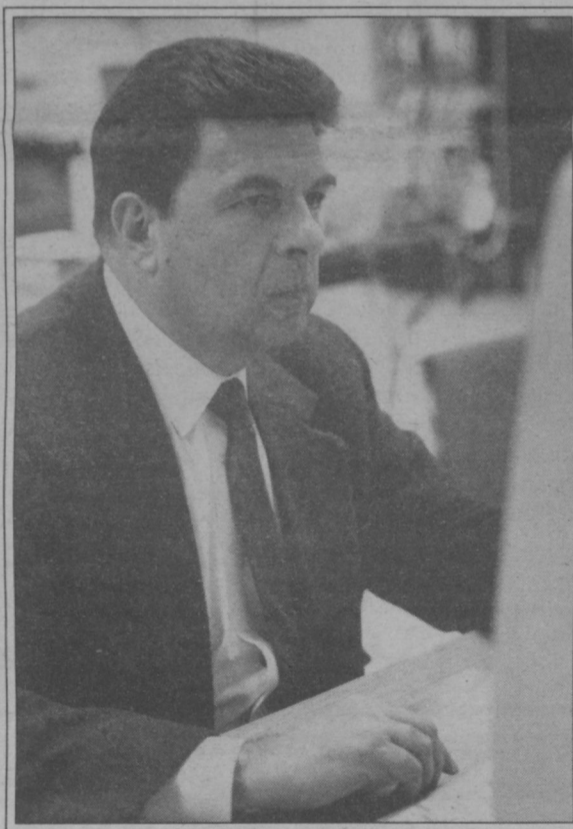
Industry-sponsored research has increased almost five-fold over the past decade, from \$530,000 in 1982 to nearly \$3 million in 1991. Projects range from the development of new materials for computer chips to the potential use of salt water organisms in energy conservation.

"In every region where a high-tech economy has thrived for a prolonged period, an outstanding research university has played a key role," notes President John H. Marburger. "These institutions act as magnets that attract and retain scientists, engineers and entrepreneurs. In this way, Stony Brook is becoming Long Island's major force for technology-based development."

Scaling the Ivory Tower

A decade ago, "Many faculty members were reluctant to work with corporate support," notes Ann-Marie Scheidt, special assistant to the provost for regional development. Researchers feared that industrial priorities might compromise their work. The corporate sector, meanwhile, was put off by what it perceived as an "ivory tower" mentality.

The barrier began breaking down in the late 70s and early 80s. At Stony Brook, a key turning point was the establishment in 1983 of the Center for Advanced Technology (CAT) in Medical Biotechnology. Combining state and corporate support in developing new technologies for commercial development, the center was instrumental in



PHOTOS BY MAXINE HICKS
Theo Pavlidis, professor of computer science, is improving how the U.S. Postal Service reads addresses.

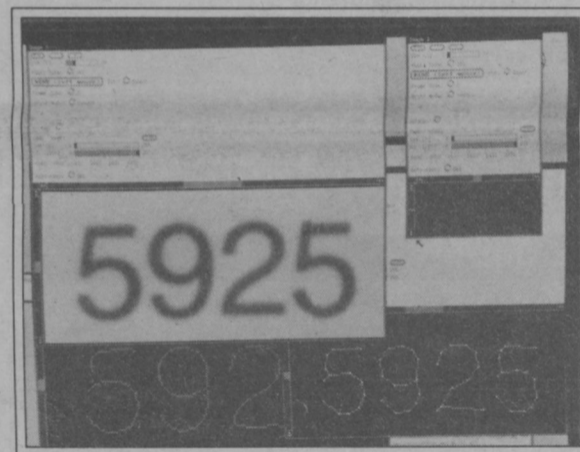
fostering a recognition that faculty and industry could work collaboratively in highly productive ways.

On the national scene, passage by Congress in 1984 of the Stevenson-Wydler Act accelerated the trend by giving universities the right to retain patent rights on inventions from federally sponsored research. The new law sharply increased the incentive for universities to seek commercial development of discoveries made in their own labs. Stony Brook established its Office of Technology Transfer that same year.

From 1978 through last June, 245 Stony Brook researchers filed 209 disclosures, the first step in the patent or licensing procedure. These have generated 52 royalty agreements with 42 businesses and organizations.

Taking an Informal Approach

"Technology transfer" does not necessarily entail a formal procedure. Publication of a research paper is a common form of "transfer," particularly when it piques the interest of business owners.



The computer screen in Theo Pavlidis Image Analysis Laboratory shows how his "character recognition" technology will work for the Post Office's mail reading machines.

The computer scans the address on an envelope — here enlarged and represented by the numbers 5925 — and proceeds to break figures down into ridges and valleys (left), and then to lines and curves (right), at which point the curves are further reduced to straight lines. In the next step, the computer will take the newly analyzed symbols, compare them to prototypes on the program, and reveal the correct address on the screen.

Another form of technology transfer is the educational process itself: Training students who will be employed by high-tech companies is one of the most common forms of technology transfer. Recruiting adjunct professors from industry, providing internships for students and prospective employment opportunities for graduates are additional advantages resulting from partnerships with industry.

The Center for Biotechnology illustrates the benefits that collaborative research can bring to the economy. Since its inception, the center has awarded over \$3.5 million in seed grants to a total of 39 researchers. In turn, the funded projects have attracted private and government support of \$7.5 million, more than double the original investment. More than 50 percent of that research has resulted in invention disclosures, patents, licenses, new companies and other significant economic developments. In addition, the number of biotechnology companies in the state has increased tenfold since the center's inception.

"The research university of the future will be like the agricultural university of the past — connected to the local and regional community by its technological and research capacity," says Center for Biotechnology Director Richard Koehn.

Biotechnology is one of the five technologies that Stony Brook has identified as important for Long Island,

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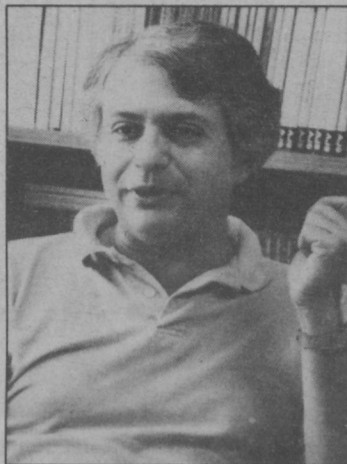
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KUDOS

Granovetter Awarded Russell Sage Grant

Mark Granovetter, professor and chair of the Department of Sociology, has been awarded a fellowship by the Russell Sage Foundation for the year 1992-93. Russell Sage Fellowships, which enable the recipient to spend a year in residence at the foundation in New York City, are the object of international competition. Each year, 10 or 12 scholars are chosen.



During his year at Russell Sage, Granovetter expects to complete two book projects. One is a study of economic sociology, *Society and Economy: the Social Construction of Economic Institutions*, to be published by Harvard University Press. The other is *The Social Construction of Industry: Human Agency in the Development, Diffusion and Institutionalization of the Electric Utility Industry*, co-authored by Patrick McGuire and Michael Schwartz, professor of sociology. This study focuses on the origins of the electric utility industry in the United States from 1880 to the 1920s.

SUNY Trustees Name Ripa 'Distinguished Professor'

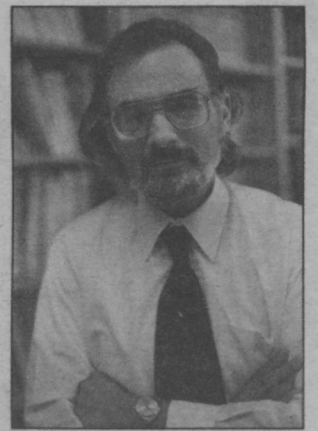
Dr. Louis W. Ripa, Jr., professor and chair of the Department of Children's Dentistry, has been appointed Distinguished Professor by the State University of New York Board of Trustees — the State University's highest rank.

One of the world's foremost experts in the incidence of dental decay and its prevention, Ripa has received numerous honors and awards for his dental research. He has been twice honored by the International Association of Dental Research with the H. Trendly Dean Distinguished Scientist Award and the Hatton Award.

His studies of clinical applications of dental sealants and research on the efficacy of topical fluoride agents have had a profound influence on the prevention of cavities throughout the world. As an educator, his teaching has repeatedly been recognized by his students. In 1985, the Student Council of the School of Dental Medicine presented him with the Dental Educator of the Year Award.

Ripa has been professor and chair of Children's Dentistry since 1973. From 1976 to 1977, he served as associate dean for academic affairs. He also has served on the adjunct

faculty of the Department of Dental Hygiene at the State University Agricultural and Technical College at Farmingdale since 1977.



Ripa's contributions to preventive and pediatric dentistry and his extensive scholarship were the impetus for the designation, according to SUNY officials. Additional criteria were his leadership in Stony Brook's Department of Children's Dentistry and service to the campus, SUNY system, professional organizations and the community.

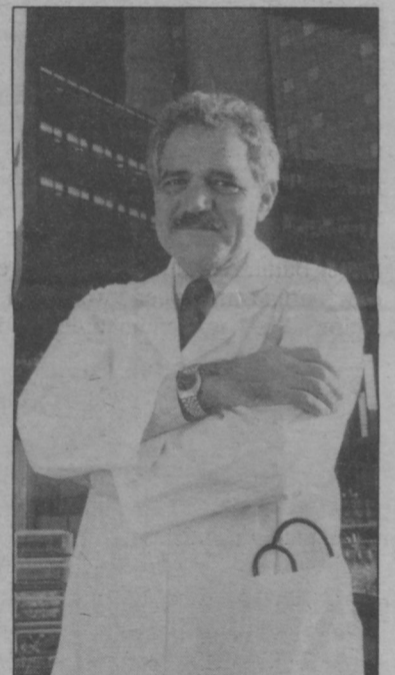
Cohen to Head AAMC Task Force on Generalist Physicians

Dr. Jordan J. Cohen, dean of the School of Medicine, has been appointed chair of the Association of American Medical Colleges' (AAMC) Task Force on the Generalist Physician.

The 16-member task force was formed in response to the need for practicing primary care physicians and the decline in student interest in generalist careers in medicine.

Goals of the task force include assisting the association in developing a generalist physician policy and a national strategy to attract medical students to the field of general medicine.

The number of medical school graduates who intend to pursue a generalist medical career has fallen from 37.3 percent in 1981, to 23.6 percent in 1989, according to the AAMC. Many experts in health care delivery believe that the optimal number should be at least 50 percent. This may be an underestimate, says AAMC officials, given the aging of the U.S. population and the expected continued growth of managed care systems.

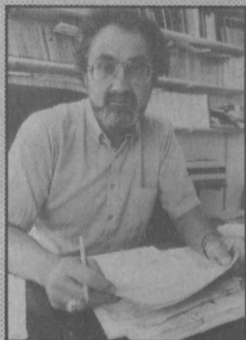


CURRENTS

Coming in May

FOCUS: BOOKS AND AUTHORS

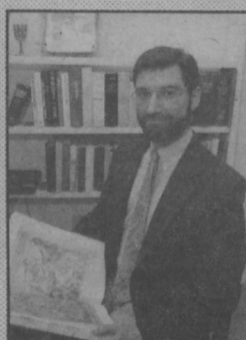
Faculty Harvest: publications on history, poetry, criticism, languages, philosophy, psychology, sociology, biology, engineering and more



Social Roles and Social Institutions, honoring Rose Laub Coser. Ed., Norman Goodman



The Great South Bay, edited by J.R. Schubel, T.M. Bell and H. H. Carter



Birth of a scholarly edition: Stephen Spector edits a Medieval drama cycle.

Currents, serving the extended community of the University at Stony Brook, is published monthly by the periodicals unit of the Office of University Affairs, 144 Administration, University at Stony Brook, Stony Brook, NY 11794-0605. Phone: (516) 632-6318.

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Student Intern: Maria Lutz

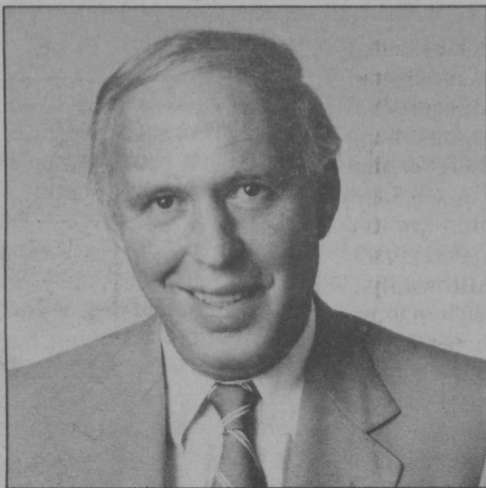
The periodicals unit also publishes *Electric Currents*, a daily gazette distributed via the university's electronic mail system. Our All-In-1 address is CURRENTS.

The University at Stony Brook is an affirmative action/equal opportunity educator and employer.

University to Award Three Honorary Degrees at 1992 Commencement



Nobel Laureate Gertrude Elion



Educator/business leader James Simons



Journalist Nina Totenberg

Journalist Nina Totenberg, Nobel laureate Gertrude Elion and educator/business leader James Simons will receive honorary doctoral degrees at this year's commencement on Sunday, May 17.

A Doctor of Letters degree will be conferred on Totenberg, a Doctor of Science on Elion, and a Doctor of Humane Letters on Simons. The honorary degrees will be conferred during ceremonies in the Indoor Sports Complex.

Totenberg is National Public Radio's award-winning legal affairs correspondent. Her reports air regularly on NPR's news programs, "All Things Considered," "Morning Edition" and "Weekend Edition." She is also the legal affairs correspondent for the MacNeil/Lehrer News Hour. Her articles have appeared in major newspapers and periodicals, including *The New York Times* magazine, *The Harvard Law Review* and *The Christian Science Monitor*.

Totenberg's coverage of the Supreme Court and of legal affairs in general has won her widespread recognition. This past October, she anchored the PBS television coverage of the Clarence Thomas Senate confirmation hearings. In 1988 she won the Alfred I. duPont-Columbia University Silver Baton Award, one of the foremost prizes in broadcast journalism, for her coverage of Supreme Court nominations. She has been honored six times by the American

Bar Association for excellence in legal reporting and is the recipient of numerous awards and honorary degrees.

Elion is 1988 winner of the Nobel Prize in Medicine (with Sir James Black and George H. Hitchings) for her work in pharmacological therapeutics. She is one of only five women to win the prize during this century. Her research interests include chemical immunosuppression, antiviral chemotherapy, and the differences in nucleic acid metabolism between normal human cells, cancer cells, protozoa, bacteria and virus. On the basis of such differences, a series of drugs were developed that block the growth of cancer cells without damaging normal human cells. Her work has been carried out at the Wellcome Research Laboratories, a division of Burroughs Wellcome, where she has worked since 1944.

She holds adjunct professorship positions at Duke University and the University of North Carolina at Chapel Hill, and is the recipient of honorary degrees from eight universities. Among her many honors are the Garvan Medal from the American Chemical Society, the Memorial Sloan Kettering Institute's Judd Award and the Albert Einstein College of Medicine Spirit of Achievement Award.

Simons is a mathematician, educator, business leader and longtime friend of the university. After teaching at

M.I.T. and Harvard, he joined the faculty at Stony Brook in 1968 as a professor and chair of the mathematics department. In 1970 he became the first director of the Division of Mathematical Sciences. In 1976 he was awarded the American Mathematical Society's Oswald Veblen Prize in Geometry in recognition of his contribution to the field. In 1974, Simons left academia for private industry. He is currently president of Renaissance Technologies Corporation in New York City.

Even after leaving the university, Simons has maintained close and supportive ties to Stony Brook. He has chaired the board of directors of the Stony Brook Foundation since 1988, and has been a member of the board since 1986. He is a member of the board of directors of the Long Island High Technology Incubator and of the Visiting Committee of the Marine Sciences Research Center. For the past eight years, he has sponsored the Simons Fellows Program, which provides opportunities for 10 outstanding high school students each summer to pursue research and scholarship at the university. With his guidance, energy and financial assistance, the university was able to start the Undergraduate Research and Creative Activities (URECA) program in 1987, providing opportunities for high achieving undergraduates, who work in partnership with faculty mentors.

Projection Booth Coming to Staller Center

The Staller Center for the Arts will soon have a state-of-the-art projection booth and begin to offer films as part of its regular cultural programming.

Erwin and Freddie Staller, longtime friends of the university, have donated funds for the project, along with friends, family and business associates of the Stallers. The donation totals close to \$75,000.

"This will be a good thing for the university and for the community, as well," says Cary Staller, vice president of Staller Associates, Inc., speaking on behalf of the donors. "People have been working for a long time to set up a film program, and we decided that the time had come to make it happen."

The funds will be dedicated to adding a soundproof, fireproof projection room directly under the existing control booth in the Main Stage auditorium, with access from the third floor of the Staller Center. The university already owns 35 mm and 16 mm projectors and a large screen, and

this additional equipment will enable the center to offer film festivals.

"We've always been anxious to introduce film into our programming," says Terry Netter, director of the Staller Center. "A comprehensive arts center should include film, since it is *the art of the 20th century*. I'm ecstatic about it." The donation, Netter says, will be sufficient to cover construction of the booth and inauguration of the initial film programs. He will establish a film committee, including members of the faculty, staff and community, to determine programming. "What we will offer is not intended to supplant any existing film series, nor to eliminate any program at the center. Films will be integrated into our existing programs and schedules," Netter says.

Construction of the projection booth is expected to begin after the International Theatre Festival this summer, and to be completed before classes resume in September.

Public Safety Launches Crime Prevention Program

McGruff, the floppy-eared 48-inch canine puppet who encourages children to "take a bite out of crime," is the centerpiece of a new crime prevention outreach program that the Department of Public Safety began in February.

The program features McGruff, together with university public safety officer Donna Capps, talking with school children about vandalism, child abuse, bicycle safety, "Just Say No," and more.

The Department of Public Safety is now accepting requests from local school districts and community groups. "As part of one of the largest universities on Long Island — and one of the largest employers in the region — we have a responsibility to reach out to the community as well as to our employees," says Public Safety Director Richard Young.

The program, based on guidelines and materials issued by the National Crime Prevention Council, is currently being presented to children at the university's day care centers. Audio tapes geared to different age groups will soon supplement the existing presentation,



Public Safety Director Richard Young, Lieutenant Douglas Little, and Lucille Oddo, executive director of Stony Brook Child Care Services, show McGruff to children at a campus day care center.

according to Lieutenant Douglas Little, the department's community relations director.

Westinghouse Award



Robert Cerrato, assistant professor at the Marine Sciences Research Center, congratulates Kurt Thorn, this year's first prize winner in the national Westinghouse Talent Search. Cerrato served as mentor for Thorn, who is a senior at Shoreham-Wading River High School. Thorn's award-winning project, conducted in part at Brookhaven National Laboratory, examined ways to detect water pollution through the study of clamshells. He is the first Long Islander to win top honors in the Westinghouse competition in 40 years.

Research Briefs

Early Warning on Ozone: From Hawaii to Stony Brook

Astronomers at Stony Brook have begun collecting ozone depletion data from a new remote sensing station in Hawaii, as part of a National Aeronautics and Space Administration (NASA) project that will monitor the ozone layer for the next 15 years.

All data from the new station, perched 13,600 feet atop Mauna Kea, Hawaii, will be relayed to scientists Philip Solomon, professor of astronomy, and Jim Barrett, research scientist, both of USB's Department of Earth and Space Sciences astronomy program. They will use the observatory to measure amounts of chlorine oxide — the primary destroyer of ozone — in the atmosphere.

In 1986, Solomon and Barrett (with Robert deZafra of the Department of Physics) found the first evidence that the Antarctic "ozone hole" was caused by chlorine from manmade chemicals known as chlorofluorocarbons, or CFCs.

Automated equipment at the Mauna Kea site will send back the first continuous, 24-hour-a-day information about changes in the ozone layer. The automated machines, Solomon says, will send back more data faster than human-operated equipment used in previous ozone studies.

Via high-speed phone lines, the research station sends chlorine oxide measurements to USB each day, where the information is analyzed by Barrett and Solomon. The sensing station equipment was designed by Alan Parrish, a former USB researcher who works for Millitech Corporation.

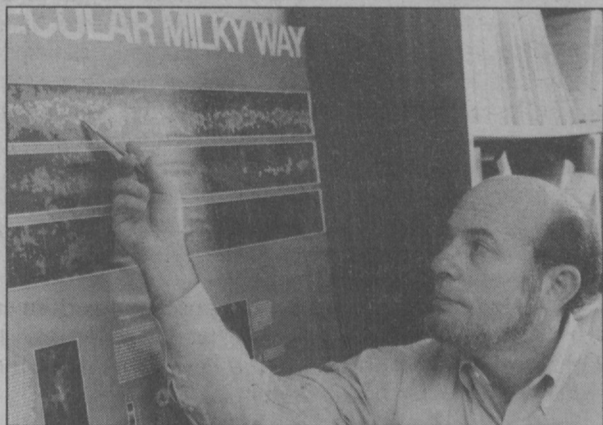
"The goal is to establish a long-term record of ozone changes, using ground-based measurements," says Solomon. "This information will complement satellite and airplane measurements taken over shorter periods of time."

The Mauna Kea site was picked not only for its high altitude and dry air — essential for detecting the weak radio signals given off by chlorine — but also because Hawaii can serve as an "early warning system" of ozone damage at southern latitudes.

"So far, large losses of ozone have been detected only in very cold regions, where ice particles help speed its destruction by chlorine," Solomon says. But if scientists began to see ozone loss even in subtropic areas such as Hawaii, "it would increase our concern about ozone-destroying chemical reactions taking place in other parts of the globe."

The project is part of NASA's "Network for the Detection of Stratospheric Change," and will include two additional stations. A second station, to be operated by a team of French researchers in the Alps near Bordeaux, will also relay data to Stony Brook. The location of the third site has not yet been determined by NASA.

The Stony Brook researchers have received \$230,000 each year from NASA for the past three years, and will receive an additional \$230,000 this year. Solomon expects funding for the project to continue for at least another decade.



Philip Solomon

Homelessness Climbs the Social Ladder into the Middle Class

The possibility of becoming homeless is no longer only a poor person's problem. About 87,000 people on Long Island are unemployed, and foreclosures nationwide are at record levels.

"The risk of homelessness is creeping up the middle class ladder," says Joel Blau, assistant professor at the School of Social Welfare, whose new book, *The Visible Poor*, was published March 7 by Oxford University Press.

"The economy has turned downward and social supports aren't there."

Blau says people are angry at the homeless because they

are frustrated about solutions, but that anger is misdirected.

"If you treat poor people badly, it allows the government to cut back on social programs that both the poor and the middle class need," he points out. "People think homelessness is something that happens to someone else. But if your house is foreclosed, you could end up in a shelter, if you don't have a support system of family and friends."

Blau's book shows that homelessness has political and economic roots that stem from government policy shifts such as cutbacks in social welfare programs, the failure to provide adequate low-income housing and deinstitutionalizing the mentally ill. The book advocates a range of social reforms, including a national standard for welfare benefits, a higher minimum wage, and encouragement of non-profit affordable housing.

Alfred J. Kahn, professor emeritus of Columbia University's School of Social Welfare has said, "This is the best overall book available on the subject of homelessness. It is indispensable for scholars, policy makers, public officials, and serious students. It is the book we will all put on our reading lists in courses on social problems and social policy."

And Senator Paul Wellstone (D-Minnesota) says Blau's book, "combines the best of public policy analysis with commitment to the poor in America."



Joel Blau

The Day the Earth Trembled (a little bit), USB Researchers Were Watching

When an earthquake shook Long Island's east end on March 10, Stony Brook's new seismic station received an unexpected test of its effectiveness.

The seismic equipment, Long Island's only earthquake-monitoring station, was set up recently in the lobby of the Earth and Space Sciences Building. The heart of the system is a vibration detection device buried at Caumsett State Park in Huntington, a site USB researchers have designated "the quietest place on Long Island." The information it collects is relayed by radio back to Stony Brook, where it is displayed on a seismograph for researchers and the public to view.

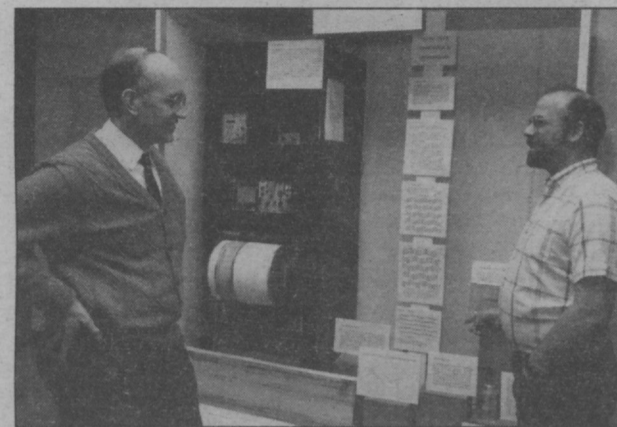
The 24-hour, continuously running station picked up the island's latest quake at 6:51 p.m. on March 10, says Donald Weidner. Weidner, director of the Center for High Pressure Research, oversees the station with instructional specialist Ben Vitale and Glenn Richard, acting director of the Museum of Long Island Natural Sciences.

The tremor measured 2.8 on the Richter scale, they say. With information gathered by the station's instruments, Weidner and his group concluded that the quake occurred along a fault line that runs near Block Island. They pinpointed its epicenter in East Hampton township.

Monitoring earthquakes is just one of the station's missions, says Weidner. It is part of an educational program developed jointly by the Museum of Long Island

Natural Sciences and the Center for High Pressure Research. The program's goal is to teach students from kindergarten through the undergraduate level about the forces deep within the Earth that shape such surface events as earthquakes and volcanoes.

"We also want to familiarize people with the work we're doing at the center," says Weidner. He and Robert C. Liebermann, professor of earth and space science, direct efforts to simulate conditions found 1,000 kilometers below the surface, with huge hydraulic presses that squeeze minerals at subterranean temperatures and pressures.



Don Weidner and Glenn Richard check earthquake data.

Short-Term Cooling May Reduce Brain Injury After Stroke

Cooling the brain for 45 minutes after a stroke may help minimize resulting brain damage. In a study published in the March 13 issue of *Brain Research*, Dr. George C. Newman, associate professor of neurology, found that short-term periods of mild cooling may be effective in reducing brain tissue injury after stroke. Previous studies have shown that long-term cooling is effective.

Stroke is an injury to the brain resulting from a lack of blood supply. Of the 500,000 Americans who suffer strokes each year, one-third will die, making it the third leading cause of death in the U.S. At any given time, there are two million Americans who have survived a stroke. In Suffolk County, the incidence is 5,000 new stroke cases each year.

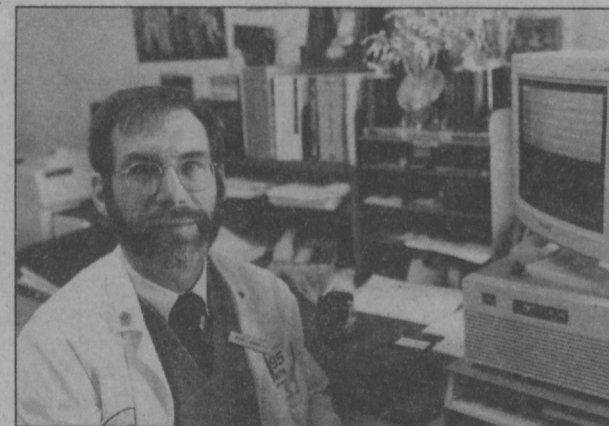
After a stroke occurs, a small area of the brain called the core, located next to the blocked artery, may be damaged. A larger area surrounding the core, called a penumbra, will either live or die depending on what happens in the next four hours. Newman believes this four-hour period is a "therapeutic window" during which doctors may be able to reduce stroke damage. "We're trying to slow the brain chemistry down so that the brain can survive," he says. "This is why it is critical to get people into the emergency room as soon as they have a stroke."

The work is especially important because this kind of treatment is less likely to have side effects than drugs. While drugs can help some patients, they can cause dangerous side effects such as psychiatric problems, in others.

"Hypothermia (brain cooling) is a coming idea," he says. "The hope is to develop a 'cooling mantle' that will cool the head, neck and upper chest."

This remains a challenge, however, because it is difficult to cool the amount of blood moving into the brain. Though it represents 2 percent of the body's weight, the brain receives 20 percent of the body's blood flow. The current research is being conducted on laboratory rats.

Co-authoring the paper are Hui Qi and Frank E. Hospod, research assistants in the Department of Neurology, and Katherine Grundmann, student research assistant and first-year medical student at Stony Brook's School of Medicine.



Dr. George Newman

NSF Director to Speak Here April 20

National Science Foundation Director Walter Massey will deliver this year's final Distinguished Lecture on Monday, April 20, at 4 p.m. in the Staller Center for the Arts Recital Hall. The Distinguished Lecture Series is sponsored by the Office of the Provost and Newsday.

Massey, a physicist, will speak on "Science and Society: the Changing Relationship."

Massey was appointed to a six-year term as director of the NSF in March, 1991. His agency, charged with strengthening the national scientific and engineering research potential and with improving education in science and engineering, has an annual budget exceeding \$2.3 billion. The NSF awards 13,000 to 15,000 grants each year for research in all fields of natural and social science and engineering.

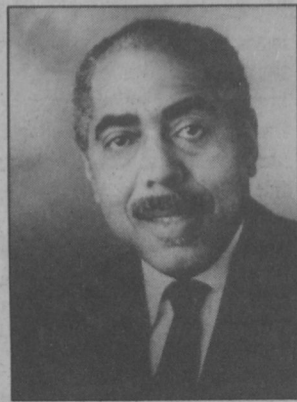
Before joining the NSF, Massey was director of the Argonne National Laboratory and professor of physics at the University of Chicago. He was on the faculty at the University of Illinois and Brown University, where he was appointed dean of the college in 1975. While at Brown, Massey originated and directed Inner City Teachers of Science, a program to educate science teachers for urban schools.

His areas of research have been the many-body theories of quantum liquids and solids, the teaching of science and mathematics, and the role of science and technology in a democratic society.

Massey holds a bachelor of science degree in physics and mathematics from Morehouse College, Atlanta, and received both his M.S. and Ph.D. degrees in physics from Washington University in St. Louis.

Prior to his arrival at the NSF, Massey served on the board of trustees of the Rand Corporation and the board of directors of the MacArthur Foundation. He was chairman of the board of the Argonne National Laboratory/University of Chicago Development Corporation (ARCH), and a member of the boards of Amoco Corporation, First National Bank of Chicago, Tribune Company, Motorola, Inc., and Materials Corporation. He is a past trustee of Brown University, a vice president of the American Physical Society and president of the American Association for the Advancement of Science. He recently served as a member of President George Bush's Council of Advisers on Science and Technology.

The lecture is free and open to the public. For further information, call Ken Wishnia at the Office of the Provost, 632-7000.



Walter Massey

Roth Regatta Sets Sail Once More

The fourth annual Roth Regatta, a daredevil crossing of the 200-foot long Roth Quad pond in hand-built cardboard boats, is set for Friday afternoon, April 24, at 4 p.m. Entrants, either solo or in teams, race in a series of heats, powered only by wind and paddle (broom, shovel). This year's commodore is undergraduate Hal Freidet.



Christine Baker, swamped, at last April's Roth Regatta.

If It's April, It's Time for I•Con

I•Con XI, the East Coast's largest science, science fiction, fantasy and gaming exhibition, will open on Friday, April 3, at 6 p.m. in the Indoor Sports Complex.

The three-day convention, which has drawn thousands of fans to campus in past years, will run throughout the weekend. Doors open at 10 a.m. on Saturday and Sunday.

Featured guests this year include Roger Zelazny, author of the Amber series, and the 1992 Gallun Award winner Robert Shackley, who collaborated with Zelazny on *Bring Me the Prince's Head* (1991). Other writers will be Nancy Kress, Rebecca Ore, Spider and Jeanne Rovinson, and Pamela Sargent.

Gaming guests include Gary Gygax, inventor of *Dungeons and Dragons*, who will demonstrate his newest game, scheduled to be out this summer. Other gaming guests will be Ken Rolston and Tom Dowd.

Artist guest of honor is cartoonist/illustrator Gahan Wilson. Comics guest of honor is Gil Kane. Also expected are Tim Hildebrandt and John Buscema.

Media guests (tentative) include Nichelle Nichols — *Star Trek's* Uhura — as well as Marc Singer and Laura Banks.

Tickets for the entire weekend are \$25 for adults, purchased in advance, and \$30 at the door. Tickets for students are \$14 and \$16; for children under 12, \$12 and \$15. Tickets may be reserved in advance by writing to



MAXINE HICKS

Aliens attend I•CON, the annual science, sci-fi and fantasy convention.

I•CON, P.O. Box 550, Stony Brook, NY 11790. Tickets purchased in advance can be picked up at the Indoor Sports Complex ticket window during the convention.

Stony Brook Celebrates Earth Day at MSRC

The Marine Sciences Research Center will hold its first Open House to celebrate Earth Day on Saturday, April 25, from 11 a.m. to 4 p.m. on the South Campus grounds of the center.

Visitors will be able to:

- Touch live marine creatures at the "Marine Petting Zoo"
- See the smallest living animals and plants of the sea magnified under microscopes and taped on video
- Help paint an environmental mural
- Listen by ultrasound to invisible marine animals burrowing in sand
- See the oceans of planet Earth as seen from satellite
- Climb aboard a real research boat and see how scientists take samples of seawater and sea bottom
- See the sea floor through cut-away core samples
- Stump the experts with questions about the marine environment
- Guess what's in the Mystery Boxes, and enter the seafarer's scavenger hunt
- Win a prize by passing the Earth Day quiz.

Food and beverages available. Free parking. Follow the signs. For further information, call 632-8676.



Earth Day — last year — with William Wise, standing, Mark Wiggins, right, and visitors.

Understanding Cosmic Gamma Ray Bursts

Astronomy Open Night will present Professor Roger Knacke on Friday, April 3, at 7:30 p.m. in Room 001 of the Earth and Space Sciences building. He will speak on "The Mystery of the Cosmic Gamma Ray Bursts."

More than 20 years ago, spy satellites detected strong, brief bursts of gamma rays, a form of radiation more energetic than X-rays, associated with thermonuclear explosions.

Investigations show that the sources of these bursts are extra-terrestrial, and astronomers thought they were associated with unusual objects called neutron stars.

Now, new observations with NASA's recently launched Gamma Ray Observatory (GRO) throw all the previous theories into doubt. The GRO observations suggest that gamma ray bursts come from very distant sources in the universe. If so, they are the most energetic, violent explosions found anywhere. Understanding them will require new thinking about fundamental processes in the universe.

Knacke will narrate the events leading up to the recent launch of the GRO and describe the discoveries that have surprised the scientific community.

Knacke resides in Setauket. His research includes the study of comets, planet formation and the origin of the Solar System. He is a member of the Infrared Space Observatory Solar System Science Team, and a participant in several NASA projects in the space sciences.

Following the lecture, weather permitting, there will be a viewing session with the university's telescopes.

Music Forum Launched

To bring together audience, composer and performer, the Humanities Institute and the Greater Port Jefferson Arts Council (GPAC) have launched a new series of performance/lectures: the Music Forum.

Performances will take place in the auditorium of Earl L. Vandermeulen High School on Old Post Road in Port Jefferson. An opportunity to meet the artists follows the presentations. Programs are:

Monday, April 13: Robert Levin, pianist and celebrated Mozart scholar, playing and discussing music of Mozart and improvisations in his style.

Monday, April 27: Herbert Brun, composer and radical pioneer of electronic music, with Drew Stafford Krause, pianist, performing and discussing the electronic music and music for piano by Herbert Brun.

Monday, May 11: Stefan Litwin, pianist, scholar and distinguished performer of 20th century music, presenting Arnold Schoenberg's music and paintings.

Individual tickets: \$15 general admission, \$12 for GPJAC and \$8 for students. Tickets are available in Port Jefferson at Theatre Three, 928-9100, and The Good Times Book Store, 928-2664. For further information call Fred Levine, 632-7835 or 928-4001; or Stefan Litwin, 751-0525.

University Receives Diabetes Grant

Stony Brook's Diabetes Center has received a one-year, \$75,100 grant from the New York State Legislature through a local initiative by Assemblyman Robert K. Sweeney to establish a diabetes outreach program for Suffolk County.

Under the program, the first of its kind in New York State, a diabetes-trained health care team will provide education to individuals with diabetes and their families at the county's 10 health centers. The team, which will consist of a diabetes nurse educator and a registered dietitian, will also serve as a regional diabetes education resource for community physicians.

Diabetes mellitus is a chronic disease that affects nearly eight percent of the U.S. population, mainly the elderly and minorities; in Suffolk County, it is estimated that about 10 percent of the residents suffer from diabetes. Although there is no cure for the disease, its metabolic consequences can be controlled by diet, exercise and medications. Complications, including blindness, nerve damage and kidney failure, may be preventable with appropriate management.

Dr. Michael Berelowitz, director of the Division of Endocrinology and Metabolism and acting director of the Diabetes Center at Stony Brook, says Suffolk County suffers from a shortage of trained diabetes care providers, including physicians, diabetes nurse educators and dietitians. The aim of the Suffolk County diabetes outreach program is to provide county residents with widespread, cost-effective access to diabetes education.

"Diabetes is one of the only chronic diseases that lends itself to a major role for patients in achieving control. Individuals can measure their blood sugar, and based on the patterns observed, adjust their medication or alter their diet," Berelowitz says.

Stony Brook's Diabetes Center, which will coordinate the outreach program, is the only one of its kind in the county, providing research, education and clinical care. Based at University Hospital, it includes a staff of physicians, nurse educators, nutritionists and support personnel, an outpatient unit, an adjoining educational facility and a 12-bed in-patient unit.

Berelowitz approached Sweeney about two years ago on the program, who in turn developed it as a legislative initiative. Sweeney, who has sponsored other legislation concerning diabetes care, became interested in the disease after learning that someone on his staff has the disease.

"We're reaching out to people who have a need for this information," he says.

—Alpine

'Silent' Lyme Disease May Affect the Brain

Lyme disease may invade the brain, even when patients show no sign of the disorder, scientists say.

In a study reported in the March 11 issue of the *Journal of the American Medical Association (JAMA)*, the researchers found that the disease-causing bacteria were present in the cerebrospinal fluid of two-thirds of the Lyme patients studied. While some showed symptoms of systemic Lyme, including fever, rashes and joint pain, others did not. The study also found that the organism was found in the brains of Bell's



Dr. Benjamin Luft

palsy patients, even though some didn't have the tell-tale Lyme rash or signs of central nervous system involvement.

Of the 12 patients studied, eight had Bell's palsy — facial paralysis not usually associated with brain involvement — and six had multiple rashes. Only four of the eight with Bell's palsy complained of central nervous system problems.

"This has important implications, because when we treat patients with disseminated disease, we have to consider the possibility that the meninges (brain membranes) are involved," says Dr. Benjamin Luft, associate professor of medicine and principal investigator of the study, who collaborated with Dr. Raymond Dattwyler, head of the Lyme Disease Center, and scientists from four other institutions. "The treatment requires certain classes of antibiotics and certain quantities which previously people haven't been using universally."

Researchers used cerebrospinal fluid samples from patients in Long Island, Westchester, Wisconsin and Connecticut, to establish a national standard of treatment for the disease.

In the past, Lyme disease treatment called for low doses of oral tetracycline or penicillin. But this therapy is ineffective in penetrating the brain, Luft says.

The researchers suggest that the brain may act as a "sanctuary" for the bacteria, protecting it from antibiotics and immunity, and thereby allowing it to infect other parts of the body intermittently. With this study, the researchers now recommend high doses of the antibiotics, amoxicillin, doxycycline or ceftriaxone — regimens Stony Brook researchers have been using for all Lyme disease patients for some time. The study also calls for a systematic assessment of whether the use of antibiotics alone is effective in treating chronic stages of Lyme.

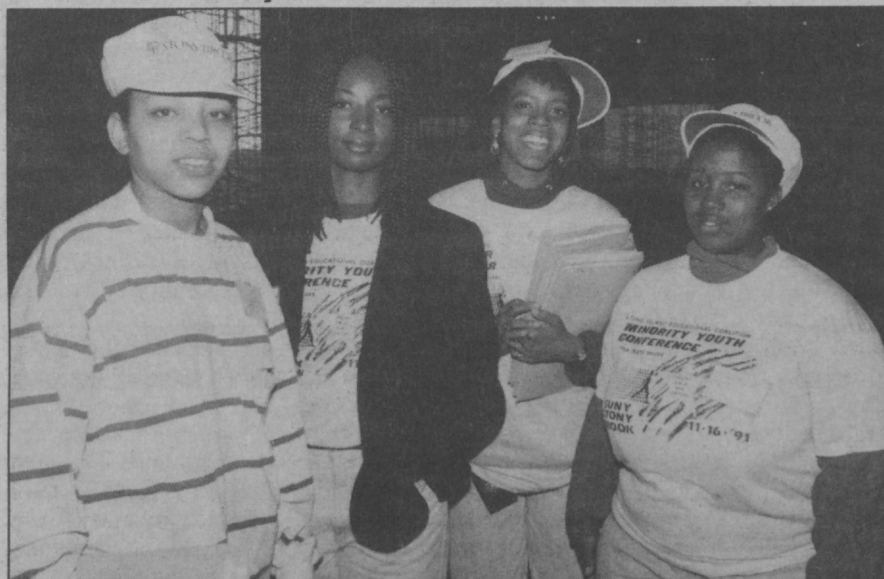
The study also advocates a new way of testing for Lyme. The researchers examined the cerebrospinal fluid of patients using a Polymerase chain-reaction (PCR) assay, which allowed them to detect even one organism. Luft says that tests traditionally used to indicate central nervous system involvement may be inadequate. The new test has been used in Stony Brook's lab for research purposes for the past five years, but may eventually replace current tests after it undergoes further study.

A follow-up study will be done to determine whether the high-dose treatment proves effective in long-term eradication of the disease.

In addition to Luft, the work was done by Charles R. Steinman, research associate professor of medicine at Stony Brook; Bethi Muralidhar, post-doctoral associate in the Department of Medicine at Stony Brook; Harold C. Neimark of the State University of New York at Downstate, Brooklyn; Thomas Rush of Phelps Memorial Hospital, Tarrytown; Michael F. Finkel of Midelfort Clinic, Eau Claire, Wisc.; and Mark Kunkel of Danbury Hospital, Danbury, Conn.

—Alpine

Minority Youth Conference



Medical students and high school visitors at the Minority Youth Conference, sponsored by Stony Brook's School of Medicine, Suffolk County Community College, and the Long Island Educational Coalition, held recently at the Health Sciences Center.

People in the News

Dr. Lauren V. Ackerman, professor of pathology, has been included as one of "ten giants" in pathology in a new book, *Historia de Diez Gigantes*, published by Ruy Perez Tamayo, professor of pathology at the University of Mexico. The book covers pathologists throughout the world over the last 500 years.



According to the *Historia*, Ackerman "contributed in a fundamental manner to reorient pathology in the direction of a medical specialty, at a time when it was indispensable that it should be done." It also notes that because of Ackerman's work, surgical pathology became an "essential" part of surgery, "so that today every self-respecting surgeon always takes recourse of it for the benefit of his patients." The author also refers to Ackerman's textbook, *Surgical Pathology*, as the 'resident's bible.'

Jan Entine, clinical associate professor of nursing, has been appointed deputy director of nursing at University Hospital after holding the position as acting director since March 1991.

Entine joined the hospital staff in 1978 and has been involved in a major part of its development in the nursing area. She is a member of Sigma Theta Tau, the National Nurses Honor Society, receiving its award for Excellence in Nursing Leadership in 1990, and is a frequent lecturer on topics in nursing administration.

She received a bachelor's degree in nursing from the University of Cincinnati and a master's degree in biophysical pathology from New York University.

Dr. Fred Ferguson, associate professor, department of children's dentistry at the School of Dental Medicine, has been named recipient of one of the first annual Governor's Awards for African-Americans of Distinction. The award, presented February 15 in ceremonies in Albany, was established by Governor Cuomo's Advisory Committee for Black Affairs.

Dr. Martin Gruber, clinical professor in the Department of Orthopaedics and chief of Pediatric Orthopaedics, will present a workshop on "Taping and Splinting" at the

American Academy of Pediatrics 1992 Spring Session, April 11-16, in Manhattan.

Dr. Sharon Nachman, assistant professor of pediatrics, is among 10 recipients of the Women's Recognition Award from the Town of Brookhaven's Office of Women's Services. Nominated by her peers, Nachman



received the award for outstanding achievement in the field of medicine. She is also director of University Hospital's Pediatric AIDS Center and acting director of the Division of Pediatric Infectious Diseases.

The sixth annual awards ceremony was held March 24 at Town Hall in Medford in celebration of Women's History Month.

Medical Students Receive Heartfelt Gift

Second-year students at the School of Medicine will be one step closer to understanding and diagnosing cardiovascular disease because of educational materials recently provided by the American Heart Association.

The five-part instructional package, "Examination of the Heart," has been distributed to every student enrolled in Dr. Lawrence G. Smith's course on cardiac physical diagnosis.

The package includes information on clinical history related to the cardiovascular system, inspection and examination of venous and arterial pulses and the diaphragm, listening to the heart, and the electrocardiogram.

More than \$175,000 has been contributed by the association's Pharmaceutical Roundtable for distribution of the materials nationwide. Some 17,000 students at 121 medical schools have received the package. The three-year grant funded by the nine roundtable companies will also provide these materials to second-year students in 1992 and 1993.

Fruitful Collaborations

Industry and university, working together, create technologies for tomorrow.

FROM COLLAGEN RESEARCH TO WRINKLE CREAMS

Stony Brook dental researchers have entered into negotiations with four pharmaceutical companies to develop new drugs to combat debilitating connective-tissue and bone diseases. They are also developing new products that will have cosmetic uses, such as anti-wrinkle creams.

These drugs hold promise for osteoporosis, rheumatoid arthritis, osteoarthritis, skin diseases, gum diseases and corneal ulcers, and may also be useful in preventing tumor growth and metastasis in the treatment of cancer.

In human clinical trials, the researchers — Drs. Lorne Golub, Nungavarm Ramamurthy and Thomas McNamara, all of the Department of Oral Biology and Pathology — collaborating with medical colleagues, have found that regular and low-dose tetracyclines inhibit the enzyme, collagenase, which breaks down collagen during gum disease and arthritis. Collagen is the major structural protein of the body's connective tissue, including skin, bone, tendons, ligaments and cartilage.

The researchers also have developed chemically modified tetracyclines that block collagen breakdown in animals, but don't act as antibiotics to kill infections. Further animal studies have shown that the drug also helps build new skin and bone when these tissues are damaged during disease.

"Ninety percent of the organic part of bone is made up of collagen, and the only enzyme currently known to initiate its degradation is collagenase," says Golub. "So any new drug which can safely and effectively inhibit excessive collagenase activity would be expected to have beneficial effects on bone-destructive diseases and other disorders."

The trio's work has been supported by the National Institutes of Health since 1974. Golub received a 1987 MERIT award (Method To Extend Research In Time) for \$1.3 million for five years, which has now been extended until 1998 for another \$1.5 million. For the past seven years, the dental scientists also have received \$80,000 a year in research grants from Johnson and Johnson.

As a result of that support, Johnson and Johnson has entered into a joint venture to form a new company called

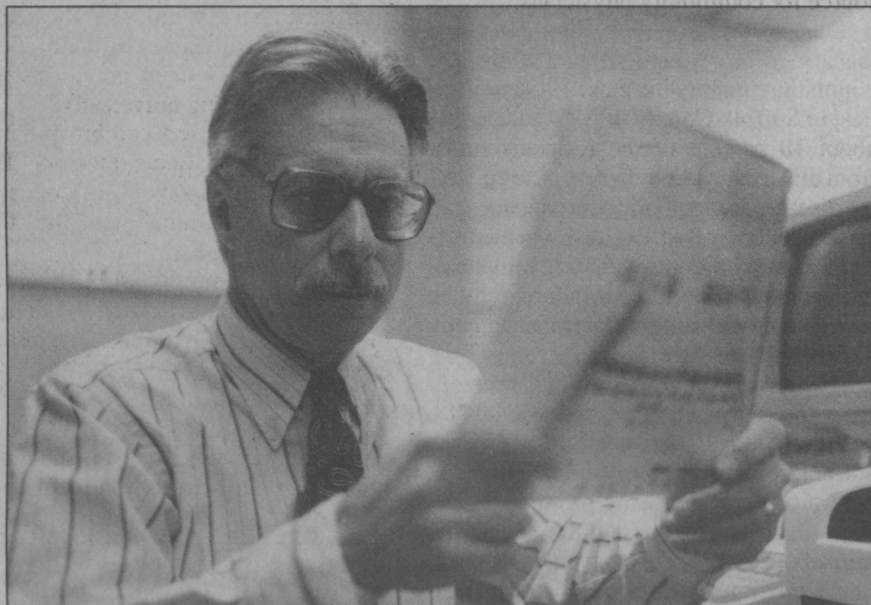
Collagenex. The company will develop drugs — in pill form — for the treatment of periodontal disease and a number of other medical disorders.

Two other U.S.-based, start-up companies are close to final agreements with the Research Foundation to develop additional drugs to reduce collagenase activity in a variety of medical and veterinary disorders, one of which will incorporate anti-collagenase products into controlled-release delivery systems. That company is expected to manufacture implantable devices that would be inserted into the brain or other organs to release anti-collagenase drugs slowly to control the growth of tumors in brain cancer and other diseases.

The other company is expected to develop topically applied creams for medical disorders, such as chronic skin ulcers, and will join the multi-billion dollar cosmetics industry in the development of moisturizing creams. The creams under development are expected to penetrate the epithelium, the first layer of skin, and enter the dermis, or the skin's connective tissue, where they might block or reduce the activity of collagen-destructive enzymes to combat wrinkles, researchers say.

Finally, Kuraray, a large chemical/pharmaceutical company in Japan, is collaborating with the Research Foundation to develop and market drugs in the Pacific Rim, including Japan, Korea, Taiwan, Australia and New Zealand. Research Foundation officials have already negotiated for the company to fund the researchers' lab for \$125,000 this year.

Golub says other companies are looking at collagenase inhibitors, but other drugs are toxic and may only be



Dr. Lorne Golub

PHOTOS BY MAXINE HICKS

delivered by injection instead of pill form.

"We know that tetracycline is safe, we know it gets absorbed and we know that it works at relatively low blood levels and still acts as an anti-collagenase," Golub says.

The Research Foundation has six patents on the anti-collagenase research. All of the products to be developed by the four companies fall under the umbrella of the patents, which translates into royalties for the Research Foundation, Stony Brook and the inventors.

"State and federal governments are now realizing that the tremendous wealth of American scientific research can be applied to new products and will help drive the country's economic engine of the future," says Golub. "Research-oriented universities are increasingly setting up mechanisms to interact with industry to commercialize research discoveries on campus. It's very exciting."

— Wendy Alpine

SHIELDING THE PACEMAKERS ON MAGLEV TRAINS

Since its discovery a few years back by two Brookhaven National Laboratory scientists, magnetic levitation has become one of today's hot technologies, with experts predicting that maglev high-speed trains will herald the transportation of the future.

The work currently being done for Long Island's Grumman Corporation by Department of Materials Sciences and Engineering Professor Antony Bourdillon is helping to ensure the safety of the new transportation.

In fact, from maglev technology to medical equipment, diamond films and remote electronic identification devices, Bourdillon is now collaborating with a number of Long Island businesses to put his expertise to work.

Bourdillon's collaboration with Grumman Corporation began last fall, when the company became the head of four consortia to produce concept design studies for maglev trains. Working with the New York State Institute for Superconductivity, Bourdillon is one of seven subcontractors in the Grumman design team, which will present its study to the U.S. Railroad Administration and the U.S. Army Corps of Engineers. They, in turn, will assess the series of federally funded maglev studies and report their findings to Congress.

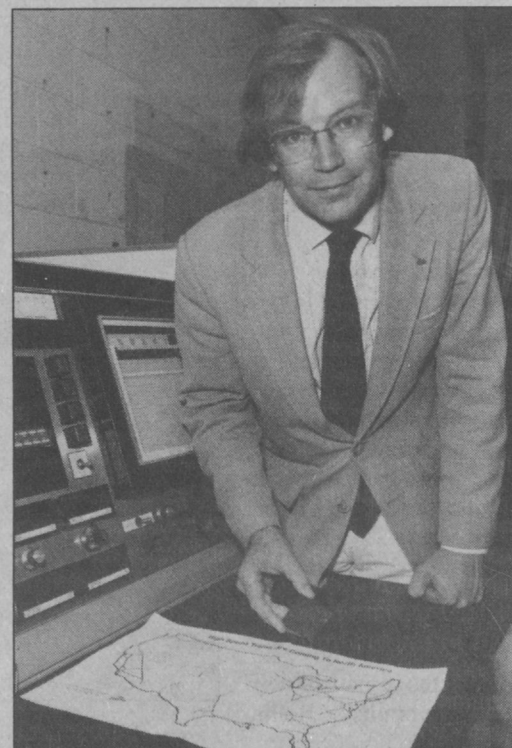
Bourdillon's expertise is in high-temperature supercon-

ductors, which are novel materials that lose resistance at high temperatures. His work for Grumman will assess the shielding requirements of the trains and develop a coating to protect passengers from possible effects of magnetic fields, the force that propels the trains at speeds up to 300 mph. The risks from these magnetic fields range from control circuit problems to watches that won't work and pacemakers that malfunction.

Bourdillon's other collaborations reflect the diversity of the materials science field. Working with Vactronic Lab Equipment, Inc. (Islip), designers of vacuum apparatus and novel films for the semiconductor industry, Bourdillon is developing diamond films to be used as thermally conducting substrates for very large-scale integrated circuits.

With Bourdillon's inventions, E-Z-Em Corporation (Westbury) is developing novel devices to be used with medical resonance imaging for a number of surgical procedures. Bourdillon's work with Knogo Corporation (Hauppauge), manufacturers of low-cost security devices, is directed toward a new range of "passive remote identification devices," based on new material properties discovered at the company. Somewhat futuristic, these identification devices can be used for such applications as personnel management and automobile identification.

— Volkman



Antony Bourdillon

INVENTING A BETTER TEST FOR MONONUCLEOSIS

Microbiologist Janet Hearing never imagined that her DNA replication studies would lead to a state-of-the-art test for Epstein-Barr virus. But they did.

It was August 1990 when Hearing got a call from Harold Cooper, manager of research and development in the diagnostics division of BioWhittaker, a biotechnology company in Walkersville, Maryland. The company was interested in making a test kit for detecting antibodies to Epstein-Barr virus using recombinant technology. Cooper had researched the scientific literature on the subject and found a 1985 paper by Hearing.

"We had just isolated a recombinant insect virus that directs the synthesis of large amounts of an Epstein-Barr virus nuclear antigen," says Hearing, assistant professor of medicine and microbiology at Stony Brook.

Epstein-Barr virus causes infectious mononucleosis, commonly called the "kissing disease" because it is spread through saliva. It has been associated with chronic fatigue syndrome, sometimes called the "yuppie disease," but Hearing says this latter connection has been ruled out.

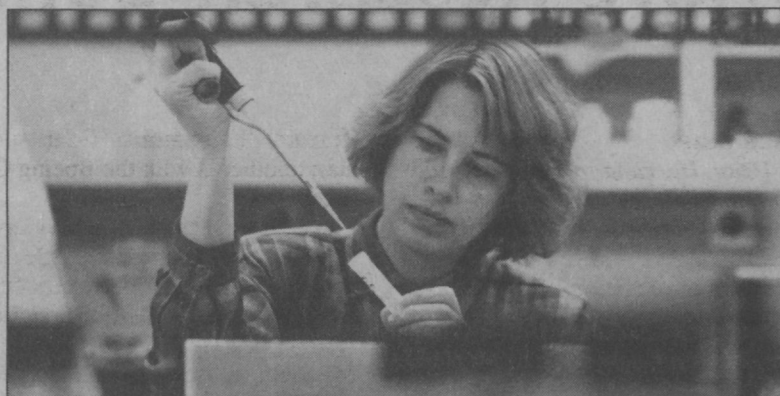
According to Cooper, there has long been a need for an accurate, easy-to-read blood test for Epstein-Barr virus infection. BioWhittaker's test, developed with Hearing's

technology, meets this need and is one of the few on the market that uses recombinant antigen. Antigens are proteins that cause an immune response.

"There's always been a need for a product based on purified proteins as the antigen, rather than infected cells, to make the results a lot more objective," Cooper says. "The test has become a stellar product for us because it's reproducible, accurate and easy to run."

The only glitch was that BioWhittaker needed a monoclonal antibody to the Epstein-Barr virus protein. In 1985, Hearing developed a cell line that produced a monoclonal antibody to the protein, but the invention was licensed exclusively to Oncogene Science in Manhasset. Today, BioWhittaker buys the monoclonal antibody from Oncogene Science to purify the recombinant antigen used in the test kit.

The test has been on the market since September 1991, and the company expects good returns, says Susan Walden,



Janet Hearing

PHOTOS BY MAXINE HICKS

product manager for BioWhittaker. "It's possible we can sell 100,000 tests a year worldwide."

Though Hearing's participation with the companies is finished, she continues to use the recombinant virus for research purposes, including using Epstein-Barr virus as a model for understanding DNA replication.

—Alpine

'GRAIN BOUNDARIES' IN CRYSTALS AND COMPUTER CHIPS

Materials Sciences and Engineering Professor Alex King came by his work with Standard Microsystems (Hauppauge) almost by accident.

It seems that Anji Liu-Corcoran, one of his graduate students, was searching for a topic for her doctoral thesis. At that point, she heard about a Stony Brook alumnus, Nimal DeLanerolle, a process engineer in the company, which manufactures custom integrated circuits. DeLanerolle was investigating why Standard Microsystems was having a problem with the reliability — and consequently the reproducibility — of its silicon chips.

Liu-Corcoran took samples of the chips, typical silicon wafers coated with titanium, and found that there was a problem in the way the two elements reacted together. "It turned out that there was enough interesting stuff going on in the material to provide research for her thesis...and a lot of useful information for Standard Microsystems," says King.

The study was a blessing for Standard Microsystems. Because of their product range and short manufacturing runs, the company could not afford to spend a lot of time on research.

"We provided Standard Microsystems with an understanding of why the process was not as predictable as they might have liked," says King. It turned out that there was a fundamental reason for the chip problem: the generally accepted reaction that takes place in the processing of titanium and silicon was wrong. "We had the equipment to study the problem," says King. "The collaboration was a natural one, because Standard

Microsystems can make the products we can't make, and we can analyze materials in a way that they are not equipped to do. It's a synergistic relationship."

King's expertise is in "grain boundaries," atomic-scale defects in crystals that control the behavior of almost every metal and ceramic substance used in engineering. The role of these grain boundaries was the focal point of the collaboration with Standard Microsystems.

"The project showed us how the elements behave during the processing steps, and this information is very valuable to us," says DeLanerolle. Presently, King and his students are expanding their work with the company. One collaboration focuses on a cause of chip manufacturing failure; another examines the chip lifetime limiting problem called "electromigration."

Similarly, King is working with researchers at Brookhaven National Laboratory on yttrium barium copper oxide, a high temperature superconducting material. By studying how to control grain boundaries, the "critical current density" of the material — the amount of electricity that can be transmitted by a material and still maintain its superconducting properties — can be improved and applied to maglev technology and superconducting electronics.

—Volkman



Alex King

SAVING STEPS TO SAVE LIVES — SYNTHESIZING A RARE DRUG

A Stony Brook researcher has developed a faster, more efficient way to synthesize a key portion of taxol, a powerful and rare anticancer drug.

Iwao Ojima, professor of chemistry, has devised a way to make the crucial C-13 side chain of the taxol molecule in three steps, rather than the eight steps needed in the method developed by French scientists in 1990. It is this side chain's particular grouping of atoms that gives taxol its antitumor properties. Ojima's process also converts 80 percent of the starting materials used to C-13; the current method yields only 30 percent.

Taxol has been hailed as a particularly promising weapon in fighting a number of late-stage cancers. It is difficult and expensive to obtain, though, and in short supply for ongoing clinical trials on ovarian, breast, lung and colon cancers and on acute leukemia. The drug is extracted from the bark

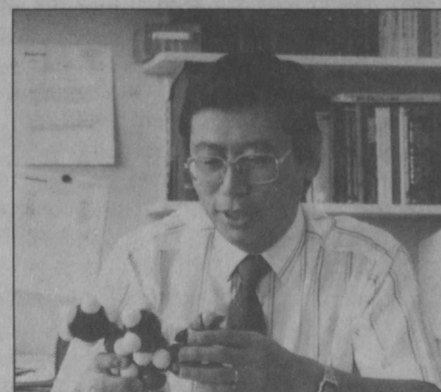
of the slow-growing Pacific yew tree. It takes about three trees to provide enough taxol to treat one cancer patient; several thousand trees yield only one kilogram (just over two pounds) of the drug.

Ojima estimates that the process he developed will cut in half the cost of synthesizing the taxol side chain.

The method can also be used to produce the C-13 side chain on Taxotere, a potent synthetic analog of taxol, and other similar compounds. Ojima also is working to develop new variations of taxol, which would be more readily absorbed by the bloodstream and would reach a tumor site faster.

Ojima has received a two-year grant of \$113,000 from the pharmaceutical firm Rhone-Poulenc Rorer to support his work, and has filed an application to patent the process.

—Sue Risoli



Iwao Ojima

A Sampler: More Research Collaborations Around Campus

MATTHEW SOBEL

Acting Dean, Harriman School for Management and Policy

Computer Integrated Manufacturing Systems, or CIMS, allows a factory to coordinate all its operations, from purchasing supplies to inventory control, from product design and production to distribution. A recent study done at the Harriman School investigated Long Island's use of this state-of-the-art hardware/software technology in the workplace.

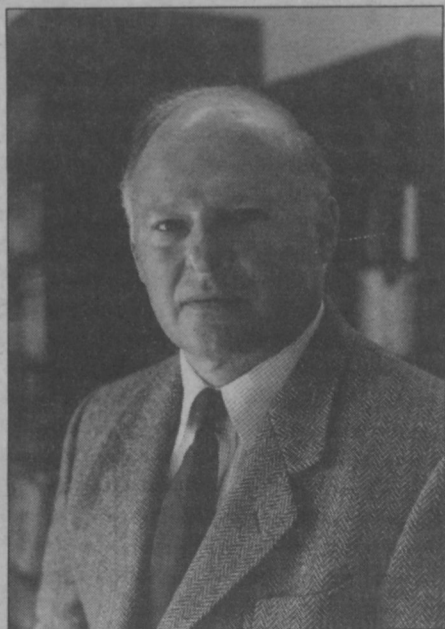
In the study, researchers examined the extent to which manufacturers use CIMS, and the obstacles faced by companies that might benefit from it. The final part of the study, to be released later this spring, will make suggestions on how these obstacles can be removed.

Conducted under the direction of Acting Dean Matthew Sobel, the project was funded by the Regional Economic Development Partnership Program and the New York State Urban Development Corporation through the Long Island office of the New York State Department of Economic Development.

According to Sobel, results of the study show that nearly all the CIMS-related technologies — CAD (Computer Aided Design), MRP (Material Requirement Planning) and SPC (Statistical Process Control) — are being used on Long Island, where manufacturing employs 165,000 people, or 13.7 percent of the workforce.

Sobel, together with Harriman faculty and graduate students, studied responses to questionnaires from a sampling of 77 small-to-large sized manufacturing companies. The sample firms represented a total of 36,000 employees; each firm had an average of 170 employees.

"Companies are starting to realize that these technologies have the potential for altering in a fundamental way the entire business of manufacturing," says Sobel. "They can open new markets and, in many cases, completely change the nature of the business."



Matthew Sobel

JOSEPH S.B. MITCHELL

Associate Professor, Department of Applied Mathematics and Statistics

New to the department this year, Mitchell, an expert in geometric algorithms, brings with him a number of collaborations. One is an ongoing relationship with the Artificial Intelligence Center of Hughes

Research Laboratories (Malibu, California); another is with the Boeing Company (Seattle).

With Hughes, Mitchell is conducting research in autonomous vehicle route planning, concentrating on intelligent vehicle control, geometric terrain models and mission planning. "We're talking R2D2," says Mitchell, whose work will include designing robots for such applications as automated lawnmowers and military tanks that can navigate around obstacles.

With Boeing, Mitchell is bringing science fiction to "virtual reality," with software designs to simulate aircraft collisions. His work will help Boeing engineers design newer, safer aircraft.

MICHAEL SCHWARTZ

Director, Institute for Social Analysis

For the last three years, the Institute for Social Analysis has been working with Marketcast (Needham, Massachusetts) to develop and implement state-of-the-art data analysis strategies for marketing new movies and evaluating new services for moviegoers.

Through Marketcast, Schwartz and Data Analysis Director Frank Romo have collaborated with most of the major film studios — Warner Brothers, Universal and Orion — in developing marketing plans for such releases as *Dances With Wolves* and *Silence of the Lambs*. Using the responses of avid moviegoers to descriptions of upcoming films, the institute applies "logistical regression" analysis to determine which elements of a film are most appealing.

In another aspect of the work, the institute has developed analytic strategies that allow movie theaters to determine the impact of new moviegoer programs, such as "Frequent Moviegoer Clubs." This analysis involves the development of original software to manage huge datasets containing daily gross figures for movies showing at each theater in a circuit.

VINCENT T. BRESLIN

Research Assistant Professor, Marine Sciences Research Center

Working with NKF Engineering, Inc. (Arlington, Virginia), Breslin is developing stabilized thermoplastic/ash residue products to dispose of residue products caused by the combustion of municipal solid waste.

Breslin's research, which includes evaluation of the engineering and environmental aspects of this new technology, offers an improvement over current landfill disposal methods. Landfills — now becoming a rarity in urban areas — involve expensive transportation costs, and the toxic metals in the waste pose a threat to groundwater.

The new thermoplastic/encapsulation process will isolate the waste material in a strong plastic matrix. And the research may present one more bonus: Breslin hopes the new technology will be used for additional products.

MURALI SUBBARAO

Associate Professor, Department of Electrical Engineering

A new computerized method for autofocusing cameras is being developed by Subbarao in collaboration with Olympus Optical Company, Ltd. (Tokyo), which has provided funding for this five-year project.

Subbarao's work, also part of a three-

year grant from the National Science Foundation, involves the use of a microprocessor to compute image defocus, which in turn sends a command to move the lens to the correct focus position. The new method will work with images that lack clear detail, resulting in an improvement over the consumer cameras on the market today.

"What we are doing is replacing some of the camera's optical components with electronic ones," says Subbarao. Robotic vision will be among the applications of the new technology.

LUCIAN WIELOPOLSKI

Research Assistant Professor, Department of Radiation Oncology

Working with a grant from the Small Business Research and Development Program of the Center for Biotechnology, Professor Lucian Wielopolski is collaborating with a biologist at Brookhaven National Laboratory to determine the effects of a variety of static magnetic fields on reducing malignant tumors.

Wielopolski's work is being conducted in collaboration with Magnetic Resonance Technology Corporation, a subsidiary of Bio Magnetic Systems, Inc. (New York City), a research and development company.

"So far, we have observed that static magnetic fields may have an effect on cell growth," says Wielopolski, whose next task will be to reproduce his findings. Wielopolski's study of static magnetic fields is one of a small number of similar studies taking place worldwide; much of the comparable work has been performed using electromagnetic fields.

According to Bio Magnetic Systems President Greg Provell, "Our hope is that this research will lead to alternate methods of treating cancer."

PETER F. COHN

Professor, Division of Cardiology

Cohn is working with a variety of pharmaceutical companies, including Wyeth-Ayerst (Philadelphia) and ICI Pharma (Wilmington, Delaware), to test the effectiveness of drugs for treating myocardial ischemia, commonly known as angina. These tests involve patients who undergo exercise testing as well as 24-hour ambulatory electro-cardiographic monitoring.

Over the past decade, Cohn's laboratory has been a national leader in the study of the patho-physiology and treatment of myocardial ischemia. The goal of the current work is to prevent episodes of damage to the heart and to minimize any areas of damage once these episodes have occurred.

PAULA ENRIETTO

Assistant Professor, Department of Microbiology

For research designed to explore how an alteration of a specific gene can cause cancer, Enrietto has been funded by the Council for Tobacco Research (New York City) to examine viruses that cause leukemia in animals.

Specifically, Enrietto is studying the function of the gene "rel," which causes

cancer in chickens. She is looking at the biochemical properties of the gene product to determine how the protein can cause a leukemogenic transformation of normal blood cells. In addition to examining the biochemical properties of the gene in leukemic cells, Enrietto will be studying the role this gene plays in normal blood cell growth.

Enrietto, an expert in molecular virology, explains that there is only a small amount of funding nationwide for the research she conducts. "If not for the funding from organizations like the Council for Tobacco Research, there are aspects of my research that I would not be able to do."



Paula Enrietto CHRISTOPHER HELMKE

ISRAEL KLEINBERG

Chair, Department of Oral Biology and Pathology

Along with other collaborations, Kleinberg is working with IDE Interstate (Amityville) to identify and synthesize various bacterial growth factors and their inhibitors and to continue to treat a number of oral, skin and vaginal infections. Kleinberg's work will help develop faster, more reliable diagnostic techniques as well as new methods for treating the infections. Other applications include the control of bacteria in food production — cured meats, dairy products and wine — and the production of citric acid and other compounds.

SANFORD SIMON

Associate Professor of Biochemistry and Pathology

With original funding from two seed grants awarded by the Center for Biotechnology, Simon has been examining ways of inhibiting *neutrophil elastase*, an enzyme that can destroy the body's tissues in such diseases as emphysema, rheumatoid arthritis and respiratory distress syndrome, and organ failure resulting from septic shock.

The work conducted by Simon came to the attention of Cortech, Inc. (Denver), which had started developing synthetic forms of the inhibitors. The result was the beginning of an ongoing collaborative testing program in Simon's laboratory. "I welcome the growth of collegiality between the corporate sector, which understands the need for innovation, and the academic sector, which naturally spawns new ideas out of which creative solutions can emerge," says Simon.

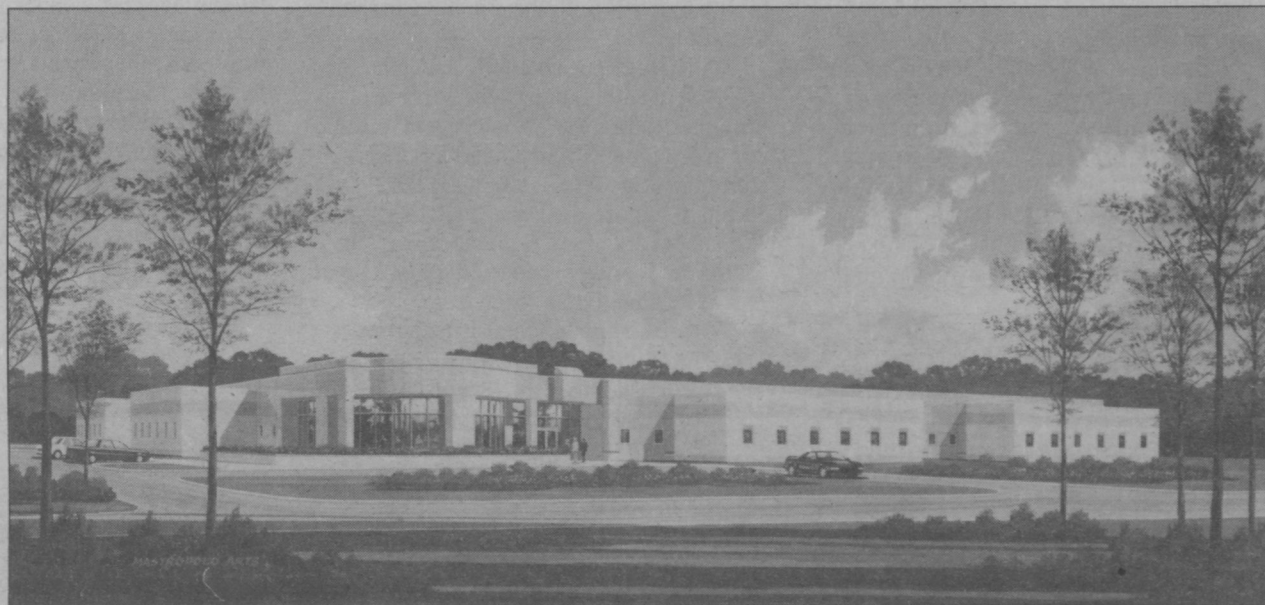


Sanford Simon

Incubator Targets Hi-Tech 'Drivers' to Diversify Regional Economy

University/industry collaboration involves sharing university resources and expertise. The Long Island High Technology Incubator, a facility scheduled to be completed by fall, will provide lab space, basic services and faculty expertise for fledgling companies in technologies important to Long Island's economy.

Ann-Marie Scheidt, special assistant to the provost for regional development, takes a look at the technologies in the current Interim Incubator Program.



The new Long Island High Technology Incubator facility, designed by Ehasz Giacalone Associates (Garden City), is now under construction. When completed this fall, the Incubator will house up to 30 start-up high-technology companies.

INCUBATOR TENANTS

Fourteen start-up companies are now tenants in the university's Interim Incubator Program. The tenants, their campus locations and research interests are as follows:

- Aphetec, Inc.
Life Sciences Building
Protein and oligoneucleotide chemistry
- Enteric Products, Inc.
Life Sciences Building
Products to diagnose gastrointestinal disorders
- Expert Diagnostics Corp.
Harriman Hall
Electronics test systems
- Fibratek Industries
Life Sciences Building
Surgical product derived from animal plasma
- Flame-Spray Industries, Inc.
Engineering Building
Equipment and R/D for the thermal spray industry
- Human Bio-Technologies, Inc.
Life Sciences Building
Biologicals directed against cancerous and infectious diseases
- Innovata Systems
Harriman Hall
Computer software
- Moltech Corporation
Engineering Building
Conducting polymers, films, biosensors
- N.Y.S. Biotechnology Association
Life Sciences Building
Trade association
- Nanoprobes, Inc.
Life Sciences Building
Antibodies for basic research, medical diagnoses and therapeutic applications
- Orion Therapeutic Systems, Inc.
Life Sciences Building
Medical treatments for blood disorders
- Professional Business Management Services, Inc.
Computer Science Building
Software development and consulting services
- Progressive Media Technologies
Harriman Hall
Computer-based training and information systems
- Robert Nathans, Ltd.
Harriman Hall
Non-linear dynamics for practical applications, including cardiac monitors and oceanographic analysis

By Ann-Marie Scheidt

Long Island's economic recovery requires new "drivers," or vital, diversified sectors, to boost the economy of the 21st century. Operating on an interim basis at the university, the Long Island Incubator's mission is diversification, helping fledgling companies grow into the major industries of the future.

The Incubator has targeted areas based on Long Island's established high-tech industry, skilled workforce, and world-class research capability. Biotechnology, whose growth in the regional economy has become a front-page success story, is the most visible of these explosively developing areas. All four graduates of the university's Interim Incubator program, and seven of the program's 14 current tenants, are in biotechnology fields. Here is a sampling of the technologies being developed by other tenant companies:

Electronics. President John Colgan and his colleagues at Expert Diagnostics, Inc. bring to their new venture a total of 70 years' experience with such major firms as Raytheon, Hughes Aircraft and Hewlett Packard. They saw opportunity in a new standard, "VXI," for automatic test equipment.

Initially driven by military needs for small, high-performance systems based on modular components, the VXI standard also opens up a private industry market for quality in-house testing capability at less than half the price of currently available custom technology. Of a U.S. market totaling \$2.5 billion, Expert hopes to capture \$40 million in the next two years.

The company's first product, a test system for fighter aircraft weaponry, reflects the principals' defense background. They plan rapid diversification into commercial transportation applications, including test equipment for speed control systems on electric railroad cars like those used by the LIRR, and for the proliferating electronic systems in automobiles.

These products rely on expert systems software. One of the real successes of artificial intelligence, this software — model-based rather than rule-based — enables engineers to design their own tests, because the systems "learn" from experience. Stony Brook's consulting talent and specialized facilities have provided the key advantages of the company's participation in the Incubator program.

Advanced Materials. From the Stone Age to the Steam Age to the Atomic Age, advances in technology have hinged on the development of new materials to make new tools. Moltech, Inc. (a contraction for "molecular technologies") was formed by Brookhaven National Laboratory scientist Terje Skotheim, who foresaw the voracious materials appetite of new technologies. The variety of potential applications is indicated by sampling some of the publications found in Skotheim's office: *Solid State Technology, Aerospace Products, Biomedical Products,*

Pollution Equipment News, Laser Focus World, Optics for Industry, and Synchrotron Radiation News.

Polymer chemistry is a foundation of Moltech's expertise. Skotheim is developing a new class of materials with high electrical storage capacity. Rechargeable batteries for portable computers — with five times the existing storage capacities — are about two years from the market; a joint venture is being formed with a major corporation to complete the research and development. Moltech's research will solve a current industry problem in which battery limitations prevent many powerful new laptops — those with active-matrix color screens and 100 MB-plus hard drives — from being truly portable.

A related application is in biological and environmental monitoring. A highly glucose-sensitive biosensor could test blood glucose levels with very small samples; implantable biosensors will ultimately simplify drug delivery as well as monitoring. Potential environmental applications include oxygen sensing in ambient air and marine environments.

These materials may also be fabricated as "thin films," which are microscopically thin layers of material. Currently, Moltech is working on diamond films to be used for protective coatings and for applications requiring the superior heat transfer characteristics of the films. Stony Brook's chemistry, materials and laser laboratory facilities are important resources for this Incubator company.

Flame-Spray Industries, Inc. is involved in research and development of high-tech thermal spray processes and materials. A recently-developed process allows a wear-resistant coating to be applied to the wall of the cylinder bore of car engine blocks, allowing the engine block to be made from light-weight aluminum rather than the heavier cast iron presently used. According to company president Dan Marantz, they are working with a number of U.S. automobile companies; Marantz expects that this new technology will help improve the auto industry's competitive position in the world market.

Information Technology. Computer and telecommunications technologies are converging. Just over the horizon may lie the ultimate information processor, combining the personal computer's ability to create and manipulate data with video, audio and telecommunications. Progressive Media Technologies, founded by three young men when one was still an undergraduate, is already trying to integrate some of these functions.

Progressive Media Technologies is working with partners in Korea and Japan to develop an interactive home entertainment system involving laser disk audio and video technology. Another partnership seeks to develop multimedia training materials integrated with computer-aided instructional software developed for the Fortune 500. Initial funding is coming from LILCO's new research program.

Stony Brook's Economic Development Mission

By John H. Marburger
President of the University at Stony Brook

T

he University at Stony Brook contributes to Long Island's economy in three major ways: direct expenditures through payrolls, purchases, and contracts; enhancement of regional productivity through education, training, and quality of life contributions; and creation of new jobs through spinoffs of companies and ideas.

Any educational institution produces the first two kinds of impacts. Stony Brook has a \$358 million payroll and non-salary expenditures that total \$222 million annually: \$175 million in supplies, \$29 million in utilities and \$18 million in equipment. That makes us one of Long Island's biggest businesses.

We also award more than 4000 degrees every commencement for studies completed with a faculty widely acknowledged to be of the highest quality. Many of our students wish to remain on Long Island and add to the strength of the regional workforce. No other institution furnishes as many highly qualified graduates for the region. The university itself is an attraction for sophisticated professionals who seek employment in Long Island technology-oriented firms. These are traditional ways that universities help their regional economies.

But Stony Brook can offer something more by virtue of its special status as a research university. Stony Brook is one of the most important strategic factors in the reorientation of the Long Island economic structure.

Setting a new course for the region

We know that Long Island's economy must change in order to maintain the current standard of living. Our region is known to be more than usually sensitive to federal defense spending. As military programs wind down, so will our economy. The only answer is to become less dependent on military budgets. There will have to be new businesses providing new jobs. Not just any business, because Long Island's high costs, difficult transportation, and sensitive environment cannot accommodate every kind of industry.

The best prospects are for technology-based products with small physical volumes and high specific values.

As a research university, Stony Brook attracts the kind of people who have the knowledge and the drive to steer Long Island's economy in a new direction. In addition to providing a significant part of the workforce that can produce technology-intensive products, Stony Brook can actually be the source of new product ideas and of the new companies themselves whose jobs are needed for the new Long Island economy.

Turning ideas into jobs

There are four stages in the metamorphosis from ideas to jobs. First, the ideas are born in the basic scholarship our faculty and graduate students perform in their natural roles within the university. Stony Brook has the facilities and the talent to push back the frontiers of knowledge. We contribute substantially to the literature of discovery, and the products of our scholarly work are esteemed throughout the world. The presence of basic research at Stony Brook and a few other organizations makes it possible for Long Island to compete with other regions for high tech business.

Second, ideas with potential for commercial application are identified and nourished by specific programs funded for this purpose. The oldest and most vigorous of such programs at Stony Brook, the Center for Advanced Technology in Medical Biotechnology, provides state dollars to match industrial funds expended on developing promising ideas. More recently, the National Science Foundation has designated Stony Brook a National Center



"As a research university, Stony Brook attracts people who have the knowledge and the drive to steer Long Island's economy in a new direction. In addition to providing a significant part of the workforce that can produce technology-intensive products, Stony Brook can be the source of new product ideas and of the new companies themselves..."

of Technology in high pressure studies of materials. The grant encourages identification of novel and potentially applicable ideas in the general field of materials science. The university devotes a portion of its overhead on sponsored research funding to a technology transfer office which continually surveys campus projects for possible applications.

'No Vacancies' at the Incubator

Third, ideas developed to the point of commercialization must be transferred to a corporate environment if they are to have any economic impact. This may be done through licensing to an existing company or by establishing a new corporation to bring the product into existence. The latter route is expedited by Stony Brook's High Technology Incubator Program in which start-up companies may rent space on campus for reduced rates. This program currently houses more than a dozen new companies. Its capacity will double upon the completion of the new Long Island High Technology Incubator facility on Stony Brook's East Campus. Although the facility is still under construction, all the anticipated space has been 'sold out' to new companies.

Fourth, the new companies must demonstrate economic viability and move out of campus incubator space into permanent quarters in regional industrial parks. The close proximity of the Stony Brook Technology Park just east of the campus permits an ongoing close relationship with the university. Other suitable industrial space abounds in nearby locations. Stony Brook cooperates with all local develop-

ers to identify, recruit and retain technology-oriented industrial tenants for Long Island.

The challenge ahead

This four step process is at work now at Stony Brook, but it could be working better. Current state budget problems are hurting faculty recruitment, placing greater burdens on faculty and students, and diminishing incentives to work on economically relevant research. Federal funding could grow in bioscience if more research space were available, but progress on a new life sciences research building is excruciatingly slow. Successes in identifying incubating companies are balanced by difficulties they have in finding permanent locations near campus with adequate sewage facilities. University Hospital, a key resource for medical biotechnology companies, is under tremendous financial pressure resulting from regulatory constraint and loss of state support for the costs of indigent care and of the expense of providing clinical facilities for medical education. Major changes are required in the hospital operating environment if it is to play its role in economic development.

Despite these problems, Stony Brook remains committed to the economic development mission. The accompanying articles give evidence of our effectiveness. Success on so many fronts makes us rare within New York state, and we can hope that a greater future share of state resources will become available to help us do our job even better. The future of Long Island's economy depends upon it.

Providing 'Road Maps' to Guide New Ventures

"It sounds easy to start a business, but it's not," says Judith McEvoy, director of the Small Business Development Center (SBDC), and she ought to know. Since its inception three years ago, SBDC staff have counseled 902 would-be ventures and taken 1,853 people through 44 training activities.

Even in a time of recession, the center is busy. In fact, McEvoy asserts, "In down times, people look to open their own businesses. It's no harder now to get a start-up business loan than it ever was."

The SBDC, under the auspices of the W. Averell Harriman School for Management and Policy, is jointly funded by the United States Small Business Administration and the State of New York, through SUNY. The youngest such center in the state system, it has already made an impact amounting to \$5.5 million on the regional economy. McEvoy brings to the center the experience she gained working for the Small Business Council and the World Trade Council of the Long Island Association.

Business ventures at the Center for Biotechnology and High Technology Incubator come to the SBDC to develop their business plan. McEvoy calls the plan a "roadmap" for a fledgling company, a carefully mapped out route for arriving at the desired destination: a successful business based on technology transfer. About 10 percent of the applicants are involved in technology transfer. The breakdown of businesses according to type is 35 percent retail, 30 percent services, 10 percent manufacturing, and 5 percent agriculture. Wholesale, construction and miscellaneous others round out the remainder.

"Previously, scientists who wanted to develop their research into a business had to pay for private consulting or wing it alone. Most of the scientific community is not business astute," McEvoy says, and that's where she comes in. She and her counselors — Lucille Wesnofske, assistant director of the SBDC, James P. Dunn and Sharon Weber — work with clients to figure out how to achieve their goals, including how to obtain loans and funding. Before a business is launched, McEvoy says, entrepreneurs need to determine their markets, financial needs, cash flow projections, costs, prices, management structure and more. The SBDC calls itself "a one-stop shop. We work with banks, state and federal agencies, venture capitalists, and we know what they are looking for," says McEvoy.

To help clients avoid duplicating the efforts of others,



Judith McEvoy, Small Business Development Center director.

the SBDC offers access to the New Technology Access System. Every patented and licensed technology of the Research Foundation of New York State is entered onto this system, which is currently being updated and expanded to include the licenses and patents of all Federal institutions within the state — and, eventually, beyond.

The function of the SBDC relates to technology transfer in another sense. "Our outreach is another form of technology transfer. Getting the information of what's happening on campus to the business community where it can be used is a form of transfer," she says.

There are no charges for counseling by the SBDC. Small fees are charged for the training activities.

Researchers Receive \$258,000 for Lilco Long Island Energy Conservation Initiative

Four university researchers have been awarded a total of \$258,000 from Long Island Lighting Company, part of the utility's new \$3 million research and development initiative to fund projects that will help improve production, delivery, use and conservation of energy on Long Island.

Also as part of the same program, Lilco awarded \$161,000 to a tenant in USB's Interim Incubator Program, Progressive Media Technologies, and its affiliated company, Argonaut Consultants, located in Northport.

"The fact that five researchers on campus have been selected for funding is a tribute to our university," says Robert Schneider, associate provost for research, who served as Stony Brook's representative to Lilco's 13-member consulting group for the project. Other organizations represented on the committee included Grumman Corporation, Unisys, Long Island Association, Hofstra University and Brooklyn Polytechnic Institute.

University researchers receiving the Lilco awards are Antony Bourdillon (Department of Materials Science and Engineering), Surya Raghu (Department of Mechanical Engineering), Gordon Taylor (Marine Sciences Research Institute), and Lee Koppelman, director of the Center for Regional Policy Studies.

Bourdillon and Raghu will use the Lilco funding to build a miniature model of a magnetic levitation (maglev) train and test the aerodynamics of trains approaching each other at closing speeds of 600 mph. This understanding of aerodynamics is critical to the safety of the new technology.

Taylor's project will examine remedies for the growth

of organisms in Lilco's water intake pipes and heat exchangers. Currently, naturally occurring organisms can block these pipes, creating a maintenance problem for the utility. Taylor will examine Long Island marine plants and animals able to fend off these organisms in order to identify and reproduce the chemical that protects them.

Koppelman will identify low-income consumers to assess their knowledge of Lilco energy conservation programs and determine whether they are willing to take part in the programs.

Progressive Media Technologies, a computer-based training and information systems company, will develop computer-based and multi-media training and education programs for Lilco. According to company president Andrew Denis, the work will enable the utility to more effectively implement training and the dissemination of information through video electronic mail, video conferences and more.

"Lilco is constantly looking for innovative ideas on how to apply state-of-the-art technology to improve service to our customers," said Joseph W. McDonnell, Lilco's vice president of communications. "Through this initiative, we are tapping into Long Island's extensive technological talent to help us achieve our goal of providing unparalleled customer service, while helping to stimulate the Long Island economy."

In all, more than 150 projects were submitted for Lilco funding; a total of 20 businesses and academic institutions received awards.

Technology Transfer: Education Serves Today's Business Needs

An important element in technology transfer is the "transfer" of education. Nowadays, with many Long Islanders affected by staff cutbacks, company closings and a slow labor market, people are turning to universities to learn new professions or upgrade their skills.

Stony Brook is helping to meet these needs with credit and non-credit courses designed to assist the region's workforce. Many classes meet during late afternoon, evening and weekend hours, often throughout the year. Here's a rundown of some of the programs of special interest:

Center for Corporate Continuing Education and Training. Provides workforce development through specialized training programs. Includes customized contract training for business and industry, a professional development series, trade and technical seminars and computer training programs. Training may be conducted in-house or at the university. Companies may be eligible for New York State training grants for selected programs. (*School of Continuing Education*)

Computer Engineering. New ABET-accredited bachelor's program emphasizes design of electronic systems containing embedded computers with particular emphasis on instrumentation and real-time systems. Both the hardware and software aspects of computer engineering are fully examined. (*Department of Electrical Engineering*)

Electrical Engineering Short Courses. Series of courses in current design technologies include theoretical and practical design components and involve hands-on laboratory experience using state-of-the-art design automation tools, in many cases directly supported by their vendors. (*Department of Electrical Engineering*)

Engineering and Applied Sciences. Part-time study is encouraged at all academic levels of the six academic departments of the school: Applied Mathematics and Statistics, Computer Science, Electrical Engineering, Materials Science and Engineering, Mechanical Engineering, and Technology and Society. The *Materials Science and Engineering Department* has developed an extramural doctorate program for people employed in research functions.

Environmental/Occupational Health and Safety. An 18-credit graduate certificate program offered jointly by the School of Allied Health Professions and School of Continuing Education. Prepares students for professional positions in detection and management of environmental health hazards. (*School of Continuing Education*)

Health Care Management. An 18-credit graduate certificate program for health practitioners who require management training and managers who require specific training in health care field. Offered jointly by School of Allied Health Professions and W. Averell Harriman School for Management and Policy. (*Harriman School*)

Information Systems. New undergraduate program fills growing regional and national need for technically knowledgeable specialists who can produce sophisticated application-oriented systems on time and within budget. (*College of Engineering and Applied Sciences*)

Labor/Management Studies. A 21-credit graduate program integrating theory and practice in exploring opportunities and challenges confronting the labor/management field. Certificate program is offered by the W. Averell Harriman School for Management and Policy; this cluster of courses also serves as a concentration in the School of Continuing Education's master's degree program in professional studies.

Long Island Regional Studies. Multidisciplinary 18-credit graduate certificate program combines courses in urban politics, housing, cultural geography, planning and environmental issues. (*School of Continuing Education*)

Management. The W. Averell Harriman School for Management and Policy offers an M.S. in management and policy, with concentrations in government management, nonprofit management and enterprise management. Courses are offered in the late afternoon and evening.

Scientific Instrumentation. Master's degree program produces graduates trained in design and use of sophisticated instrumentation typical of modern high-technology research and development enterprise. (*Division of Physical Sciences and Mathematics, College of Arts and Sciences*)

Waste Management. An 18-credit graduate certificate program offered in collaboration with the university's Waste Management Institute. Designed to meet immediate demands for waste management solutions and long-range goal of promoting region's environmental and economic welfare. (*School of Continuing Education*)

Promoting The Ties That Bind

Continued from page 1

and they form the basis for the university's technology transfer efforts. The other critical technologies are: advanced materials, computing and information, electronics and instrumentation, and environmental sciences.

These "knowledge-based" technologies reflect the environmental and geographic constraints of Long Island: the products don't rely on traditional forms of manufacturing with their potentially serious environmental impact, and they don't depend on low-cost transportation for high-bulk items. Instead, the smaller, high value-added products produced by these industries — computer chips and biologics, for example — earn profits by performance, rather than by low production costs.

To help develop these technologies, Stony Brook has created a network of centers, institutes and other initiatives to promote collaborations with industry and government as well as to foster economic growth. Among the university's initiatives are:

- The Long Island High Technology Incubator. Created to nurture new high-tech companies through the start-up phase, the university can continue affiliations with these businesses as they "graduate" to Long Island industrial parks.

- Long Island Environmental-Economic Roundtable. Co-chaired by Marine Sciences Research Center Dean J.R. Schubel and Adjunct Professor Harold Berger, the Roundtable was created to promote business growth while respecting the region's fragile environment. This year, Roundtable members have called for a study of sewage treatment capacity in Suffolk County and have formed a committee to study energy conservation.

- Long Island Research Institute. Now in the planning stages, this consortium of Stony Brook, Brookhaven National Laboratory and Cold Spring Harbor Laboratory is being developed to facilitate technology transfer in the region.

- Regional Development Task Force. A Stony Brook faculty/administration committee seeking ways the university can contribute to economic growth, the task force will be holding a series of seminars on critical technologies, slated to begin this spring.

- Technical, educational and training support. Programs range from classes, seminars and certificate programs at the School of Continuing Education to courses for working professionals in the School of Engineering, all designed to keep Long Island's workforce prepared for tomorrow's new technologies.

Ridges, Valleys and Readability

Pavlidis' work in image analysis is one of the important areas on the cutting edge of today's computer technology.

The Post Office project is a case in point. Pavlidis' mission is to improve the efficiency of the Post Office's Optical Character Recognition (OCR) scanner, the machine that reads the mail. Currently, these OCR machines read addresses by contrasting the light and dark areas of an envelope. Unfortunately, this method creates a problem with print from worn-out typewriter ribbons, dot matrix printers, textured envelopes and envelopes with glassine-covered address windows. Because of the machine's current limitations, almost half the country's mail must be processed by hand.

Pavlidis' work is designed to upgrade the software to read this unclear text. "There's going to be a dramatic improvement in the Post Office's efficiency," says Pavlidis.

To attack the problem, Pavlidis is using the character recognition technology he started developing 25 years ago while on the faculty of Princeton University. Simply, the program works by treating distorted text as a "terrain" in which dark and light areas emerge on the computer screen as color-coded "ridges" and "valleys."

Observing Pavlidis' procedure is like watching a mystery unfold. The image, in this case an envelope, is picked up by the computer, which, in a handful of steps, turns individual letters and numbers into the color-coded series of loops and straight lines. The computer takes these renderings, compares them to prototypes in the program, and reveals the correct character on the screen. This process, now in the feasibility stage, takes about a minute; eventually, it will handle about 10 envelopes a second.

Pavlidis is also using his character recognition technology on a project for Grumman Data Systems. Working with Research Assistant Professor William Sakoda, Pavlidis is developing a computerized method to analyze satellite photographs.

Using images loaded into the computer, the researchers



PHOTOS BY MAXINE HICKS

Francis "Pat" Hession, president of the Long Island High Technology Incubator, matches university research expertise with high tech business needs. He has served as manager for advanced technology at Stony Brook since 1984.

can examine a photograph and pick out highways and other significant landmarks from the mass of detail. In an extension of the research, they can also load an archive of maps into the computer and note any changes in more recent satellite photographs. Additional applications of this technology include land utilization and earth resource studies.

"I enjoy working with industry," says Pavlidis, who says he came to Stony Brook because, among other reasons, it was located in a region that could turn into another Silicon Valley.

"The role of a research laboratory is not to solve problems, but to create tools for people to solve these problems," says Pavlidis. "I like to see ourselves as a resource for building these tools."

Pavlidis and Symbol Technologies: A State-of-the-Art Collaboration

Theo Pavlidis' ongoing collaboration with Symbol Technologies (Bohemia) illustrates the scope of technology transfer; in this case, the transfer of basic science to commercial applications and the transfer of expertise through the employment of university graduates.

A world leader in bar code scanning devices, Symbol Technologies has 1,900 employees, 600 of whom work in the company's Long Island headquarters, where a fifth of the engineers are Stony Brook computer science graduates.

"Everyone benefits when you have university and business collaborations," says Ynjiun Wang who worked on bar coding technology with Pavlidis as a graduate student. Today, Wang is a design engineer at Symbol, working on the company's latest project, a two-dimensional bar code developed with Pavlidis' help.

Wang's thesis, "Spatial Information Theory," investigated a problem identified by Pavlidis: how to pack more information into one square inch of space. "We originally thought we could get about

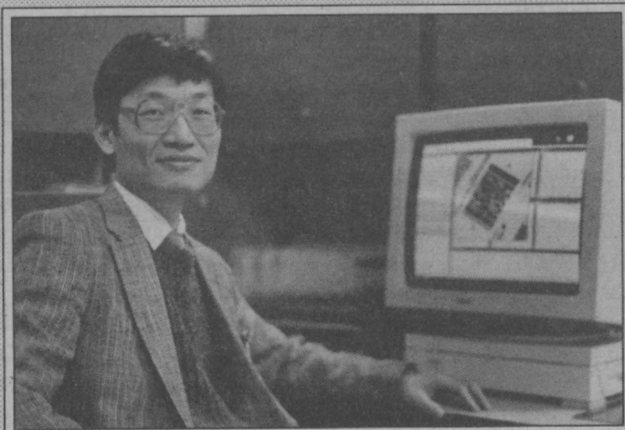
250 English characters," says Wang. "But it turned out to be higher."

Ordinary one-dimensional bar codes, the Universal Product Codes used in supermarkets, can handle 12 digits in a vertical series of light and dark spaces that look like bars. In order to read these bars, the computer has to reference a central database; the code itself carries no information.

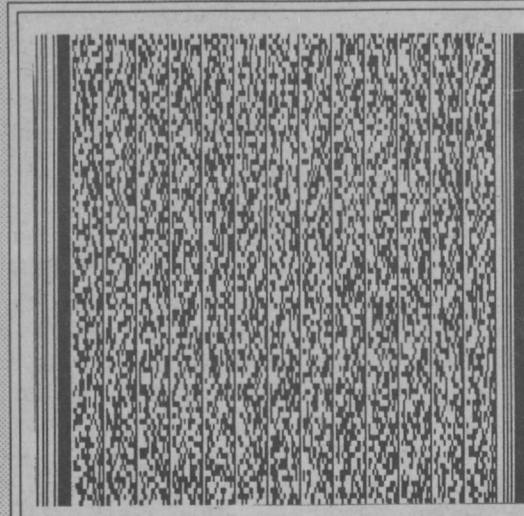
The two-dimensional code, called Portable Data File 417, consists of stacks of horizontal and vertical codes, and

its development is about to revolutionize the industry. Currently, the company is developing a scanner to read the new codes and eventually will develop scanners that can read at a distance.

The advantage of the two-dimensional code is the density of information it can contain: a person's full medical history or the contents and destination of a box of military supplies, for example. It can be printed on checks or credit cards, encoding a signature and even enabling a person to serve as his own notary.



Ynjiun Wang worked on bar coding with Pavlidis as a graduate student at Stony Brook. Today, Wang is senior manager of research and development at Symbol Technologies.



Fourscore and seven years ago...

The Gettysburg Address, reduced to a two-dimensional bar code devised by Pavlidis, requires a rectangle of 2.46 inches x 2.55 inches to convey 1,457 characters in 82 rows of space. In a one-dimensional bar code representation, the speech would be 24 feet long.

Strategic Technologies

Advanced Materials

- Composite Materials • Conducting Polymers • "Smart" Materials • Superconducting Materials • Thermal Spray Techniques • Thin Films

When the National Science Foundation in 1991 designated Stony Brook a Science and Technology Center for High Pressure Geophysics, it gave a strong push to a materials science initiative that was already developing a full head of steam. The designation—shared with Princeton University and the Carnegie Institution—assures research funding of nearly \$10 million over five years. Much of the work is to focus on new and exotic materials with industrial applications, particularly superhard substances that can only be created under extremely high pressures.

Those who shape American science policy view the development of new materials as a top priority in maintaining the nation's international competitiveness. For Stony Brook—which has traditionally been strong in such areas as chemistry, materials science and physics—a synergistic push into advanced materials was a logical next step.

Materials research at Stony Brook ranges from the creation of "buckyballs" to the use of uranium-eating bacteria in the disposal of nuclear waste. Many Stony Brook faculty take advantage of the National Synchrotron Light Source at Brookhaven National Laboratory, conducting studies of polymers, catalysis, and x-ray photochemistry, as well as etching and lithography techniques used in microelectronics and microfabrication technology.

Resources and Services

Center for High Pressure Geophysics. Hydraulic presses—creating temperatures of 2,400 degrees Celsius and pressures of 260,000 atmospheres—simulate conditions 1,000 kilometers beneath earth's surface. Has collaborations with General Electric, DuPont, Exxon and IBM.

Electron Microscopy. Laboratories operated by the departments of Materials Sciences Engineering and Earth and Space Sciences have transmission electron microscopes and scanning electron microscopes, as well as a variety of facilities for elemental analysis.

Laboratory for Surface Analysis. Houses advanced spectroscopic equipment capable of elemental detection down to as little as a fraction of an atomic layer. Currently supports studies concerned with corrosion and protection of alloy systems, microfabrication of electronics materials, and trace element analysis of toxic waste products.

Mass Spectrometer Center. Provides low resolution analyses by electron ionization, chemical ionization, and fast atom bombardment mass spectrometry.

Molecular Graphics Facility. Utilizes highly sophisticated program to create full-color drawings of atomic arrangements in molecules or crystals.

NMR Center. Regional facility has six superconducting Fourier transform NMR spectrometers. Recently acquired a powerful 600 MHz NMR spectrometer—the first in New York and one of only 25 in the world—for use in structural elucidation of enzymes and other highly complex molecular systems. It is the only spectrometer in the U.S. configured to observe tritium. Other NMR spectrometers are dedicated to solid samples and in vitro investigations.

Thermal Spray Laboratory. World's leading non-commercial research facility in the technology of sprayable metals, ceramics and composite materials. Permits design and engineering of specific surface properties for precision electronic, biomedical and mechanical components, as well as product improvement through surface enhancements. The lab incorporates an infrastructure maintenance and repair center established with \$1 million from the U.S. Army Corps of Engineers.

Tritium Lab. Consists of a fully equipped, high security laboratory for handling radioactive materials. Is linked with a 7-Tesla NMR operating at 300 MHz and a 14-Tesla NMR operating at 600 MHz.

X-Ray Crystallography Facilities. The departments of Earth and Space Sciences, Chemistry, and Materials Sciences Engineering operate specialized X-ray crystallography facilities offering a variety of diffractometers, X-ray cameras and imaging systems.

Five areas of research have been designated as especially suited to development on Long Island and to collaboration between the university and industry: advanced materials, biotechnology, computing and information technology, electronics and instrumentation and environmental technologies.

Biotechnology

- Biological Materials • Biomedical Instrumentation • Medical/Dental Diagnostic Products • Medical/Dental • Therapeutic Products • Pharmaceuticals and Drug Delivery Systems

Stony Brook has become a major center for biomedical research, with multidisciplinary programs in cancer, AIDS, diabetes, Alzheimer's disease, Lyme disease and many other areas. Investigators pursue both clinical research, testing new patient therapies and diagnostic methods, and basic research into the causes and mechanisms of disease at the cellular and molecular level.

With the opening of University Hospital in 1980, Stony Brook targeted the life sciences as a major area of development. A joint effort of research and teaching between the Division of Biological Sciences and the School of Medicine, the life sciences today account for 600 of Stony Brook's 1,500 faculty and nearly 20 percent of Stony Brook's \$73.4 million annual research budget. During the 1990's, Stony Brook will build on its current reputation with the goal of becoming one of the world's premier institutions in biological and biomedical research and teaching.

Stony Brook's strength in the life sciences already has played a pivotal role in the development of Long Island's biotechnology industry, and it is certain to be an even greater factor in the future. Among the new initiatives now underway is an interdisciplinary Center for Molecular Medicine—to be housed in a new \$50 million Life Sciences Building—which will ensure that Stony Brook remains at the forefront of research and development in human genetics and human disease.

Biotechnology is especially important to Long Island's economic future because, as noted by a recent regional study, it is an "enabling" technology. That is, the competitiveness of the regional biotechnology industry is linked directly to the region's competitiveness in such areas as health care, pharmaceuticals, food processing, environmental management, specialized technical instrumentation and university science.

Resources and Services

Chemical Synthesis Center. Provides the biomedical research community with custom-synthesized compounds (low to medium molecular weight) that are unavailable commercially or prohibitively expensive. Of nearly 10 million compounds reported in the scientific literature, only about 50,000 are commercially available.

Center for Analysis and Synthesis of Macromolecules. Can design and synthesize general organic intermediates for start-up companies lacking an organic chemistry lab. Assists in synthesizing peptides, sequencing proteins/peptides and analyzing amino acids. Offers customized services such as peptide synthesis.

Center for Biotechnology.

Howard Hughes Medical Institute in Neurobiology. Conducts basic research toward understanding the action of chemical transmitter substances in the brain.

Lyme Disease Center. Conducts research aimed at developing a Lyme disease vaccine and treatments for the disease in its later stages. Is regarded as the nation's leading test site for Lyme disease.

Tissue Culture/Hybridoma Laboratory. Assists labs in maintaining cell lines, monolayer suspension, providing media and tissue culture supplements, production of monoclonal antibodies and hybridomas, and such screening services as ELISA assays and western blots.

Computing and Information Technology

- Applied Statistics and Biostatistics • Computational Fluid Dynamics, Chaotic Systems • Computational Geometry • Computer Hardware, Architecture and Software • Computerized Scientific Instrumentation • Telecommunications Systems and Hardware

Stony Brook's primary capabilities in computing and information technology reside in the Department of Computer Science and the Department of Applied Mathematics and Statistics.

The Department of Computer Science—consistently ranked among the top 15 in the nation—has particular strengths in operating systems, computer networks, databases, VLSI, artificial intelligence, natural language understanding, software engineering and computer architecture. The department operates research laboratories for network computing, image processing, 3-D graphics, robotics vision and heuristics systems.

The department provides a superb computing environment, including 100 SUN 3 workstations, a 24 MIPS share-memory Sequent S27 multiprocessor, a DEC Vax-11/780, seven Vax-11/750s, three microVax IIs, three Symbolics Lisp machines and many Macintosh, Intel, and IBM personal computers. A fiber optics network proves links to other campus buildings, including the campus computing center with DEC 8600s and IBM 3090/3083s. Stony Brook is an Arpanet host and has 56 Kbps connections to Csnnet, Nysernet and the MOSIS VLSI foundry.

The Department of Applied Mathematics and Statistics reflects the pervasive role of mathematical methods through science and industry in our modern world. The department has internationally recognized groups in computational fluid dynamics and game theory, as well as strength in scientific and parallel computing, stochastic modelling, computational geometry, applied statistics, biomathematics and biostatistics, reliability, numerical analysis, oil reservoir simulation and ground water flow.

The department's Hypercube parallel supercomputer is being upgraded in 1992 to perform 7.5 billion operations per second. The supercomputer—the most powerful machine in its class in the Northeast in terms of memory and computational speed—is linked to a network of 35 Sun workstations. It is also used by faculty in the departments of Computer Science and Chemistry as well as scientists at Brookhaven National Laboratory.

Resources and Services

Computer Science Library. Houses 5,000-volume collection of books, journals and technical reports.

Institute for Visualization Environments. Focuses on 3-D graphics and volume visualization. Has initiated major interdisciplinary project to create tools that will more rapidly produce customized visualization environments. Other projects include: reconstruction of stereo pictures; optical character recognition; techniques for reading bar codes under adverse conditions, and low-level vision systems for motion perception and texture analysis.

Institute of Mathematical Modeling. Of special interest to Long Island industry is the expertise in computational geometry, including motion planning, night vision, and product layout. Other interests include ground water flow and environmental remediation, statistical problems in human genome research, and mathematical models of human origins.

Laboratory for Advanced Programming and Interactive Systems. Uses formal methods for the design and implementation of real interactive systems.

Statistical Laboratory. Faculty and graduate students consult on a wide range of statistical problems, including quality control, drug assessment, medicine, politics, environmental health, economics and social welfare.



Leonid Boguslavsky and Paul Hale of Moltech, a company housed in the Interim High Technology Incubator.

Electronics and Instrumentation

Electronic equipment and instrumentation make up one of the nation's most rapidly growing economic sectors, both in terms percentage growth and actual number of new jobs created. Moreover, it ranks first as a facilitator of new developments in other technologies.

Stony Brook's capabilities in electronics and instrumentation reside chiefly in two departments: Electrical Engineering and Physics.

Electrical Engineering

- Communications • Digital Systems and Computer Architecture • Electronic Design Automation • Computer-Aided Design • Microprocessor-Based (Embedded) Systems Optoelectronics and Electromagnetics • Signal and Image Processing • Solid State Electronics

Stony Brook's Department of Electrical Engineering is heavily involved with Long Island's electronics-oriented companies. The department's major strengths are in communications, signal processing, machine vision, analog and digital VLSI, systems and controls, microprocessor-based systems, electronic circuits and devices.

The department believes that the future of electronics on Long Island lies in enhancing the product development cycle (from the requirements definition phase through design, manufacturing, and testing) by the use of modern technologies and design tools; it has oriented itself to concentrate on technologies which contribute to this goal. Two especially critical variables in today's internationally competitive environment are quality and time-to-market.

To support this orientation, the department has laboratories in computer-aided design, advanced IC design, and simulation, digital signal processing, computer vision, microprocessor-based (embedded) systems design, and microwave electronics.

In addition to the department's degree programs (which include many evening graduate courses), the department has initiated a series of short courses in current design technologies. These courses are specifically designed for engineering professionals in industry.

Resources and Services

Electronic Design Automation/Computer-Aided Design Laboratories. The Department of Electrical Engineering



Marine Sciences Research Center scientists study life on the shoreline.

has several laboratories with networks of both Unix-based and DOS-based workstations running professional digital and analog electronic design tools.

Advanced IC Design and Simulation Laboratory. This laboratory is involved in the design of high-performance bipolar, CMOS, and superconducting analog and digital integrated circuits. Research includes finding ways of enhancing DC circuit analysis to obtain useful information regarding the existence of multiple operating points and operating point stability.

Computer Vision Laboratory. This laboratory has state-of-the-art facilities for applied research in three-dimensional machine vision and image processing. The facilities include powerful computer workstations, personal computers, video cameras, color monitors, digital image acquisition system and many application software systems. Several R&D projects are currently being pursued by a team of engineers.

Digital Signal Processing Research Laboratory. Involved in the architectures, hardware and software of digital signal processing. Currently active in the development of algorithms for high-performance control and image processing applications.

Microcomputer Systems Design Laboratory. Facilities for the design and development of systems containing embedded microprocessors. Active in the development of intelligent instrumentation. Laboratory includes development systems, in-circuit emulators, logic analyzers, device programmers, and appropriate design packages.

Microwave Electronics Laboratory. Equipped for experimental work in fabricating and testing microwave components using microstrip and stripline techniques. Includes low-temperature and electromagnetic facilities, vacuum deposit equipment, photolithographic facilities, and microwave network analyzer system.

Physics

- Electronic Structure in Alloys • Impurity Effects in Superconductors • X-Ray Absorption Spectroscopy

Several laboratories in the Department of Physics make up an expanding program of solid-state and low-temperature physics. Areas of study include X-ray absorption spectroscopy, properties of superlattices, impurity effects in semiconductors, phase transitions in two-dimensional solids, kinetics of ordering transitions, electronic structure of alloys, and liquid helium superfluids.

The Department of Defense recently awarded a \$4.4 million University Research Initiative grant to support the work of Kanstantin Likharev in superconducting electronics, a field that holds exceptional promise for superfast signal processing and ultimately computing. Likharev's group has demonstrated signal processing at 100 GHz clock rates, several orders of magnitude faster than semiconductor technology. Likharev is also doing important work in single-electron charging effects, as are colleagues Vladimir Goldman and Dmitri Averin.

Resources and Services

Institute for Interface Phenomena. Explores fundamental questions related to the use of superconducting materials in electronics devices. With \$630,000 DARPA award, the institute is conducting research on Josephson junctions in high-temperature superconductors. Also is collaborating with Russia's Ioffe Institute in developing new metal-insulated transition material devices.

Environmental Technologies

- Biologically Based Pesticides and Environmental Controls • Biomass Energy Alternatives • Energy Management • Marine Research Products • Market Research Services • Recyclable Products • Specialized Engineering Consulting • Technology Assessment

Resources and Services

Stony Brook faculty in diverse fields are addressing some of the world's most pressing environmental challenges. For example:

- **Philip Solomon**, professor of earth and space sciences, is heading a worldwide network of stations that—under NASA's aegis—will measure ozone depletion from the ground over the next 15 years;

- **Robert Cess**, professor of mechanical engineering, is directing a major project funded by the Department of Energy to improve the computer models scientists use to predict the long-term impact of the "greenhouse effect";

- **Arthur Grollman**, professor of medicine and pharmacology, is studying the effects of toxic industrial chemicals, cigarette smoke, and ionizing radiation on the molecular biology of DNA. The work is supported by the National Institutes of Environmental Health Sciences.

Stony Brook faculty also are tackling a variety of environmental problems closer to home. For example, scientists in the Waste Management Institute (WMI)—an arm of the Marine Sciences Research Center—are developing a technique by which to safely recycle incinerator ash in concrete blocks used in construction. WMI scientists are also studying the efficacy of "biodegradable" plastics.

Environmental technologies are a major growth area for which Long Island offers a nearly ideal proving ground. Solutions pioneered on Long Island might well become models for addressing similar problems around the nation and world.

Resources and Services

Coastal Ocean Strategies (COAST) Institute. Extends technical and scientific capabilities of the Marine Sciences Research Center into the policy arena, serving as vehicle to reduce time between advances in understanding and application of research to improve management of coastal areas.

Environmental-Economic Roundtable. A forum of business, government, environmental and civic leaders to promote sound economic development on Long Island. Designs and recommends policies and practices to ensure a working balance between environmental protection and economic development.

Institute for Terrestrial and Planetary Atmospheres. Coordinates interdepartmental research programs on the atmosphere of the Earth and other planets of the solar system. Areas of investigation on the Earth's atmosphere include climate change, stratospheric ozone depletion, and air pollution.

Living Marine Resources Institute. Coordinates activities of the Marine Sciences Research Center in serving the state's commercial fishing, aquaculture and recreational fishing industries. Research focuses on developing better understanding of basic processes controlling reproduction and growth of commercially and recreationally important species.

Marine Sciences Research Center. Serves as the focus for research, graduate education and public service in the marine sciences for the SUNY system. Offers research and educational programs in biological, physical, chemical and geological oceanography, as well as in coastal zone management, waste management, and fisheries and shellfisheries science and management.

Waste Management Institute. Aims to reduce impact of waste generation and disposal through research, assessment, education and policy analysis. Takes interdisciplinary approach incorporating source reduction, recycling incineration methods.

Volunteers Needed For Arthritis Study

The Department of Physical Therapy is looking for volunteers with a confirmed diagnosis of rheumatoid arthritis to participate in a study on pain control.

The study will compare water therapy, flotation in magnesium sulfate solution and behavioral therapy in the treatment of pain management. Participants will be asked to soak in warm water or an epsom salt bath or participate in instructional sessions, all designed to reduce levels of pain. They will receive treatment twice a week for a month, and be followed up one month later.

The study is a collaborative project, conducted by Stony Brook's Departments of Physical Therapy, Medical Technology, Rheumatology, and Psychiatry and the Sensorium Corp. in East Setauket. For further information, call 689-5772.

Humanities Institute Sponsors Lectures

The Humanities Institute, in conjunction with other university departments, will host the following lectures this month:

Michelle Wallace, City College of New York, will present "Race, Gender, and Psychoanalysis in 40s Films:



Lost Boundaries and Home of the Brave," in the Art Gallery of the Staller Center on Wednesday, April 1, at 12:40 p.m. This event is co-sponsored by the Art Department and the Friends of the Staller Center and is part of the Visiting Lecturer Series: Issues in Cultural Studies.

Sandra Harding, professor of philosophy and director of Women's Studies at the University of Delaware will participate in the Four Day Visiting Fellow series from Monday, April 13 to Thursday, April 16. Topics for the series include:

"Science in the World Community: the Need for 'Strong Reflexivity.'" Public lecture, Tuesday, April 14, 4:30 p.m.

"Science, 'Race,' and Remaking Democracy: The Project" Faculty seminar, Wednesday, April 15, 4:30 p.m.

Bernadette Fort, Northwestern University, will speak on "Ancient Painting, Modern Vision: The Construction of Antiquity in the Enlightenment," Wednesday, April 22, at 4:30 p.m. as part of the Visiting Lecturer Series: Issues in Cultural Studies and the History Department's Eighteenth Century Series.

Amy Ling, director of Asian American Women's Studies at the University of Wisconsin, will speak on "Asian American Studies: Past, Present and Future," Wednesday, April 29 at 4:30 p.m., part of the Humanities Institute's series, Ethnicity in the New

WLIW to Air USB Video on New York Harbor, April 3

Although some areas of New York Harbor are severely degraded by pollution, others are home to a surprising number of different communities of birds and fishes. These contradictions will be explored in the premiere broadcast of the educational video, "Alive in an Urban Harbor," on television station WLIW/Channel 21 at 7 p.m., Friday, April 3.

The half-hour video, produced by the Marine Sciences Research Center in collaboration with John J. Stevens Produc-

tions, Inc., will be followed by a half-hour panel discussion featuring a scientist from MSRC and other key scientists and environmentalists.

The video includes interviews with oceanographers, fishermen, and environmental activists. MSRC provided scientific advice and guidance for the production, as well as financial support through its Institute for Urban Ports and Harbors.

Blood Drive — April 8

Roll up your sleeve: it's time to give blood. The university and Long Island Blood Services will hold a drive on Wednesday, April 8, from 10 a.m. to 9 p.m. in the Pritchard Gymnasium of the Indoor Sports Complex. The goal is 600 pints.

Eligible donors must be in good health, between the ages of 17 and 75, and weigh at least 110 pounds. With the recent addition of a new test for the HIV-2 antigen, there is no longer a restriction on donors who come from any specific geographic regions. The process, including health screening, donation and refreshments, takes about one hour and is completely safe. For further information, call 632-0304.

Sunwood Available for Parties, Beach Club

The grounds of the university's waterfront Sunwood estate in Old Field can be rented for outdoor weddings and other private parties this summer. For information, reservations and rate schedules, call the Office of Conferences and Special Events at 632-6320.

The Sunwood Beach and Gardens Group welcomes new members, including alumni, who want to use the grounds of the Sunwood Estate and see that they are maintained. The property includes a private beach on Long Island Sound and 27 acres of gardens, wild and tamed. Interested members are invited to participate in special gardening days. Yearly membership is \$35 per family. For information, write to the Sunwood Beach and Gardens Group, Office of the Provost.



The gates of the 27-acre Sunwood estate are opening for another season.

New Collections Acquired by Pollock-Krasner Center

Two major documentary collections, the Jeffrey Potter and B. H. Friedman archives, have been acquired by the Pollock-Krasner Study Center. The Study Center, a project of the Stony Brook Foundation, is located in the former home of the Abstract Expressionist painters Jackson Pollock and Lee Krasner.

The Jeffrey Potter collection consists of original audio tapes and transcriptions of interviews with Pollock's family, colleagues and East Hampton neighbors, as well as diaries, manuscripts, photographs, reference books and other documents.

The Jeffrey Potter archives were acquired with grants from the Hand Hollow Foundation, the Andy Warhol Foundation for the Visual Arts, and the Eugene V. and Clare E. Thaw Charitable Trust.

The second acquisition was a gift of B. H. Friedman, whose biography, *Jackson Pollock: Energy Made Visible*, was pub-

lished in 1972. It contains published source material amassed by Friedman, including rare items such as a brochure from the "Intrasubjectives" exhibition at the Kootz Gallery in 1949 and other publications relating to Pollock and his associates.

The Pollock-Krasner Study Center also houses a 1,000-volume art reference library and an oral history collection. The Pollock-Krasner house and studio are open for tours from May to October. The Study Center operates throughout the year.

For further information or to schedule an appointment to gain access to the collections, contact Helen A. Harrison at 324-4929.

Gerontology Project Hosts Clinical Case Forum

The School of Nursing's Gerontology Project will sponsor "Aging and Behavior," the second annual Clinical Case Forum, on Friday, April 24, 8:30 a.m. to 1:30 p.m. in the Health Sciences Center Lecture Hall 4, Level 2. The half-day conference will focus on clinical excellence in gerontology and examine the impact of nurse-managed care on the quality of life.

The keynote address will be delivered by Sister Rose Therese Bahr, professor of nursing at the Catholic University of America and chair of the A.N.A. Council of Gerontological Nursing.

Cosponsors are Kappa Gamma Chapter, Sigma Theta Tau, the Veterans Administration Medical Center in Northport, and the university.

Admission to the conference is \$50 in advance; \$55 at the door. Students, \$20 and \$25. Registration includes continental breakfast, lunch and parking. For additional information, call Alice Finkle at 444-3249 or 444-3289.

Cultural Festival 1992

"Many Nations, Many Cultures: Together One World" is the theme for this year's Cultural Festival, Monday, April 20-Sunday, April 26. Events include films, workshops, talent shows, concerts and parties.

The Festival on the Plaza, featuring food of many nations, international folk dance and more, will take place outside the Staller Center for the Arts on Wednesday, noon to 3 p.m., April 22. For more information, call the Department of Student Union and Activities, 632-6828.

University Awards Full-Tuition Scholarships

Eleven New York State high school seniors have been awarded four-year, full-tuition scholarships to the university. The scholarships were awarded under the university's Presidential Scholars Program, one of two new programs to acknowledge the accomplishments of superior students in high schools throughout the state, and to interest them in studying at Stony Brook.

Selection of award winners was based on a collaborative evaluation by high school and university administrators. Criteria included a grade point average of 94 or higher, SAT combined score of 1250 or higher, class rank and leadership qualities.

In addition, 100 incoming freshmen have been awarded \$500 scholarships under the new Freshman Scholars Program. Each of these students is pursuing a challenging high school curriculum as well as high school and/or community involvement.

The 11 recipients of the President Scholars Program scholarship awards are: April Berdoulay, Northport High School; Elizabeth Cabrera, St. John's Preparatory High School, Astoria; Jennifer D'Agostino, West Islip High School; Aneu Greene, Jamaica High School; Tamia Kenner, Clara Barton High School, Brooklyn; Kami Quinn,

Patchogue-Medford High School; Amy Scoca, Holy Trinity High School, Hicksville; Drita Sinanovic, DeWitt Clinton High School, Bronx; Fay Vargas, Hillcrest High School, Queens; Elizabeth Viola, Shoreham-Wading River High School; and Michael Wyrsta, McQuaid Jesuit High School, Rockland.

Peter J. Rajkowski '87 Award

An award in memory of Peter J. Rajkowski, a Stony Brook graduate who died in 1990, has been established and endowed by Peter's parents, Richard and Isabelle Rajkowski of Marcellus, New York.

The award will be granted annually at the end of the academic year to a full-time junior or senior majoring in Theatre Arts, in recognition of exceptional leadership, initiative and organizational skills in theatre projects.

Peter, born on April 15, 1962, graduated cum laude in 1987, earning the Erwin and Maria Piscator Award for Achievement and the Outstanding Leadership and Service Award from the Department of Student Union and Activities and Executive Area of Student Affairs. He died on October 7, 1990, of a heart attack while playing tennis.

While at Stony Brook, Rajkowski organized the renovation of space for the Fanny Brice Theatre, produced several shows — including, *Real Inspector Hound*, by Tom Stoppard, *People*, by Fieffer, and *That Scoundrel Scapin* by Moliere — and acted in *Terra Nova* and *Three Sisters*.

Pediatric AIDS Center Seeks Volunteers

Stony Brook's Pediatric AIDS Center is seeking volunteers to test the effectiveness of new drug therapies for children and pregnant women infected with Human Immunodeficiency Virus (HIV).

The pediatric and obstetrical clinical trials will enable patients to receive drugs that are not now available from other sources. Drugs used in the two-year National Institutes of Health research trial are provided at no cost to patients.

University Hospital has operated a comprehensive care center for the treatment of pediatric AIDS since May 1990.

Since 1982, more than 2,841 cases of pediatric AIDS have been reported nationwide, with almost 90 percent reported since 1985. Suffolk County has the highest concentration of AIDS cases in the country for a residential suburban region.

To find out more about the clinical trials at the Pediatric AIDS Center at University Hospital, call 444-2700 or 444-7726.

HSC Catering Service Will Plan Department Parties

Morrison's Custom Management Catering, the food service at University Hospital and the Health Sciences Center, is available to cater staff meetings, luncheons, dinners and other department parties on both sides of campus. Custom menus can be planned.

For details, contact Ed Gross at 444-1441 or 444-9295.

ARA, the West Campus food service, also offers catering services. For information, call 632-6530.



David Allen, head of the map section at the Frank Melville, Jr. Memorial Library, recently presented a paper at the American Historical Association's annual meeting in Chicago, discussing bibliographic database management programs.

Arthur Haas, lecturer of music, recorded works for the harpsichord by D'Anglebert on the Wildboar label. The recording, made on a 1785 Jacques Germain harpsichord in South Dakota's Shrine to Music Museum, received rave reviews from *Continuo Magazine* in February.

Arie Kaufman, professor of computer science, was appointed chair of the Technical Committee on Computer Graphics for the IEEE Computer Society, serving from January 1, 1992-June 30, 1993.

Jack Lissauer, assistant professor of Earth and Space Sciences, was one of 100 scientists attending the "Neptune and Triton Conference" held at the University of Arizona in January. The conference, sponsored by the National Aeronautics and Space Administration, presented findings obtained

from the Voyager II spacecraft's flight past Neptune. Lissauer gave a presentation on the formation of Neptune, and another on its rings.

Susan G. O'Leary, Psychology Department director of clinical training, has been elected chair of the Council of University Directors of Clinical Psychology for 1992-1994. The Council includes directors of 144 doctoral programs in the United States and Canada. O'Leary will be responsible for guiding the development and implementation of policy regarding the training of psychologists to further the science and practice of clinical psychology.

John B. Smith, director and dean of libraries, recently served on a panel at the New York Library Association exploring the future of library education.

Ying Yeh, doctoral candidate in musical arts, received rave reviews for her performance in *Savage Land*, a new opera in Chinese, performed by Washington Opera in January. She sang the soprano part of Jin Zi, faithful sweetheart of the main character.

TRANSITIONS

John J. McLoughlin has been named the Stony Brook Foundation's director of Corporate and Foundation Giving. In this role, McLoughlin will encourage regional and national corporations and foundations to support university programs. "I look forward to helping meet the challenges and opportunities facing the university as it enters the 21st century," says McLoughlin.

McLoughlin comes to Stony Brook from the Graduate School and University Center of the City University of New York (CUNY) where he served as associate director of development. Prior to that, he was national director of corporate and foundation giving at the American Lung Association as well as a corporate and foundations relations officer at Fordham University. He is a member of the board of directors of the Greater New York Chapter of the National Society of Fund Raising Executives.

A graduate of St. Francis College in Brooklyn, he holds a master's degree in

history from Fordham University and did additional graduate work at Columbia University.

Sharon A. Quinn has been named director of Major Gifts and Planned Giving for the Stony Brook Foundation.

"Quinn brings both a strong fund-raising experience and a knowledge of the Long Island community to Stony Brook," says Thomas W. Boyden, associate vice president for development.

Quinn comes to Stony Brook from St. Jude Children's Hospital, where she was the Tri-State metropolitan director for three years. Prior to that, she was director of development at the American Diabetes Association in Phoenix and walk director for the March of Dimes Birth Defects Foundation in Phoenix and Woodbury, NY. She earned a bachelor's degree in communications from the State University of New York College at Geneseo.

Researcher Wins Second Major Award

Dr. Dmitry Goldgaber, associate professor of psychiatry, received a \$100,000 grant from the Metropolitan Life Foundation to support his scientific investigation into the

causes of Alzheimer's disease.

In addition, Goldgaber is the recent recipient of a two-year, \$200,000 Zenith Award from the Alzheimer's Association.



Left to right: Dean of the School of Medicine Dr. Jordan Cohen, Robert G. Schwartz, chair, president and chief executive officer of MetLife Insurance Company, and Alzheimer's Disease researcher Dr. Dmitry Goldgaber, associate professor of psychiatry.

University Honors Outstanding Faculty

On May 7, members of the faculty will be honored at a Faculty Achievement Dinner sponsored by the Alumni Association, in recognition of awards and distinctions they earned during 1991. Those so designated are:

1991 New York State Academy of Family Physicians' Family Practice Educator of the Year

Melville Rosen, professor and chair of family medicine

1991 New York State Legislature's Nurse of Distinction

Gene Mundie, acting deputy nurse director, Operating Room

AAAS, Fellow

Frank Fowler, professor of chemistry

Albert H. Douglas Award for Excellence in Teaching

Gary Kaplan, assistant professor of neurology

Alfred Sloan Foundation Fellowship

- Jainendra Jain, assistant professor of physics
- Mikhail Lyubich, associate professor, Institute for Mathematical Sciences
- Anne Preston, assistant professor, Harriman School
- Gang Tian, associate professor of mathematics

American Ceramics Society, Fellow

Herbert Herman, professor of materials science and engineering

American Chemical Society Award for Nuclear Chemistry

John Alexander, professor of chemistry

American College of Physicians, Master

Jordan Cohen, dean of the School of Medicine

ASME Rufus Oldenburger Award

John Truxal, distinguished teaching professor emeritus, technology and society

Charles C. Eldredge Prize for Outstanding Recent Research in the History of American Art

Michele Bogart, associate professor of art

Distinguished Scientific Contribution Award

John Neale, professor of psychology

EDUCOM Award

For Distinguished Mathematics Software
Steven Skiena, assistant professor of computer science

Fulbright Fellowship

Barbara Frank, assistant professor of art

Hardy Lecturer, London Mathematical Society

H. Blaine Lawson, professor of mathematics

Humboldt Fellowship

Richard Howard, professor of philosophy

International Association of Hispanics, Elected President

Elias Rivers, professor and chair of Hispanic languages

John Price Wetherill Medal, Franklin Institute

Gerald Brown, distinguished professor, Institute for Theoretical Physics

John Simon Guggenheim Memorial Foundation Fellowship

Martin Rocek, professor, Institute for Theoretical Physics

Kellogg Foundation Visiting Scholar

Paul Edelson, dean for continuing education

Long Island Forum for Technology, Tech Island Award

Richard Koehn, director, Center for Biotechnology

Marvin Kuschner Professorship in Pathology

Frederick Miller, professor and chair of pathology

National Endowment for the Humanities Fellowship for Independent Study and Research

Clyde Lee Miller, associate professor of philosophy

NATO Scientific Affairs Division Grant

Jean-Francois Mertens, professor, Institute for Decision Sciences

New York State Asian-American Heritage Award

- Sung Bae Park, professor of comparative literature
- C. N. Yang, director of the Institute for Theoretical Physics

NIH Merit Award

David Williams, professor of pharmacology

NSF Creativity Award

- Harold Friedman, professor of chemistry
- George Stell, professor of chemistry

NSF/PYI

Frank Webster, assistant professor of chemistry

Outstanding Young Investigator Award, Society of Leukocyte Biology

Richard Kew, assistant professor of pathology

Royal Society, Fellow

Paul Adams, professor of neurobiology and behavior

Satter Prize of the American Mathematical Society

Dusa McDuff, professor and chair of mathematics

Searle Scholar

Jorge Galan, assistant professor of microbiology

Social Science Research Council (SSRC) Fellowship

Rachel May, assistant professor of Germanic and Slavic languages

SUNY Distinguished Professor

- Louis W. Ripa, Jr., distinguished professor and chair of children's dental medicine
- Louis Simpson, distinguished professor of English
- Robert R. Sokal, distinguished professor of ecology and evolution

SUNY Distinguished Service Professor

- Robert D. Cess, distinguished service professor of mechanical engineering
- J. R. Schubel, distinguished service professor, dean and director of Marine Sciences Research Center

SUNY Distinguished Teaching Professor

Rose Zimbaro, distinguished teaching professor of English

Smith Sets New Record for Points Scored

By Tony McMullen

With a lay-up early in the first half of an Eastern College Athletic Conference (ECAC) semi-final contest against Glassboro State, junior guard Emeka Smith became the all-time leading scorer in the history of Stony Brook men's basketball.

Smith, scored a game-high 26 points in the 93-81 loss at Glassboro State and brought his career point total to 1815. Smith eclipsed the previous mark of 1793 points set by Earl Keith during his four year career, from 1974-79. Keith, an All-American forward, led the Patriots to two NCAA post-season appearances, including the Final Four in 1978.

"Halfway through the season, people started telling me I was 300 points away from the record," recalls Smith. "But I never kept track of my points."

Keeping track of Smith's points is no easy task. Smith has led the Patriot basketball team in every offensive category except field goal percentage and rebounds over the last three years. Averaging 22.3 points a game in his career, with a season-high average of 23.9 this year, Smith's offensive skills resemble those of his modern day idol — All-star Tim Hardaway of the Golden State Warriors.

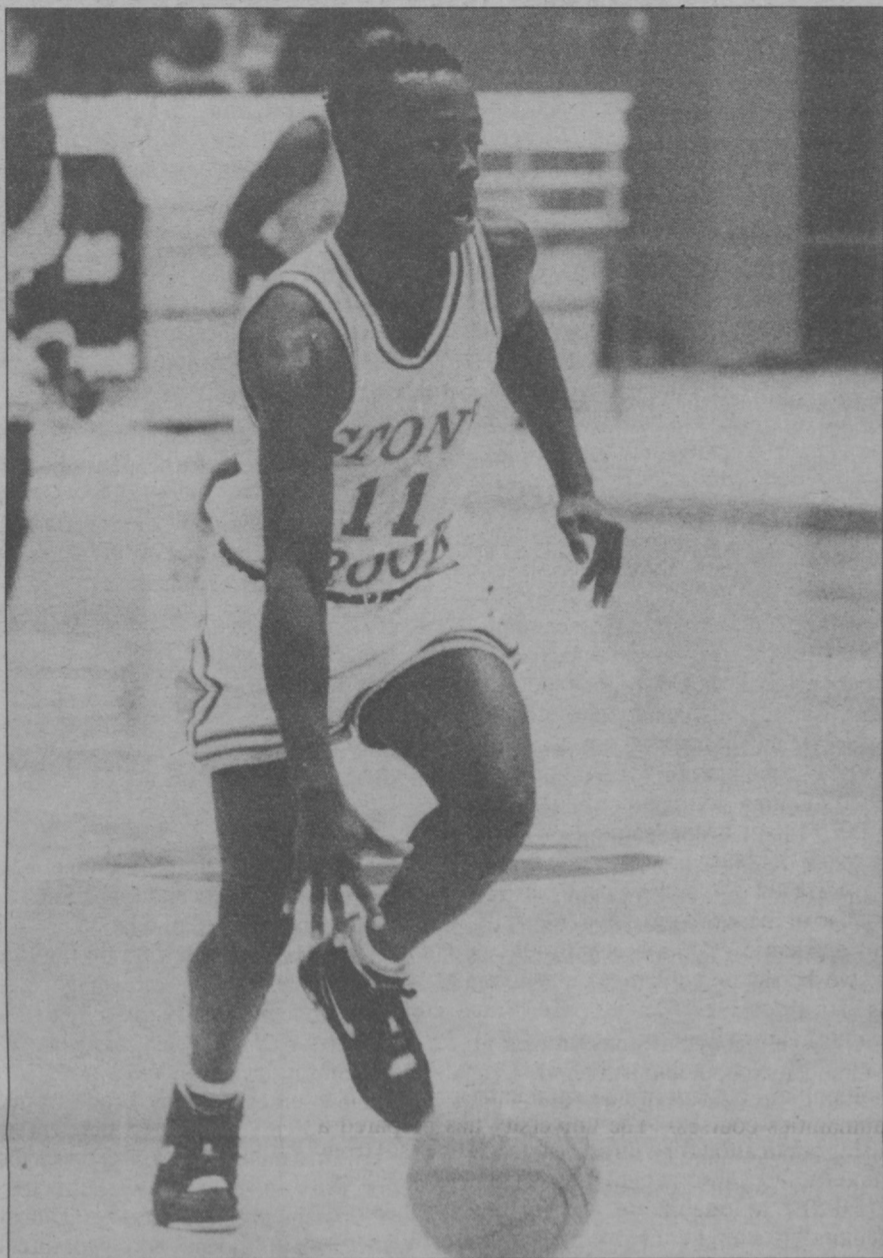
Smith's offensive abilities have helped earn him individual recognition. As a freshman, he was honored as Rookie of the Year by both the Skyline Conference and the ECAC and was named to the All-Metropolitan Basketball Writers Association All-Star team. Avoiding the infamous "sophomore jinx," he continued his success and became a first team All-star selection by the New York State Basketball Coaches Association, Skyline Conference, and the Metropolitan Basketball Writers Association, in addition to being named Skyline Conference Most Valuable Player. This year has been no different. Smith has already been named to the conference and ECAC all-star teams with several honors still unannounced at this time.

"Emeka is a special player," says Head Coach Bernard Tomlin. "Having a player who can quarterback the team and score like he does is unique." Smith has quarterbacked Stony Brook to post-season play in each of his three seasons as the Patriots' point guard. Two bids to the New York/New Jersey Metropolitan ECAC tournament have resulted in a championship in 1990 and, most recently, a semi-final loss at the hands of Glassboro State. In between ECAC tournament appearances, the Patriots' national ranking of twelfth during the 1991 regular season helped earn them the first seed in the NCAA Tournament's East Region. A second round loss to Rochester spoiled dreams of becoming the second team in university history to advance to the Final Four.

The Patriots have accumulated a 64-19 (.770) record with Smith in the lineup. Think of the Patriots without Emeka Smith! It almost happened. Smith and teammate Ricky Wardally, having both played high school basketball at South Shore, passed up opportunities to play Division I. "I almost went to Colgate," says Smith. "Ricky and I were both recruited by the Colgate coach, but when they changed coaches, we didn't feel comfortable with the situation."

Fortunately for the fans of Patriot basketball, Smith and Wardally have called Stony Brook home. And bringing home a championship next year is already on Smith's mind. "I am already looking forward to next season," he says. "Our young guys will have gained a year of experience and Coach Tomlin is recruiting hard."

As for Smith, he will continue to improve his game to help make the team better. Asked how he would like to be remembered when his playing days are over, Smith replies, "I would want people to say 'He was a guy that worked hard every day in practice and deserved everything he got.'"



Simonds Earns All-American Squash Honors

By Tony McMullen

The phone at the Simonds household in Locust Valley, New York, rang later than usual on this particular Friday night. It was Will, Bill and Jane Simonds' son, calling home to share the news: he had just been named to the National Intercollegiate Squash

Racquets Association All-American.

In a formal ceremony on February 21, which also marked the beginning of the Team Nationals tournament weekend hosted by Yale University, it was announced that Simonds was voted one of

only 20 squash All-Americans.

"When I told my mom I was an All-American, she just started to scream," recalled Simonds. "I had to wait about a minute before she was able to talk to me."

The news of Simonds' All-American honors may have surprised his parents, but it did not come as a shock to those within the squash community. Simonds' accomplishments over his four year collegiate career at Stony Brook, coupled with key victories over All-Americans from Vassar and Franklin and Marshall in the final three weeks of the season, made Simonds a candidate the coaches' committee could not pass over.

"Since Will plays for Stony Brook, a nontraditional squash school by Ivy League standards, his win over another All-American candidate, Cornell's first player, really helped his cause," said USB Head Coach Bob Snider.

Simonds becomes Stony Brook's fourth All-American since the squash program started in 1966, joining Stuart Goldstein in '73, Neal Vohr in '82, and Rob Bruno in '88. Goldstein, only one of two inductees into Stony Brook's VIP Club Hall of Fame, later became the United States' top player and was ranked as high as second in the world in the late 70s.

Simonds is certain to leave his mark on the Stony Brook squash program. In his first two years of collegiate competition, he

amassed a 33-13 record as the team's second player. He then moved to the Patriots' top position and continued to excel as he compiled records of 20-5 and 21-6 in his junior and senior seasons, respectively. In addition, he was voted by his teammates as the team's MVP in his freshman, junior and senior years. Currently the Stony Brook record holder of both the single-season (21) and career (74) victory marks, Simonds also captained this year's Stony Brook team (18-9) to a season-ending ranking of 13.

In addition to competing against the nation's best squash players throughout the season, Simonds always managed to take time out of his practice schedule to help his teammates.

"Will was the closest thing I've ever had to an assistant coach," said Snider. "He is a great instructor who really enjoys helping others."

And if Simonds gets his way, he will put those teaching skills to work at one of New York City's racquet clubs after his graduation this May.

In the meantime, Simonds will serve out his term as president of Sanger Hall, where he and most of his teammates reside, while also fine-tuning his tennis game. And when his tennis game gets rained out, he will head back into "the best squash facilities I've [Simonds] ever played in," to work on his rail shot.

The Very Important Patriots (VIP) Club of the University at Stony Brook cordially invites you to attend Stony Brook's VIP Club Hall of Fame induction activities honoring Jack Esposito '68, soccer, track and field and A. Henry "Hank" von Mechow, physical education faculty, 1958-91.

Saturday, May 2

\$22 includes game and dinner

Game at 2 p.m.

Halftime Ceremony

Stony Brook Lacrosse vs Ohio State Patriot Field

Induction Dinner at 5 p.m.

University Club

RSVP by April 17. Call 632-7205.

"OVER THE RAINBOW: Fostering Multiculturalism, Diversity and Quality"

Tilden G. Edelstein

Provost of the University at Stony Brook
Convocation Address — March 5, 1992

I have chosen as the theme for my convocation address, issues which, I believe, are central to illuminating many trenchant current debates and developments in higher education. These issues also enable us to better understand Stony Brook in the nineties as a public research university committed to undergraduate and graduate education, unsponsored and sponsored research, health care, and regional economic and cultural development. The timeliness of talking about multiculturalism, diversity and quality is evidenced by the intense national debate surrounding them — a debate unfortunately excessively heated, in my opinion, by political and media distortions fed by some academic and other excesses. For example, I am sure that American Indians have a right to be called Native Americans, and I believe that contentious sports teams — like the winning Washington Redskins and Atlanta Braves, and the losing Cleveland Indians — are using offensive names. However, I do wonder, I confess, about the need for pets to be called "animal companions." But perhaps I am not being fair. I have heard Native Americans protest about being called Indians, but not since Mr. Ed, who was a talking horse on TV, have I heard an animal speak out against use of the word pet.

This academic year at Stony Brook, as many of you know, we began to implement in undergraduate classrooms our extensively debated diversified educational curriculum; and in June we held a week-long series of seminars for a select group of faculty seeking to increase the multicultural content of undergraduate social science and humanities courses. The university has prepared a promising application for a three-year teaching grant from the Fund for the Improvement of Post Secondary Education (FIPSE) to enable us to help enhance faculty multicultural teaching while we work with Suffolk Community College to improve curricula articulation between this university and community colleges.

These activities are occurring in the context of major campus — and even community wide — events connected to the issues of multiculturalism, diversity and quality. We celebrated Hispanic Heritage month in October by offering an impressive mixture of cultural events, including an address (part of the University Distinguished Lecture Series) by Blandina Cardenas Ramirez, Director of the Office of Minority Concerns for the American Council of Education. Subsequently, Professor Leonard Jeffries of the City University of New York spoke at the university. During Black History month, Professor Henry Louis Gates, Jr., W.E.B. DuBois Professor of the Humanities at Harvard University, participated in the University Distinguished Lecture Series. We have heard Professor Arnold Rampersad of Princeton University, the biographer of Langston Hughes and the editor of the new unexpurgated edition of Richard Wright's major works. Professor Charles V. Hamilton of Columbia University, the biographer of Adam Clayton Powell, spoke here. Thanks to a generous and thoughtful donation from a faculty member, a lecture series entitled "Ethnicity in the New America: the University of the Future" has brought to our campus Professor Mario Valdes, the President of the Modern Language Association, who talked about political correctness and the media; and he will be followed, this semester, by three more speakers, including Professor Amy Ling of the University of Wisconsin, a scholar committed to developing Asian-American studies. March is Women's History month: the University Distinguished Lecture Series will host Professor Elizabeth Fox-Genovese on the topic "Unspeakable Things Unspoken: Ghosts and Memories in African-American Women's Identity." Formerly a chair of Women's Studies at Emory University, Professor Fox-Genovese has been an articulate supporter of the much publicized National Association for Scholars.

This year also has been marked by celebration of the 25th anniversary of the Stony Brook Hillel, with a whole series of events related to being a Jewish American. Next year, the theme for FLC (the undergraduate Federated Learning Communities) will be "American Pluralism: What the Melting Pot Didn't Melt." Students can fulfill the requirements for an academic minor while exploring



The Federated Learning Communities' new poster illustration, announcing the 1992-93 program on the American "melting pot," conveys a sense of the diversity of Stony Brook's student population.

multiculturalism and pluralism with some depth and coherence. While undergraduate curriculum reform at Stony Brook is being increasingly committed to multiculturalism, this also is happening in Staller Center programs with its summer International Theatre Festival and the strong multicultural programming during the academic year.

It is likely that more and more of our masters and doctoral programs will offer academic opportunities to graduate students to receive multicultural training to teach and to do multicultural research. Many of us have been educated in graduate schools solely with an excessively Eurocentric focus or centered on only a national and white male focus. Our re-education is occurring relatively recently, within the last thirty years, in my scholarly discipline (history), women's history, gay/lesbian history, Afro-American history, global history and comparative history have brought new knowledge and insight. Comparative literature, international economics and international business are two other fields where there is significant growth based upon a multicultural framework. Ongoing curricula reforms in the School of Medicine and in other HSC units also are changing direction.

A survey of higher education in a recent issue of *Change*, a magazine of higher learning, finds that research universities (ahead of four-year colleges and two-year colleges) are introducing multicultural education into their undergraduate curricula. Like Stony Brook, they are doing so by accretion, not by abandoning teaching about Europe and America. As one informed observer concludes: "The multicultural wars remain a hot topic in the press — but on campus, the war is over: multiculturalism won. The question no longer is *whether* students should learn about diverse cultures, but *how*." Studying about multiple cultural legacies clearly has intellectual and educational value. The restructuring and reorganization of our departments and divisions, particularly in the Social Sciences and Humanities, further can enhance our commitment to

multiculturalism. But I strongly believe that programs like Africana Studies and Women's Studies need to maintain their administrative identity while their faculty interact with more traditional units.

It is worth asking: why there has been a war about multiculturalism, and what are the possible benefits of this war? First, recall that the most dramatic movement in higher education began as a result of another war: World War II. Despite the Federal Land Grant Act cessions to colleges and universities in the mid-nineteenth century, American higher education, for much of its history, was very limited in the number and kinds of attending students. From the seventeenth century, matriculation at the earliest private American colleges was confined to an elite group of white males. Subsequently, nineteenth-century public universities markedly expanded educational opportunities, but by the first decade of the twentieth century only about four percent of high school graduates attended college. One graphic way to illustrate the contrast to today is to observe that as late as the 1930's, an enthusiastic proponent of physical exercise and the importance of competitive sports, characterized college football as an elitist sport because it was played almost exclusively by wealthy college students attending expensive universities. Today, both the skin color and the family wealth of many college football players, of course, are very different. College basketball, however, was not the same as football. As some of you recall, in the 1920's and 1930's, City College of New York had great basketball teams filled with kids from the playgrounds, and most importantly CCNY was an unusual institution of higher education because it attracted ethnic minorities — mostly sons of immigrants whose parents had neither attended college nor high school. First generation Jewish and Italian Americans were either banned or limited by ethnic and religious quotas for admission to our most famous and prestigious colleges and universities — and

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"OVER THE RAINBOW: Fostering Multiculturalism, Diversity and Quality"

even more so by American medical schools. And blacks, Native Americans and women of *any* color rarely attended any institution of higher education — including CCNY.

The GI Bill, implemented after World War II, began, therefore, the most extraordinary demographic changes in higher education. The United States, befitting our democratic beliefs, today stands far ahead of all nations in making higher education available to a larger percentage of our people than any other nation. At present, for example, some 75 percent of New York State's high school graduates attend either two-year community colleges or four-year colleges and universities. The very establishment, in fact, of the SUNY system, including the creation of its medical schools, was explicitly in response to the limited access of ethnic and religious minorities which characterized the policy of some of our most prestigious institutions. Not until the decade after the Supreme Court's decision in *Brown versus Board of Education* which judged separate schools to be intrinsically unequal, did we begin to see the influx of black students into higher education. Thirty years ago, 94 percent of the students on campus were white and two thirds were male. Twenty years ago, the so called integrated colleges and universities averaged less than 3 percent black students. Yet even today, only fifteen states, in addition to the District of Columbia, have college enrollments that are over 20 percent minority, with another eighteen states between 9-19 percent minority. (Women of all colors now slightly outnumber men.) While racial diversity is growing in higher education, among thirteen million students in American colleges and universities, as late as 1988, some ten million were white.

In New York State, by comparing CUNY and SUNY, minority attendance very recently has received prominent media attention. *Newsday* correctly attributed 14 percent to the SUNY system. On the other hand, it should be emphasized that some 28.5 percent of Stony Brook's undergraduates are minorities — 7.8 percent black, 6 percent Hispanic and 14.5 percent Asian-American. Some 1500 foreign students, mostly in the graduate programs, come here from some eighty-seven different countries. And at our Health Sciences Center enrollments and graduation of minorities and women have been given special effort, resulting in some significant advances toward diversity. As has been correctly noted in *Currents* (December 1990): "more than any other four-year institution within SUNY, Stony Brook has come to symbolize access and opportunity." Many of our students not only are members of underrepresented groups, but are the sons and daughters of recent immigrants who settled in New York City and either remain there or relocated to Long Island.

While the average American public university around the country enrolls 11.4 percent of students from families with income below \$20,000, at Stony Brook the percentage is 22.7. The national average for students at public universities with fathers who did not complete high school is 6.6 percent; at Stony Brook it is 14.9 percent. Stony Brook's success in being chosen by and choosing to enroll minority students, as well as other first generation college students, is another example of what President John Marburger has called our sophistication. It also exemplifies our contribution as an American institution of higher learning. Many of our faculty have rightly been stimulated by the intellectual and teaching challenges. Recently, for example, Professor Patricia Wright, an Anthropology Department member holding a distinguished Mac Arthur Fellowship who came to Stony Brook from Duke University, told me about her enthusiasm for teaching introductory anthropology to such a great variety of racial, ethnic and religious groups of students. And anthropologists have long been committed to teaching about multiculturalism — well before the rest of us.

While the recently published *SUNY 2000 Mission Statement* declares that all campuses must make special effort to recruit, enroll, retain and graduate students uncondition-

ally from underrepresented groups and from immigrant groups, Stony Brook has come closest in meeting this challenge. But just as I tell my faculty colleagues who pass resolutions, "don't write, send money," SUNY and our legislature, the Governor and the Department of Budget should do the same. In my opinion, special recognition — preferably special funding — is warranted for Stony Brook to soften the negative teaching impact accompanying the drop in the percentage of state support. Not only are we not

Quality, of course, is much easier to declare than to achieve. Stony Brook's challenge is to continue to go beyond our quantitative accomplishments and to use the test of quality in the areas of multiculturalism and diversity. There are some conceptual assumptions, however, that need to be stated. Woodrow Wilson was wrong when he said, "You cannot become a thorough American if you think of yourself in groups. America doesn't consist of groups." Wilson was factually wrong, not only because the

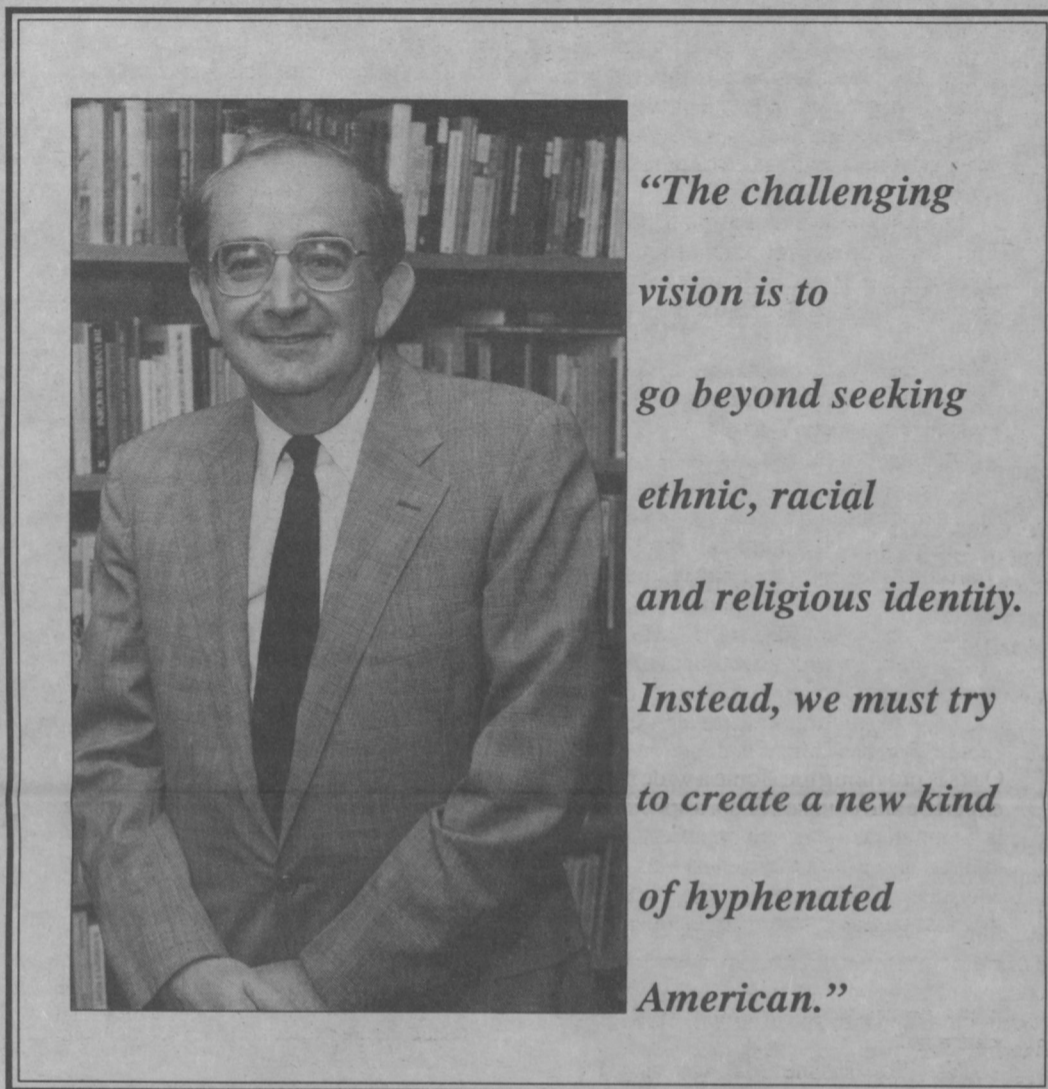
progressive reforms of his era applied to whites only. Jim Crow laws disenfranchised African-Americans; soldiers and civilians were segregated by race; and employers, with impunity, utilized race, ethnicity and gender as terms of employment. In fact, everyone belongs to a group, whether a dominant or marginalized one — or some place in between. Obviously, America, with the exception of Native Americans, is a land peopled by immigrants or their descendants. Paradoxically, throughout American history, some of these descendants of immigrants have pressed to have new immigrants become assimilated to *their* views — a movement characterized in the late nineteenth century as the "melting pot" idea. That idea did not disappear in the twentieth century, and until the nineteen sixties had a large number of advocates. Some ideological heirs of these people have emerged today, but identity politics and ideas, despite some excesses, have made a major contribution to multiculturalism and diversity — and even to our sanity. Jewish Americans no longer change their names or have their noses fixed in order not to sound or look Jewish. African Americans do not lighten their skin and straighten their hair to look less Negroid. Hispanic Americans no longer avoid getting a tan so as not to look too dark.

It has become increasingly clear that an educated person must be able to understand the diversity among

Americans, accept differences and relate effectively to individuals who differ because of their race, ethnic groups, social class, gender, sexual preference, national origin or physical handicap. Such an education is especially necessary with the ever increasing evidence of a global economy. A quality education, however, requires us to explore other cultures in ways that result in more than a superficial tourism. We should not be able to say: if it's Tuesday, it must be Belgian culture. Our commitment to a multicultural curriculum requires us to pay attention to systematic coherence, increasingly clear definitions, and the need to comprehend the complexity of different cultures. As the historian, Joan Scott, has noted: "a curriculum that teaches people to think about difference — not as a biological essence, but as a historically created and changeable identity — is a democratic curriculum. It enables us to enter the debate that we must have about difference intelligently, and to understand our group identities (including the identity of 'American') not as timeless traits, but as the changing products of politics and history." Indeed, as Patrick J. Hill, the founder of our Federated Learning Community, has written, "there is a need to develop conversations of respect between diverse communities, characterized by the kind of intellectual reciprocity in which participants expect to learn from each other, expect to learn non-incidentally things, and expect to change (at least intellectually) as a result of the encounter." Such an education challenges us to go beyond mere tolerance of pre-existing diversity but to participate actively in our multicultural education. Tolerating diversity falls short if it only enhances group identity and doesn't encourage the interchange of values and ideas that enhance the participants.

Higher education, of course, is meant to be compensatory — that is to compensate an individual for what is not yet learned. Past distortions, however, must not be replaced by compensatory distortions by substituting one myth with

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equitably funded to account for the high cost of living on Long Island and downstate New York, compared to the rest of the SUNY institutions, but as a public research university we are underfunded relative to comparable state institutions around the country. I believe that we deserve special help because of our success in minority recruiting, retention and the value-added education which our students receive by coming to Stony Brook and graduating from the university. Additionally, a high proportion of our graduates gain admission to graduate schools immediately upon receiving their baccalaureate degrees. Our Office of Student Affairs, under the direction of Vice President Fred Preston, deserves special commendation for providing campus social and cultural activities enabling minorities to feel welcome at Stony Brook. Student campus organizations and campus social and cultural events have been creatively responsive to multicultural education and the diversity of our student population.

Especially significant are the results of a recent outcomes survey conducted throughout SUNY by ACT (American College Testing). It reports that Stony Brook was ranked by students "first among the university centers and first or second among all state-operated colleges for campus understanding of gay/lesbian/bisexual students and the racial and ethnic diversity of student body." We also rank first among university centers and are significantly higher than the average from the other university centers and all state colleges for the positive impact of "multicultural courses" which have helped the student to appreciate diversity. I agree with the statement of my administrative colleague, Ronald Douglas, vice provost for Undergraduate Studies, who has said: "Stony Brook provides an opportunity for students to obtain a quality university..." at a price more affordable than most public and all private institutions of higher education. "We are doing what a public university should be doing — providing opportunity."

Long Island State Veterans Home: Questions and Answers

By Dan Forbush

The Long Island State Veterans Home, operated by the Health Sciences Center, opened in October with a certified occupancy of 60 patients and an expectation that it would expand smoothly and rapidly to its certified capacity of 350 residents.

Veterans Home and university officials are confident that the Department of Health will soon authorize an increase in the Home's patient population, but the road thus far has been anything but smooth. The following describes the status as Currents went to press on March 25.

Where does the Home currently stand with the Department of Health?

During an inspection in late January, DOH found serious deficiencies in the Home's operation, and documented these in a report delivered to the Veterans Home February 18. As required by law, the Veterans Home submitted its plan of correction within ten days. In late March or early April, DOH will conduct another inspection to see if the plan of correction has been implemented.

The outcome of this inspection has important ramifications for the Home's development. A positive inspection—including the elimination of any "Level A" deficiencies—would clear the way for the Home to be certified for Medicaid and Medicare reimbursement. It would also clear the way for the Home to expand its certified occupancy. The Home has applied to DOH to open two additional units of 30 patients each. This would bring the Home's total certified capacity to 120.

What is the nature of the deficiencies found by DOH?

DOH found "Level A" deficiencies in the areas of resident assessment/comprehensive care planning, infection control, physician services, and administration. To address problems in these areas, the Home's plan of correction calls for, among other things, implementation of:

- system to ensure timely completion of patient assessments by all disciplines;
- new policies and procedures for identifying, reporting, treating and preventing the spread of a suspected outbreak of infectious disease among both patients and employees;
- a more systematic means to ensure appropriate physician supervision in patient care.

DOH found "Level B" deficiencies in 14 areas, including provision of services, accommodation of needs, dignity, activities of daily living, vision and hearing, and accidents. To address problems in these areas, the Home's plan of correction calls for, among other things:

- ensuring that residents are provided timely appointments for consultations and other direct services outside the Home;

- ensuring that prompt efforts are made to resolve patient grievances by providing well-ventilated smoking areas, properly equipped shower rooms, and quiet and considerate night staff;

- providing supplemental in-service training to ensure that staff are sensitive to the special needs of geriatric residents.

Why have these problems occurred?

Most of the deficiencies identified by DOH are rooted in difficulties of start-up, such as unanticipated delays in the delivery of equipment and insufficient coordination in scheduling non-emergency eye, dental and hearing examinations. Acting Administrator Joseph Lapietra attributes problems in comprehensive care planning chiefly to the fact that staff were for the first time sitting down to work as a cohesive group. The Home has been hampered by an unusual degree of internal conflict, and strengthening the staff's sense of teamwork continues to be one of Lapietra's top priorities.

Implementation of the plan of correction is well on its way. Lapietra says he is confident the Home will have a "good inspection" when DOH returns in early April.

What steps have the Home and university taken to improve management and morale within the Home?

A member of the nursing staff at University Hospital is conducting a series of workshops in team-building for the nursing staff at the Home, an approach which Acting Administrator Joseph Lapietra says will be extended to other departments. In addition, a consultant is working with staff in developing policies and procedures from the perspective of interdisciplinary care.

An oversight committee appointed by Health Sciences Vice President Howard J. Oaks is providing the Home a wide range of expertise and counsel. Also, a special effort is being made—through meetings, presentations and a monthly newsletter—to ensure that the Home maintains regular and open communication with residents, family members and veterans organizations.

Does the Home accept all of DOH's conclusions?

No. The Home believes that DOH reached erroneous conclusions regarding the medical care provided to individual patients. Particularly troublesome is the fact that—in both its exit interview on Jan. 27 and in the survey document—DOH failed to acknowledge in any way a lengthy Jan. 24 meeting in which the Home's medical staff provided DOH inspectors detailed explanations of their clinical conclusions and actions regarding four patients.

During the 48-hour period granted to nursing facilities to provide additional information following an exit interview, Acting Administrator Joseph Lapietra formally requested an opportunity to rebut the

agency's conclusions. No such opportunity was provided.

In the plan of correction, the Home's medical staff spelled out their reasons for reaching different conclusions regarding the care provided to individual patients. They produced medical records that DOH had noted as missing and demonstrated that the Home had indeed performed consultations and tests which DOH had noted as not being done.

What prompted the DOH inspection?

The January inspection was to have been a routine follow-up to an inspection conducted by DOH in late December to determine whether to approve the Home for opening an additional 60 beds. DOH had found several minor deficiencies in the December survey and wanted to satisfy itself that the problems had been corrected.

As it turned out, the January inspection was far from routine. DOH mobilized a team of 11 inspectors for an intensive five-day scrutiny of the facility.

The pivotal factor was an extraordinary communication to DOH by the Home's

own administrator at that time, Irwin Lamm. On January 10, Lamm delivered to DOH an unsolicited report produced by the Home's quality assurance staff and made an extraordinary appeal to DOH to come to the facility to conduct an "in-depth" survey of "systemic problems which permeate the Nursing and Medical Services departments." The report contained misrepresentations regarding the Home's medical and nursing care, and Lamm submitted it to DOH without consulting with staff, department directors or HSC administrators. Lamm's action is widely interpreted by Veterans Home staff as a reflection of mounting tension between Lamm and the directors of those two departments.

Acting largely on information in the quality assurance report delivered by Lamm, DOH initiated investigations into a number of alleged cases of "abuse, neglect or mistreatment." Four of these cases already have been found by DOH to be without substance and therefore have been dismissed. Veterans Home and university officials are confident that all will ultimately be dismissed on further investigation.

Veterans Home: A Chronology

October 25, 1991

The Veterans Home opens 60 of its 350 beds and begins accepting patients. Administrator Irwin Lamm reports to University Hospital Executive Director William Newell, who in turn reports to Vice President for Health Sciences J. Howard Oaks.

December 27, 1992

The facility undergoes routine inspection by Department of Health in preparing to open an additional 60 beds. The administrator assures the university that minor problems will be corrected and will not interfere with the opening of new beds. However, internal conflicts among staff begin to interfere with orderly operation of the facility.

January 10, 1992

Without notifying staff, supervisors or administration, the administrator charges in writing to the Department of Health that the Home and its professional staff are neglecting and mistreating residents, and calls in DOH to begin an intensive investigation.

This extraordinary action is widely interpreted as a reflection of internal conflict between the administrator and the directors of nursing and medical services.

January 20, 1992

The administrator and head nurse are replaced by Vice President for Health Sciences J. Howard Oaks. Joseph Lapietra is named acting administrator; Virgelene Bowie is named acting director of nursing.

In addition, Oaks appoints a special committee reporting directly to him to provide oversight of the Home during a transition period in which internal problems are to be resolved.

The committee is chaired by William Newell,

executive director of University Hospital. Other members are:

- Mary Crosier, administrator of the State Veterans Home at Oxford, New York;
- John Flatley, chair of the Home's Advisory Committee;
- Robert Kistler, director of Institutional Management, Department of Health;
- Martin Liebowitz, M.D., vice chairman, Department of Medicine, Stony Brook School of Medicine;
- Lenora McClean, dean, Stony Brook School of Nursing.

January 21, 1992

Eleven DOH inspectors arrive at Veterans Home to begin inspection that will extend over five days.

January 27, 1992

DOH conducts exit interview. Sixty day period for corrections begins.

February 18, 1992

Department of Health issues written statement of deficiencies.

February 28, 1992

Home submits written plan of correction.

March 23, 1992

Home submits revised plan of correction, providing more detailed responses to DOH in such areas as resident assessment, comprehensive care planning, infection control, and physician services.

Early April

Sixty day period allowed for corrections ends. DOH expected for return inspection.

"OVER THE RAINBOW: Fostering Multiculturalism, Diversity and Quality"

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another. For compensatory distortions are as bad as teaching American history and omitting slavery and racism, or omitting the genocide of Native Americans. If we substitute a chauvinistic analysis for the old distorted analysis, it will result only in ultimate disillusionment. Critical realities are sufficiently hard to find; they should not be ignored when we find them. Also, we shouldn't exaggerate or overindulge ethnicity. For example, a recent survey of Polish, Irish and Italian descendants of immigrants were asked about the meaning of ethnic identification. Forty-seven percent identified ethnic food as most important. Similar superficial conclusions could be found about many ethnic groups. I enjoy a

potato knish as much as other Jewish-Americans, but mere gastronomic Judaism is both fattening and mindless. Whether we like it or not, we must acknowledge, additionally, that ethnicity for many people is less important than nationalism. Hispanic-Americans may have less group identity than they do as Puerto Ricans, Mexican, Cubans, etc. And Asian-Americans often feel more like Japanese, Chinese and Koreans.

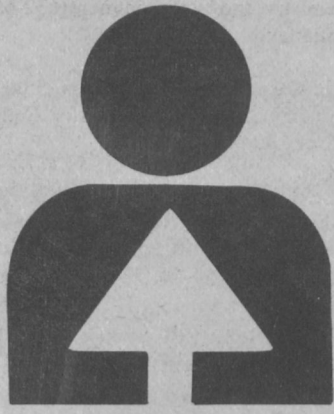
Yet we must understand that being a hyphenated American, as we all are, requires us to acknowledge that to be Italian-American is not same as being an Italian, being Jewish-American is not the same as being an Israeli, being an African-American is not the same as being a member of an

African nation, being Chinese-American or Korean-American or Japanese-American is not the same as being a citizen of those countries. I believe, we have a new opportunity at our universities, especially at Stony Brook, to utilize the happy fact that a growing number of administrators, faculty and students deplore racism, sexism, homophobia, and ignoring the rights of the physically handicapped. We have a great opportunity to do much more than simply find and explore our intellectual and cultural identity, however, important that is.

The challenging vision is to go beyond seeking ethnic, racial and religious identity. Instead, we must try to create a new kind of hyphenated American. At this uni-

versity, that hyphenated American could be called a Stony Brook-American. If you agree with me, the Office of Student Affairs probably can order coffee cups and T-shirts saying Stony Brook-American before the week is over!

Seriously, as faculty, administrators and students, we have a wonderful chance to utilize the Stony Brook commitment to multiculturalism, diversity and quality to make a monumental contribution to each other and to the world. We then could appropriately recite that rhapsodic passage from Shakespeare's *The Tempest*: "O, wonder! How many goodly creatures are there here! How beauteous mankind is! O brave new world That has such people in't!"



Wednesday, April 1

8:30 a.m. - 5:00 p.m.
Fundamentals of Purchasing for New and Experienced Buyers, Session 1 of 2. (CED) 632-7071

9:00 a.m. - noon
Lotus. (US) 632-7795

9:00 a.m. - noon
Advanced Lotus. (US) 632-7795

Thursday, April 2

8:30 a.m. - 5:00 p.m.
Fundamentals of Purchasing for New and Experienced Buyers, Session 2 of 2. (CED) 632-7071

9:00 a.m. - 4:30 p.m.
Supervising New York State: The Advanced Program, "The Challenge of Change." Session 1 of 5. (HR) 632-6136

10 a.m. - noon
Vectorization. (US) 632-7795

Friday, April 3

9:00 a.m. - noon
dBase. (US) 632-7795

9:00 a.m. - noon
WordPerfect. (US) 632-7795

9:20 - 10:20 a.m.
Intro. to Excel. (US) 632-8050

Monday, April 6

9:00 a.m. - noon
Advanced Lotus. (US) 632-7795

9:00 a.m. - noon
WordPerfect. (US) 632-7795

9:20 - 10:20 a.m.
Intro. to WORD. (US) 632-8050

Tuesday, April 7

10:00 a.m. - noon
Intro. to ALL-IN-1. (US) 632-7795

Noon - 1:30 p.m.
Perception: What You See Is What You Get
Leader: Kaye J. Nubel, B.A. (GS) 632-6715

1:30 - 3:30 p.m.
LaTeX III. (US) 632-7795

Wednesday, April 8

7:00 - 8:00 a.m.
Clinical Laboratory Right-to-Know
Hospital L-2, Pathology Conference Room
Contact Carol Gomes, 444-7636

10:00 a.m. - noon
Intro. to AIX/370. (US) 632-7795

Noon - 2:00 p.m.
Conflict Management and Effective Negotiations. Leader: Russell Esposito, M.P.A. (GS) 632-6715

12:45 - 2:00 p.m.
Nursing Right-to-Know. Tech Park (EHS) Contact Lori Brickman, 632-6410

3:00 - 4:00 p.m.
Clinical Laboratory Right-to-Know
Hospital L-2, Pathology Conference Room
Contact Carol Gomes, 444-7636

3:00 - 4:30 p.m.
I Never Told Anyone. For Women Only (workshop on child sexual abuse)
Leader: Connie Baird, M.S.W. (GS) 632-6715

Thursday, April 9

8:30 a.m. - 5:00 p.m.
Achieving Manufacturing Excellence Through Plant Layout and Material Handling, Session 1 of 2. (CED) 632-7071

8:30 a.m. - 5:00 p.m.
Implementing Manufacturing Continuous Improvement, Session 1 of 2. (CED) 632-7071

10:00 - 11:00 a.m.
New Employee Orientation Right-to-Know
HSC, L-3, Room 155
(EHS) Contact Lori Brickman, 632-6410

Noon - 1:30 p.m.
Stress Management: Relaxing the Mind and Body, Workshop III.
Leader: Anne Gallenstein, M.S., R.N. (GS) 632-6715

1:30 - 3:30 p.m.
Producing a Thesis Using LaTeX. (US) 632-7795

2:00 - 3:15 p.m.
Assertiveness Training. For Women Only, Session 1 of 2. Leader: Sharon Placella, M.S.N. (GS) 632-6715

Friday, April 10

8:30 a.m. - 5:00 p.m.
Achieving Manufacturing Excellence Through Plant Layout and Material Handling, Session 2 of 2. (CED) 632-7071

8:30 a.m. - 5:00 p.m.
Implementing Manufacturing Continuous Improvement, Session 2 of 2. (CED) 632-7071

9:20 - 10:20 a.m.
Intro. to WordPerfect. (US) 632-8050

Saturday, April 11

10:15 a.m. - 4:00 p.m.
Making an Herb Basket. (UCC) 632-6822

Monday, April 13

7:00 - 8:00 a.m.
Clinical Laboratory Right-to-Know
Hospital, L-2, Pathology Conference Room
Contact Carol Gomes, 444-7636

9:00 a.m. - noon
Advanced Lotus. (US) 632-7795

9:00 a.m. - noon
DOS. (US) 632-7795

2:15 - 3:30 p.m.
Clinical Assistant Right-to-Know, Tech Park (EHS) Contact Lori Brickman, 632-6410

Tuesday, April 14

10:00 a.m. - noon
Advanced ALL-IN-1. (US) 632-7795

Noon - 1:30 p.m.
Advanced WordPerfect 5.1 Module II
Section B, Session 1 of 4. (CED) 632-7071

2:00 - 3:00 p.m.
Clinical Laboratory Right-to-Know
Hospital, L-2, Pathology Conference Room
Contact Carol Gomes, 444-7636

6:00 - 7:30 p.m.
Effective Public Speaking
Leader: Ellen Foot, M.S.W. (GS) 632-6715

Wednesday, April 15

9:00 a.m. - noon
Lotus. (US) 632-7795

9:00 a.m. - noon
WordPerfect. (US) 632-7795

10:30 a.m. - noon
Interviewing Skills, Leader: Lynn Johnson (GS) 632-6715

Noon - 1:00 p.m.
Radiology Right-to-Know
Hospital, L-4, Radiology Lounge (EHS) Contact Lori Brickman, 632-6410

3:00 - 4:00 p.m.
Radiology Right-to-Know
Hospital, L-4, Radiology Lounge (EHS) Contact Lori Brickman, 632-6410

6:00 - 7:30 p.m.
Dealing With Our "Inner Critic"
Leader: Jo Kasper-Allen, A.C.S.W. (GS) 632-6715

Thursday, April 16

10:00 a.m. - noon
Vi Editor. (US) 632-7795

12:45 - 2:00 p.m.
Nursing Right-to-Know. Tech Park (EHS) Contact Lori Brickman, 632-6410

3:00 - 5:00 p.m.
Finding the Right Position: Tips for Your Job Search. Leader: Tom Tyson, M.S. (GS) 632-6715

Friday, April 17

9:00 a.m. - noon
DOS. (US) 632-7795

9:00 a.m. - noon
WordPerfect. (US) 632-7795

9:20 - 10:20 a.m.
Resume in WORD. (US) 632-8050

Monday, April 20

9:00 a.m. - noon
Advanced Lotus. (US) 632-7795

9:00 a.m. - noon
DOS. (US) 632-7795

2:00 - 3:00 p.m.
Clinical Laboratory Right-to-Know
Hospital, L-2, Pathology Conference Room
Contact Carol Gomes, 444-7636

3:30 - 4:30 p.m.
Clinical Laboratory Right-to-Know
Hospital, L-2, Pathology Conference Room
Contact Carol Gomes, 444-7636

Tuesday, April 21

10:00 a.m. - noon
Intro. to ALL-IN-1. (US) 632-7795

12:45 - 2:00 p.m.
Nursing Right-to-Know. Tech Park (EHS) Contact Lori Brickman, 632-6410

6:00 - 7:30 p.m.
Feeling Better About Yourself
Leader: Celeste Gertsen, Ph.D. (GS) 632-6715

Wednesday, April 22

10:00 a.m. - noon
Vi Editor. (US) 632-7795

Noon - 1:00 p.m.
Radiology Right-to-Know
Hospital, L-4, Radiology Lounge (EHS) Contact Lori Brickman, 632-6410

3:00 - 4:00 p.m.
Radiology Right-to-Know
Hospital, L-4, Radiology Lounge (EHS) Contact Lori Brickman, 632-6410

Thursday, April 23

10:00 a.m. - noon
Networks & Mail. (US) 632-7795

10:00 - 11:00 a.m.
New Employee Orientation Right-to-Know
HSC, L-3, Room 15 (EHS) Contact Lori Brickman, 632-6410

11:30 a.m. - 12:30 p.m.
Physical Therapy Right-to-Know
Hospital, L-5, Physical Therapy Dept. (EHS) Contact Lori Brickman, 632-6410

Friday, April 24

9:00 a.m. - noon
dBase. (US) 632-7795

10:00 a.m. - noon
DataQuery. Requires instructor's approval. (US) 632-7795

Saturday, April 25

9:00 a.m. - 2:00 p.m.
Advanced PageMaker Module II, Section B, Session 1 of 2. (CED) 632-7071

10:00 a.m. - noon
Wild Plants of Long Island That Can Be Used For Food & Medicine
Leader: Ellen Kamhi, Ph.D., (GS) 632-6715

Monday, April 27

Radiation Safety Training for Nursing Personnel in Nursing Orientation. Time & Place TBA. (BM) Contact Jodi S, 444-3196

9:00 a.m. - noon
WordPerfect. (US) 632-7795

9:00 a.m. - noon
Lotus. (US) 632-7795

9:00 a.m. - noon
Introduction to Lotus 3.0
Section B, Session 1 of 5. (CED) 632-7071

1:00 - 2:00 p.m.
Nursing Orientation Right-to-Know. Tech Park (EHS) Contact Lori Brickman, 632-6410

6:00 - 9:00 p.m.
Advanced Lotus 3.0, Section A, Session 1 of 2. (CED) 632-7071

Tuesday, April 28

10:00 a.m. - noon
Intro. to ALL-IN-1. (US) 632-7795

6:00 - 8:00 p.m.
Advanced WordPerfect 5.1 Module III, Section A, Session 1 of 3. (CED) 632-7071

Wednesday, April 29

7:00 - 8:00 a.m.
Radiology Right-to-Know
Hospital, L-4, Radiology Lounge (EHS) Contact Lori Brickman, 632-6410

8:30 - 9:30 a.m.
Intro. to WORD. (US) 632-8050

9:00 a.m. - noon
Advanced Lotus. (US) 632-7795

9:00 a.m. - noon
WordPerfect. (US) 632-7795

9:00 a.m. - noon
WORD for Windows, Section A, Session 1 of 5. (CED) 632-7071

3:00 - 4:30 p.m.
I Never Told Anyone. For Men Only (workshop on child sexual abuse)
Leader: Connie Baird, M.S.W. (GS) 632-6715

Thursday, April 30

8:30 a.m. - 5:00 p.m.
Developing a Business Plan. (CED) 632-7071

8:30 a.m. - 5:00 p.m.
The Tools and Techniques of Total Quality Management, Session 1 of 2. (CED) 632-7071

10:00 a.m. - noon
Intro. to AIX/370. (US) 632-7795

Notes:

(1) Some programs have fees and/or prerequisites; please contact the sponsor for more information.

(2) If you sponsor training or personal development activities, please contact Paul Croser at 632-7191 to get your event included in the Training Calendar.

Codes:

BM	Biomedical Engineering, University Hospital
CED	School of Continuing Education
CL	Clinical Laboratories, University Hospital
EHS	Environmental Health & Safety
GS	Group Shop
HR	Human Resources
PS	Public Safety
QA/SD	Quality Assurance/Staff Development, University Hospital
UCC	Union Craft Center
US	User Services

WEDNESDAY APRIL 1

Pediatrics Grand Rounds, "Syphilis," Hugh Eves, Univ. of Medicine and Dentistry of New Jersey, New Jersey Medical School. 8:00 a.m. Level 3, Lecture Hall 6, Health Sciences Center. Call 444-2730.

CED Trade and Technical Seminar, "Fundamentals of Purchasing for New and Experienced Buyers." 8:30 a.m.-5:00 p.m.; 2nd session April 2. For all involved in the purchasing function who wish to brush up on the basic elements of purchasing. \$325; preregistration required. Call 632-7071.

Computing Services Workshop, "LOTUS." Hands-on course introduces the beginner to the most frequently used commands. 9:00 a.m.-noon. To register, call 632-7795.

Computing Services Workshop, "Advanced LOTUS." Basic and advanced macros are introduced. 9:00 a.m.-noon. Call 632-7795.



Roth Regatta Boat Builders Sign-up. 9:00 a.m.-5:00 p.m. SB Union. \$10 deposit refunded day of race. Call Hal at 2-2648 or Fran at 2-2655.

The NAMES Project AIDS Memorial Quilt Display. 10:00 a.m.-10:00 p.m. Indoor Sports Complex. Free and open to the public. Call 632-6339.

Department of Music/WUSB Radio Spring "Music at Stony Brook" Series, "Opera at Stony Brook." 11:00 a.m.-1:00 p.m. WUSB 90.1 FM. Discussion and musical selections from *Dido and Aeneas* and *Così fan tutte*. Call 632-7330.

Department of Music Graduate Student Noon-time Concert Series. Recital Hall, Staller Center for the Arts. Free. Call 632-7330.

Catholic Mass. Noon. Level 5, Chapel, Health Sciences Center. Call 444-2836. Every Wednesday.

Humanities Institute Visiting Lecturer Series: Issues in Cultural Studies, "Race, Gender and Psychoanalysis in Forties Films: *Lost Boundaries* and *Home of the Brave*," Michele Wallace, City College of New York. 12:40 p.m. Addresses the issues of identity involved in the phenomenon of "passing." (Cosponsored with Dept. of Art and the Friends of the Staller Center.) University Art Gallery, Staller Center for the Arts. Call 632-7765.

Center for Biotechnology Job Fair Information Session. Will prepare students for April 8 Biotech Job Fair. Covers resume writing, dress code, etc. Profiles of attending companies will be available. 12:40-2:10 p.m. Stony Brook Union Auditorium. Call Donna Moran, 632-8521.

Campus Life Time, Table Tennis Doubles Competition. 12:40-2:10 p.m. Limited registration day of event. Indoor Sports Complex. Call 632-7168.

Second Language Teaching Seminar Series, "Using Video in Language Teaching," Susan Stempleski, Columbia University. 3:00-5:00 p.m. 109 Jacob Javits Lecture Center. Free. Call 632-7777.

Lacrosse vs. Marist. 3:30 p.m. Athletic Field. Call 632-7200.

Men's tennis vs. SUNY-Purchase. 4:00 p.m. Tennis Courts. Call 632-7200.

University Hospital Sibling Preparation Program. For expectant parents and siblings. 4:00-5:00 p.m. 9th Floor Conference Room, University Hospital. Call 444-2960.

Intramural Department, 2 On 2 Basketball Competition. 6:30 p.m. Indoor Sports Complex. Call 632-7168.

Cystic Fibrosis Support Group. 7:30 p.m. Department of Pediatrics Conference Room, Level T-11, Health Sciences Center. Call 757-5873 or 385-4254.

Staller Center Classical Music Series, "Julian Bream, Guitarist." One of the world's greatest guitarists and lutenists. 8:00 p.m. Recital Hall, Staller Center for the Arts. \$20. Call 632-7230.

Women's History Month Lecture, "Sixty Years as a Foreign Correspondent," Ruth Gruber, author, journalist. 8:00 p.m. Room 231, Stony Brook Union. Call 632-9176.

Roth Quad Regatta Meeting. 9:00 p.m. Whitman's Main Lounge, Roth Quad. All welcome. For information call Hat at 2-2648 or Fran at 2-2655. Every Wednesday until April 22.

THURSDAY APRIL 2

Flea Market. Bargains Galore! This Faculty Student Association sponsored market is open every Thursday unless other special events are scheduled in the bi-level. 8:30 a.m.-4:00 p.m. SB Union Bi-level. Call Michele Liebowitz to confirm, 632-6510.

Computing Services Workshop, "WordPerfect." Hands-on course designed for one new to word processing. 9:00 a.m.-noon. Call 632-7795.

Computing Services Workshop, "Vectorization." 10:00 a.m.-noon. To register, call 632-7795.

The NAMES Project AIDS Memorial Quilt Display. 10:00 a.m.-7:00 p.m. Indoor Sports Complex. Free and open to the public. Call 632-6339.

Hospital Chaplaincy Interfaith Prayer Service. Noon, Level 5, Chapel, Health Sciences Center. Call 632-6562. Every Thursday.

University Hospital and the American Cancer Society, "Look Good, Feel Better Program," for women of all ages undergoing cancer treatment to develop skills to improve their appearance and self-image. 1:00-3:00 p.m. 15th Floor Conference Room, University Hospital. Free parking; validate at meeting. Call 444-2880.

"Cancer Support Group for Patients, Family and Friends," Sponsored by University Hospital and the American Cancer Society. 4:00-5:30 p.m. Level 5, University Hospital, Physical Therapy Department. Free parking; validate at meeting. Call 444-1727. Every Thursday.

Softball vs. Manhattanville. 4:00 p.m. Athletic Field. Call 632-7200.

Chemistry Dept. Organic Chemistry Seminar, "Mechanistic Studies of HIV-1 Protease and the Rational Design of Novel Anti-AIDS Drugs," Thomas D. Meek, SmithKline Beecham Pharmaceuticals. 4:00 p.m. Room 412, Chemistry. Call 632-7880.

Protestant Ministries, Brown Bag Theology. 5:00-6:30 p.m. Interfaith Lounge, 157 Humanities. Discussion group. Bring supper. Call 632-6563. Every Thursday.

Prepared Childbirth Courses. Lamaze refresher course, classes in preparation and Caesarian section birth, newborn care and preparation for breast-feeding. 7:30-9:30 p.m. (varies). Preregistration required. Call 444-2729. Every Thursday.

FRIDAY APRIL 3

Last Day for undergraduates to withdraw from a course or change courses to or from Pass/No Credit. Last day for CED/GSP students to withdraw from one or all courses.

Computing Services Workshop, "dBASE." Introductory course uses dBASE III for hands-on instruction. 9:00 a.m.-noon. Call 632-7795.

Computing Services Workshop, "Introduction to Excel." Introduces student to Excel (a popular spreadsheet program) on the Macintosh. 9:20-10:20 a.m. To register, call 2-8050.

Catholic Mass. Noon. Level 5, Chapel, Health Sciences Center. Call 444-2836. Every Friday.

Department of Linguistics Colloquium, "LF Representations, Weak Islands, and the ECP," Carmen Dobrovie-Sorin, University of Paris VII/C.N.R.S. 3:15 p.m. N505, Ward Melville Social & Behavioral Sciences. Call 632-7777.

Lacrosse vs. Canisius. 3:30 p.m. Athletic Field. Call 632-7200.

B'nai B'rith Hillel Foundation Services. 5:15 p.m. Roth Quad Dining Hall, lower level. Call 632-6565. Every Friday.

I-CON. East Coast's largest science, science fiction, fantasy and gaming exhibition. Friday, 6:00 p.m.; Saturday/Sunday, 10:00 a.m. Weekend tickets: \$25/adult in advance, \$30/at door; Student/\$14 & \$16; children under 12/\$12 & \$15. To reserve tickets, write I-CON, P.O. Box 550, Stony Brook, N.Y. 11790.

C.O.C.A. Film, *Beauty and the Beast*. 7:00, 9:30 p.m. & midnight. Room 100, Javits Lecture Center. \$1.50; \$1/I.D.

Astronomy Open Night, "The Mystery of the Cosmic Gamma Ray Bursts," Roger Knacke, professor, earth & space sciences. 7:30 p.m. Room 001, Earth & Space Sciences. Call 8221.



Non-instructional Figure Drawing. Practice from a live model. 7:30-9:30 p.m. Union Crafts Center. \$4. Call 632-6822. Every Friday.

Stony Brook Fencing Club. 8:00-10:00 p.m. Indoor Sports Complex (dance studio). Call 585-8006. Every Friday.

SATURDAY APRIL 4

CED Real Estate Licensing Program, "Market Data Analysis of Residential Properties (R2)." 8:00 a.m.-5:00 p.m.; 2nd session April 11. Second course required for N.Y.S. appraisal license. 30 hours plus exam. \$325. Call 632-7067.

B'nai B'rith Hillel Foundation Services, 9:30 a.m.: Orthodox service, Roth Quad Dining Hall, lower level; Conservative service, Roth Quad Dining Hall, 2nd floor (in kosher dining room). Services followed by Kiddush (light refreshments). Call 632-6565. Every Saturday.

Staller Center Special Event, "Zoppe Circus Europa." One-ring, European style circus complete with the legendary Wallendas, Lippizan Stallions and more daring feats and unique animal acts. 3:00 & 7:00 p.m. Main Stage, Staller Center for the Arts. \$22/\$20; children under 12/ \$11 & \$10. Call 632-7230.

C.O.C.A. Film, *Beauty and the Beast*. 7:00, 9:30 p.m. & midnight. Room 100, Javits Lecture Center. \$1.50; \$1/I.D.

SUNDAY APRIL 5

Baseball vs. Manhattanville (Doubleheader). Skyline Conference game. Noon. Baseball Field. Call 632-7200.

Prepared Childbirth Courses. Lamaze refresher course, classes in preparation and Caesarian section birth, newborn care and preparation for breast-feeding. 3:30-5:30 p.m. Preregistration required. Call 444-2729. Every Sunday.

Catholic Campus Ministry Sacrament of Reconciliation. 4:40 p.m. Peace Studies Center, Old Chemistry, and by appointment (632-6561). Every Sunday.

Catholic Campus Ministry Mass. 5:00 p.m. Peace Studies Center, Old Chemistry. Call 632-6562. Every Sunday.

C.O.C.A. Film, *Beauty and the Beast*. 7:00 & 9:30 p.m. Room 100, Javits Lecture Center. \$1.50; \$1/I.D.

MONDAY APRIL 6

Flea Market. Bargains Galore! This Faculty Student Association sponsored market is open every Monday unless other special events are scheduled in the bi-level. 8:30 a.m.-4:00 p.m. SB Union Bi-level. Call Michele to confirm, 632-6510.

Computing Services Workshop, "Advanced LOTUS." Basic and advanced macros are introduced. 9:00 a.m.-noon. Call 632-7795.

Computing Services Workshop, "WordPerfect." Hands-on course provides an overview of the most frequently used tasks and commands. 9:00 a.m.-noon. To register, call 632-7795.

Computing Services Workshop, "Introduction to WORD." Introduces the user to the Macintosh as well as WORD 4.0. 9:20-10:20 a.m. To register, call 632-8050.

Department of Microbiology Seminar, "Structural and Functional Characterization of a Retroviral Nucleocapsid Protein," Dr. Joyce Jentoft, School of Medicine, Case Western Reserve University. Noon. Room 038, Life Sciences Lab. Call 632-8800.

Catholic Mass. Noon. Level 5, Chapel, Health Sciences Center. Call 444-2836. Every Monday.

Writers Club Meeting. 2:00 p.m. Poetry Center, Room 239 Humanities. Peer Group Workshop follows (bring 5 copies of your poems for critique). Poetry Series on Video also follows meeting. Free. Call 632-0596. Every Monday.

Men's tennis vs. Southampton. 4:00 p.m. Tennis Courts. Call 632-7200.

Prepared Childbirth Courses. Lamaze refresher course, classes in preparation and Caesarian section birth, newborn care and preparation for breast-feeding. 7:30-9:30 p.m. (varies). Preregistration required. Call 444-2729. Every Monday.

"The Gospel of Luke." Bruce Kuhn in a one-man dramatic presentation. 8:30 p.m. Sponsored by Focus: Campus Crusade for Christ, Basic, Korean Christian Fellowship, Chinese Christian Fellowship and Intervarsity Christian Fellowship. Room 102, Jacob Javits Lecture Center. Free. Call 632-8844.

TUESDAY APRIL 7

CCCET School of Continuing Education, "Advanced WordPerfect 5.1 Module I." Merge, Sort and Select. 9:00 a.m.-noon; 2nd session April 9. \$105. To register, call 632-7071.

Roth Regatta Boat Builders Sign-up. 9:00 a.m.-5:00 p.m. SB Union. \$10 deposit refunded day of race. Call Hal at 2-2648 or Fran at 2-2655.

Computing Services Workshop, "Introduction to ALL-IN-1." Introduces the use of the ALL-IN-1 software running under VMS on the VAXcluster. 10:00 a.m.-noon. Call 632-7795.

Department of Psychiatry Grand Rounds. George Murray, Massachusetts General and Joan Rubinstein, assistant professor, psychiatry. 11:00 a.m.-12:30 p.m. Level 2, Lecture Hall 4, Health Sciences Center. Call 444-2988.

Catholic Mass. Noon. Level 5, Chapel, Health Sciences Center. Call 444-2836. Every Tuesday.

SB Campus Committee of NOW Brown Bag

Lunch Meeting. Addresses issues concerning all women on campus. Faculty, staff and students welcome. Noon. Room S216, Ward Melville Social & Behavioral Sciences. Call 632-7100.

University Counseling Center Group Shop Workshop. "Perception: What You See Is What You Get." Fast moving, highly experiential session explores the reasons why we each see the world differently and how we can use this for better communication. Noon-1:30 p.m. Free. To register, call 632-6715.

University Hospital Diabetes Support Group. 1:00 p.m. Conference Room 084, 12th Floor, University Hospital. Call 444-1202. Every Tuesday.

Computing Services Workshop, "LaTeXIII." Covers using counters, \typein & \typeout for entering information at execution time and for tracing settings. 1:30-3:30 p.m. Call 632-7795.

Department of Music Colloquium, "Meet the Composer - Laura Kaminsky," composer and program director of Town Hall of N.Y.C. Tapes and discussion of her music. 2:00 p.m. Room 3317, Music Wing, Staller Center for the Arts. Free. Call 632-7330.

Department of Music Colloquium, "The Akhak Kwebom of 1493," Robert Provine, University of Durham, England. Discusses the most famous treatise in the history of Korean music. 4:00 p.m. Room 3317, Staller Center for the Arts. Free. Call 632-7330.

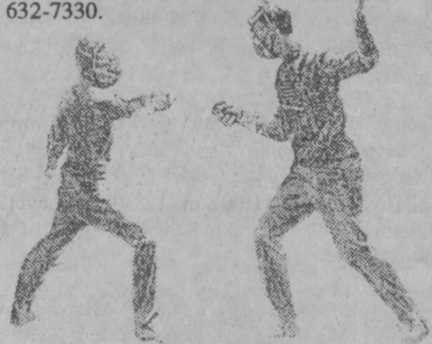
Protestant Ministries Worship, Meditation: Study & Practice. 4:00-5:00 p.m. Interfaith Lounge, 157 Humanities. Call 632-6563. Every Tuesday.

Second Language Teaching Seminar Series, "Integration of ESL and Content Area Studies," Helen Corchado, N.Y. State Department of Education. 4:00-6:00 p.m. Room 116, Harriman. Free. Call 632-7777.

Physics Department Colloquium, "Relativistic Heavy Ion Physics at the AGS: Results and Future Perspectives," Johanna Stachel, associate professor, physics. 4:15 p.m. Room P-137, Harriman Hall. Call 632-8110.

The Alternative Cinema at Stony Brook, "Sammy and Rosie Get Laid" (1987, British, color, 97 min.) A wicked black comedy in which cultural, sexual and generational conflicts ensue when a retired Pakistani politician visits his accountant son who lives in London. 7:00 and 9:30 p.m. SB Union Auditorium. \$2. Call 632-6136.

Department of Music, Contemporary Chamber Players. Features Boulez's *Derive I* and Messiaen's *Oiseaux Exotiques*. 8:00 p.m. Recital Hall, Staller Center for the Arts. Free. Call 632-7330.



Stony Brook Fencing Club. 8:00-10:00 p.m. Indoor Sports Complex (dance studio). Call 585-8006. Every Tuesday.

"The Gospel of Luke." Bruce Kuhn in a one-man dramatic presentation. 8:30 p.m. Sponsored by Focus: Campus Crusade for Christ, Basic, Korean Christian Fellowship, Chinese Christian Fellowship and Intervarsity Christian Fellowship. Room 102, Jacob Javits Lecture Center. Free. Call 632-8844

WEDNESDAY APRIL 8

Prime Time for Students (intensive academic advising period). Through April 16.

Pediatrics Grand Rounds, "Evaluation of the Immunological System," Thomas Fleisher, Na-

tional Institutes of Health. 8:00 a.m. Level 3, Lecture Hall 6, Health Sciences Center. Call 444-2730.

Computing Services Workshop, "Introduction to AIX/370." Students should obtain an account on the HP-UNIX network before taking this course. 10:00 a.m.-noon. To register, call 632-7795.

Campus Blood Drive. 10:00 a.m.-9:00 p.m. Indoor Sports Complex. Call 1-800-933-BLOOD.



Department of Music Graduate Student Noon-time Concert Series. Recital Hall, Staller Center for the Arts. Free. Call 632-7330.

University Counseling Center Group Shop Workshop, "Stress Management: Relaxing the Mind and Body." Noon-1:30 p.m. Free. To register, call 632-6715.

University Counseling Center Group Shop Workshop, "Conflict Management and Effective Negotiations." Techniques for maximizing the number of alternatives and solutions. Noon-2:00 p.m. Free. To register, call 632-6715.

Culture and Society in the Eighteenth Century Lecture Series, "The Complexity of Women's Identities in Eighteenth-Century China," Iona Man-cheong, assistant professor, history. 12:30 p.m. (Cosponsored by the Dept. of History Faculty Seminar on Eighteenth-Century Studies, The Humanities Institute, and the Women's Studies Program.) Room N-303, Ward Melville Social & Behavioral Sciences. Free. Call 632-7513 or 632-7765.

Department of Art "The Politics of Visual Culture: Race and Gender in Mid-20th Century U.S.A." Series, "I, Too am America": African-American Artists and Their Work at Mid-Century, Richard Powell, Duke University. 12:40 p.m. (Cosponsored by the Friends of the Staller Center and the Humanities Institute.) Stony Brook Art Gallery, Staller Center for the Arts. Free. Call 632-7250.

Campus Life Time, Badminton Singles Tournament. 12:40-2:10 p.m. Limited registration day of event. Indoor Sports Complex. Call Intramural Dept., 632-7168.

Center for Biotechnology 4th Annual Biotech Job Fair. 1:00-3:30 p.m. More than 25 companies (including Cold Spring Harbor Lab, Pfizer, Inc., and Curative Technologies) will have representatives available to meet with seniors, graduate students & postdocs. Center for Biotechnology, Alliance Room, Frank Melville, Jr. Memorial Library. For further information, call Donna Moran, 632-8521.

University Counseling Center Group Shop Workshop, "I Never Told Anyone." For Women Students Only. Presentation regarding complex issues of child sexual abuse. Discussion follows. Confidentiality assured. 3:00-4:30 p.m. Free. To register, call 632-6715.

Baseball vs. Queens. 3:30 p.m. Baseball Field. Call 632-7200.

Lacrosse vs. Hartford. 3:30 p.m. Athletic Field. Call 632-7200.

Office of Human Resources Employee Relations Council Trip, *Man of La Mancha* or *Streetcar Named Desire*. \$65, front mezzanine seats and bus fare. Call 2-8300 or 2-8757.

Managing and the Environment Lecture Series, "Regulatory Implications of the 1990 Clean Air Act: Market Based Incentives." 7:00-8:30 p.m. Sponsored by W. Averell Harriman School for Management and Policy. Room 111, Javits Lecture Center. Free. Call 632-7180.

Harriman School Visiting Labor/Management Lecture Series, "Comparable Worth and other Labor Issues in New York State," Thomas F. Hartnett, New York State Commissioner of Labor. 7:30-9:00 p.m. Room P113, Physics. Call 632-7770.

Robert A. Smolker Memorial Lecture in Conservation, "Lemurs Lost and Found: Conservation in Madagascar," Patricia Wright, associate professor, anthropology. Sponsored by Dept. of Ecology & Evolution. 8:00 p.m.; reception follows. Earth & Space Sciences Lecture Hall. Free. Call 632-8600.

THURSDAY APRIL 9

CED Trade and Technical Seminar, "Implementing Manufacturing Continuous Improvement." 8:30 a.m.-5:00 p.m.; 2nd session April 10. Presents the requirements of manufacturing success and the process of continuous improvement. \$425. To register, call 632-7071.

Computing Services Workshop, "Producing a Thesis Using LaTeX." 1:30-3:30 p.m. To register, call 632-7795.

University Counseling Center Group Shop Workshop, "Assertiveness Training." For Women Only. Two sessions (April 16): 2:00-3:15 p.m. Free. To register, call 632-6715.

Department of Theatre Arts Presentation, *Hair* by Geromi Ragni and James Rado; music by Galt MacDermot. An American love/rock musical. 8:00 p.m., Thursday-Saturday; 2:00 p.m., Sunday. (Also April 14-19.) Theatre Two, Staller Center for the Arts. \$10; \$8/students & seniors. Call 632-7230.

FRIDAY APRIL 10

Computing Services Workshop, "Introduction to WordPerfect." WordPerfect Version 5.1. 9:20-10:20 a.m. To register, call 632-8050.

University Apartments' "Nepal Night." Learn about the country and taste its exotic cuisine. 6:00 p.m. Schomburg Apartments Commons. Free. Call 2-2337.

C.O.C.A. Film, *Prince of Tides*. 7:00, 9:30 p.m. & midnight. Room 100, Javits Lecture Center. \$1.50; \$1/I.D.

Department of Theatre Arts Presentation, *Hair* by Geromi Ragni and James Rado; music by Galt MacDermot. 8:00 p.m. Theatre Two, Staller Center for the Arts. \$10; \$8/students & seniors. Call 632-7230.

SATURDAY APRIL 11

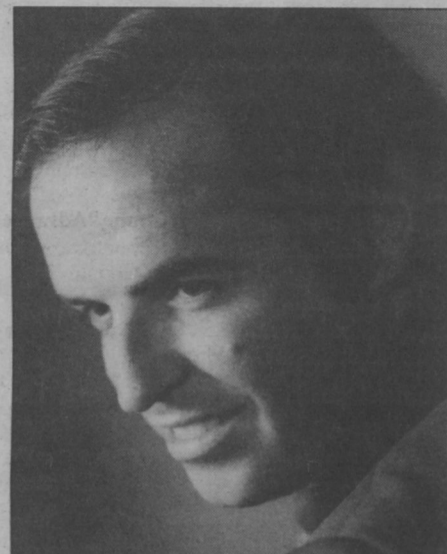
Alumni Association Career Day for Alumni & Students. 8:30 a.m.-3:30 p.m. Harriman School for Management and Policy. \$15/Alumni Association members; \$5/non-members; \$25/including Alumni Association membership. For information, call 632-6330.

Union Crafts Center, Herb Basketry. This basket can be used as a pie carrier. Made with fine woven reed bottom and a high handle. 10:15 a.m.-4:00 p.m. Material fee \$12. Fiber Studio, Stony Brook Union. \$30/students; \$40/non-students. To register, call 632-6828/6822.

Men's & Women's Outdoor Track & Field PAC Championships. 11:00 a.m. Athletic Field. Call 632-7200.

C.O.C.A. Film, *Prince of Tides*. 7:00, 9:30 p.m. & midnight. Room 100, Javits Lecture Center. \$1.50; \$1/I.D.

Department of Theatre Arts Presentation, *Hair* by Geromi Ragni and James Rado; music by Galt MacDermot. 8:00 p.m. Theatre Two, Staller Center for the Arts. \$10; \$8/students & seniors. Call 632-7230.



Tenor James Hopkins sings the part of Ferrando in Mozart's *Così fan tutte*.



Soprano Christine Goerke plays Fiordiligi.



Mezzo Suzanne Loerch plays Dorabella.

Department of Music, Stony Brook Opera Ensemble and Symphony Orchestra. David Lawton, conductor, and Gary Glaze, director. A full production of *Così fan tutte*. 8:00 p.m. Main Stage, Staller Center for the Arts. \$15/\$13/\$11; student/senior discounts available. Call 632-7230.

SUNDAY APRIL 12

Baseball vs. Hunter (Doubleheader). Skyline Conference game. Noon. Baseball Field. Call 632-7200.

Department of Theatre Arts Presentation, *Hair* by Geromi Ragni and James Rado; music by Galt MacDermot. 2:00 p.m. Theatre Two, Staller Center for the Arts. \$8; \$6/students & seniors. Call 632-7230.

C.O.C.A. Film, *Prince of Tides*. 7:00 & 9:30 p.m. Room 100, Javits Lecture Center. \$1.50; \$1/I.D.

MONDAY APRIL 13

Advance Registration for Fall Semester (through May 1). Schedules for undergraduate and graduate students announced prior to registration.

Computing Services Workshop, "WordPerfect." Hands-on course provides an overview of the most frequently used tasks and commands. 9:00 a.m.-noon. To register, call 632-7795.

Computing Services Workshop, "Advanced LOTUS." Basic and advanced macros are introduced. 9:00 a.m.-noon. Free. Call 632-7795.

Village Cinema Film Series, "Student Academy Awards Regional Finalists." Screening of films by the regional N.Y. State finalists in this national competition for student filmmakers. Four categories: dramatic, documentary, animation, and experimental. 8:00 p.m. Theatre Three, 412 Main St., Port Jefferson. \$4; \$3.50/students, seniors and members of the Arts Council. (Cosponsored by the Humanities Institute, the Greater Port Jefferson Arts Council, and Theatre Three.) Call 632-7765, 928-9100, or 473-0136.

TUESDAY APRIL 14

Computing Services Workshop, "Advanced ALL-IN-1." 10:00 a.m.-noon. To register, call 632-7795.

Department of Psychiatry Grand Rounds, "Learning and Emotional Responsivity in Cocaine-exposed Infants," Stephen Alexandri; Medical College of Pennsylvania. 11:00 a.m.-12:30 p.m. Level 2, Lecture Hall 4, Health Sciences Center. Call 444-2988.



Student Union & Activities, Plant Sale. 11:00 a.m.-4:00 p.m. Stony Brook Union Lobby. Call 632-6828.

SB Campus Committee of NOW Brown Bag Lunch Meeting. Addresses issues concerning all women on campus. Faculty, staff and students welcome. Noon. Room S216, Ward Melville Social & Behavioral Sciences. Call 632-7100.

Department of Physiology and Biophysics Seminar, "Sodium-dependent Glucose Transport," Ernest M. Wright, UCLA School of Medicine, Los Angeles, CA. Noon. T-5, Room 140, Basic Health Sciences. Free. Call 444-3036.

CCCET School of Continuing Education, "Advanced WordPerfect 5.1 Module II." Tables, Macros and Columns. Tuesday/Thursday, noon-1:30 p.m. (through April 30). \$105; preregistration required. Call 632-7071.

Physics Department Colloquium, "Most Urgent Problems in Physics and Astrophysics," Vitaly Ginzburg, Lebedev Institute, Moscow, Russia. 4:15 p.m., Room P-137, Harriman Hall. Call 632-8110.

Humanities Institute Four-Day Visiting Fellows Lecture, "Science in the World Community: the Need for 'Strong Reflexivity,'" Sandra Harding, University of Delaware. 4:30 p.m. Humanities Institute, E-4340, Library. Free. Call 632-7765.

University Counseling Center Group Shop Workshop, "Effective Public Speaking." 6:00-7:30 p.m. Free. To register, call 632-6715.

The Alternative Cinema at Stony Brook, The Marriage of Maria Braun (1978, German with English subtitles, color, 120 min.). An amazingly coherent mix of epic romance, offbeat comedy and soap opera. 7:00 and 9:30 p.m. SB Union Auditorium. \$2. Call 632-6136.

Department of Theatre Arts Presentation, Hair by Geromi Ragni and James Rado; music

by Galt MacDermot. 8:00 p.m. Tuesday-Saturday; 2:00 p.m., Sunday. Theatre Two, Staller Center for the Arts. \$10; \$8/students & seniors. Call 632-7230.

WEDNESDAY APRIL 15

Pediatrics Grand Rounds, "Talking to Children about Death," Richard N. Fine, professor & chair, pediatrics; Martha Driessnack, nurse practitioner, pediatrics; and Father Robert Smith, Institute for Medicine in Contemporary Society. 8:00 a.m. Level 3, Lecture Hall 6, Health Sciences Center. Call 444-2730.

Computing Services Workshop, "LOTUS." Hands-on course introduces the beginner to the most frequently used commands. 9:00 a.m.-noon. To register, call 632-7795.

Computing Services Workshop, "WordPerfect." Provides an overview of the most frequently used tasks and commands. 9:00 a.m.-noon. To register, call 632-7795.

University Counseling Center Group Shop Workshop, "Interviewing Skills." 10:30 a.m.-noon. Free. To register, call 632-6715.

Union Crafts Center Co-op, Pottery Sale. 11:00 a.m.-3:00 p.m. SB Union Lobby. Call 632-6828.

Student Union & Activities, Plant Sale. 11:00 a.m.-4:00 p.m. SB Union Lobby. Call 632-6828.

Department of Music Graduate Student Noon-time Concert Series. Recital Hall, Staller Center for the Arts. Free. Call 632-7330.

Department of Art "The Politics of Visual Culture: Race and Gender in Mid-20th Century U.S.A." Series, "Visual Metaphor at Mid-Century: Labyrinths, Mazes and Webs," Michael Leja, Northwestern University. Addresses gendered connections between visual and verbal communication in Abstract Expressionism as well as some of its Surrealist antecedents. 12:40 p.m. (Cosponsored by the Friends of the Staller Center and the Humanities Institute.) Stony Brook Art Gallery, Staller Center for the Arts. Free. Call 632-7250.

Campus Life Time, Wallyball Mini Tournament. 12:40-2:10 p.m. Limited registration day of event. Indoor Sports Complex. Call Intramural Department, 632-7168.

Softball vs. Hunter. 3:30 p.m. Athletic Field. Call 632-7200.

University Hospital Sibling Preparation Program. For expectant parents and siblings. 4:00-5:00 p.m. 9th Floor Conference Room, University Hospital. Call 444-2960.

Humanities Institute Four-Day Visiting Fellows Faculty Seminar, "Science, 'Race,' and Remaking Democracy: The Project," Sandra Harding, University of Delaware. 4:30 p.m. Room E-4340, Library. Call 632-7765.

University Counseling Center Group Shop Workshop, "Dealing With Our 'Inner Critic.'" Discover ways to disempower your critic, and empower yourself. 6:00-7:30 p.m. Free. To register, call 632-6715.

Department of Theatre Arts Presentation, Hair by Geromi Ragni and James Rado; music by Galt MacDermot. 8:00 p.m. Theatre Two, Staller Center for the Arts. \$10; \$8/students & seniors. Call 632-7230.

Department of Music, Contemporary Chamber Players, "Five American Premieres" (preview concert). Specially commissioned works by Kathryn Alexander, James Boros, Sandra Sprecher, James Moberly and Steven Roens. (Program to be repeated on April 22 at Merkin Hall, New York City.) 8:00 p.m. Recital Hall, Staller Center for the Arts. Free. Call 632-7330.

THURSDAY APRIL 16

Computing Services Workshop, "WordPerfect."

Hands-on course provides an overview of the most frequently used tasks and commands. 9:00 a.m.-noon. To register, call 632-7795.

Computing Services Workshop, "Vi Editor." An introduction to the UNIX editor Vi. Users should obtain an account on the HP-UNIX network before taking this course. 10:00 a.m.-noon. To register, call 632-7795.

Student Union & Activities, Plant Sale. 11:00 a.m.-4:00 p.m. Stony Brook Union Lobby. Call 632-6828.

Humanities Institute Four-Day Visiting Fellows Graduate Student Seminar, Topic T.B.A. Sandra Harding, University of Delaware. Noon. Room E-4340, Library. Call 632-7765.

University Counseling Center Group Shop Workshop, "Finding the Right Position: Tips for Your Job Search." 3:00-5:00 p.m. Free. To register, call 632-6715.

Softball vs. William Paterson (Doubleheader). 3:30 p.m. Athletic Field. Call 632-7200.

Chemistry Department Organic Chemistry Seminar, "Quinone Methides: Synthesis, Chemistry, and Biological Activity," Steven R. Angle, University of California, Riverside. 4:00 p.m. Room 412, Chemistry. Call 632-7880.

Second Language Teaching Seminar Series, "Multicultural Perspectives in Teaching," Yvonne DeGateno, United Way of New York. 4:00-6:00 p.m. Room 137, Harriman. Free. Call 632-7777.

Undergraduate Excellence Awards Presentation. 5:00 p.m. Recital Hall, Staller Center for the Arts. Call 632-6700.

The Poetry Center Readings. Poets: Adam Fisher, Vince Clemente, Mindy Kronenberg, Claire Nicolas White and other Long Island poets. 7:30 p.m.; reception to follow. Poetry Center, Room 238, Humanities. \$3. Call 632-7373.

Department of Theatre Arts Presentation, Hair by Geromi Ragni and James Rado; music by Galt MacDermot. 8:00 p.m. Theatre Two, Staller Center for the Arts. \$10; \$8/students & seniors. Call 632-7230.

FRIDAY APRIL 17

Good Friday (classes in session).

Computing Services Workshop, "DOS." Introduces the beginner to the most frequently used DOS commands. 9:00 a.m.-noon. Free. To register, call 632-7795.

Computing Services Workshop, "Resume in WORD." Shows how to use the resume template. 9:20-10:20 a.m. To register, call 632-8050.

Baseball vs. New Paltz (Doubleheader). Skyline Conference game. 1:00 p.m. Baseball Field. Call 632-7200.

Department of Theatre Arts Presentation, Hair by Geromi Ragni and James Rado; music by Galt MacDermot. 8:00 p.m. Theatre Two, Staller Center for the Arts. \$8; \$6/students & seniors. Call 632-7230.

C.O.C.A. Film, Cape Fear. 7:00, 9:30 p.m. & midnight. Room 100, Javits Lecture Center. \$1.50; \$1/I.D.

SATURDAY APRIL 18

Lacrosse vs. Georgetown. 1:30 p.m. Athletic Field. Call 632-7200.

C.O.C.A. Film, Cape Fear. 7:00, 9:30 p.m. & midnight. Room 100, Javits Lecture Center. \$1.50; \$1/I.D.

Department of Theatre Arts Presentation, Hair by Geromi Ragni and James Rado; music by Galt MacDermot. 8:00 p.m. Theatre Two, Staller Center for the Arts. \$10; \$8/students & seniors. Call 632-7230.

SUNDAY APRIL 19

Department of Theatre Arts Presentation, Hair by Geromi Ragni and James Rado; music by Galt MacDermot. 2:00 p.m. Theatre Two, Staller Center for the Arts. \$10; \$8/students & seniors. Call 632-7230.

C.O.C.A. Film, Cape Fear. 7:00 & 9:30 p.m. Room 100, Javits Lecture Center. \$1.50; \$1/I.D.

MONDAY APRIL 20

Computing Services Workshop, "Advanced LOTUS." Basic and advanced macros are introduced. 9:00 a.m.-noon. Free. To register, call 632-7795.

Computing Services Workshop, "DOS." Introduces the beginner to the most frequently used DOS commands. 9:00 a.m.-noon. Free. To register, call 632-7795.

Cultural Festival ("Many Nations, Many Cultures: Together One World") Opening Ceremony. "History of Diversity at Stony Brook," Myrna Adams, director, Equal Opportunity and Affirmative Action. Other speakers: Oral Muir and Wayne Blair, resident hall intern. 12:45 p.m. Fireside Lounge, Stony Brook Union. Call 632-6828.

University Distinguished Lecture Series, "Science & Society: the Changing Relationship," Walter Massey, director of National Science Foundation. 4:00 p.m. (Cosponsored by the Office of the Provost and *Newsday*.) Recital Hall, Staller Center for the Arts. Free. Call 632-7000.

Cultural Festival Workshop, "Multiculturalism 101," Sheila Rothenberg, lecturer, CED Special Programs. 7:00 p.m. UNII Cultural Center, Roth Cafeteria Building. Call 632-6828.

Italian Cultural Society Film, "Everybody's Fine" (Italian). 9:00 p.m. Stony Brook Union Auditorium. Free. Call 632-4641.

TUESDAY APRIL 21

Computing Services Workshop, "DOS." Introduces the beginner to the most frequently used DOS commands. 9:00 a.m.-noon. Free. To register, call 632-7795.

Computing Services Workshop, "Introduction to ALL-IN-1." Introduces the use of the ALL-IN-1 software running under VMS on the VAXcluster. 10:00 a.m.-noon. To register, call 632-7795.

Department of Psychiatry Grand Rounds, "Perspectives on Hypnosis, Hypnotizability, and Dissociation," Fred Frankel, Beth Israel Hospital, Boston, MA. 11:00 a.m.-12:30 p.m. Level 2, Lecture Hall 4, Health Sciences Center. Call 444-2988.

SB Campus Committee of NOW Brown Bag Lunch Meeting/Speaker Series. Dianne Rulnick, director, human resources. Noon. Room S216, Ward Melville Social & Behavioral Sciences. Free. Call 632-7100.

Cultural Festival Film, "Late Summer Blues" (Israeli). Sponsored by Commuter Students Association. 1:00 p.m. Stony Brook Union Auditorium. Free. Call 632-6455.



Men's tennis vs. Staten Island. 4:00 p.m. Tennis Courts. Call 632-7200.

The Institute for Medicine in Contemporary Society Spring Lecture Series - The Ralph Johnston Memorial Lecture, "Behind My Mask: The Peculiar Work of Literature About Medicine," Joseph Cady, University of Rochester. 4:00 p.m. Lecture Hall 6, Health Sciences Center. Call 444-2765.

University Counseling Center Group Shop Workshop, "Feeling Better About Yourself." Practical "how to" ways to increase positive self-awareness, self-control and self-projection. 6:00-7:30 p.m. Free. To register, call 632-6715.

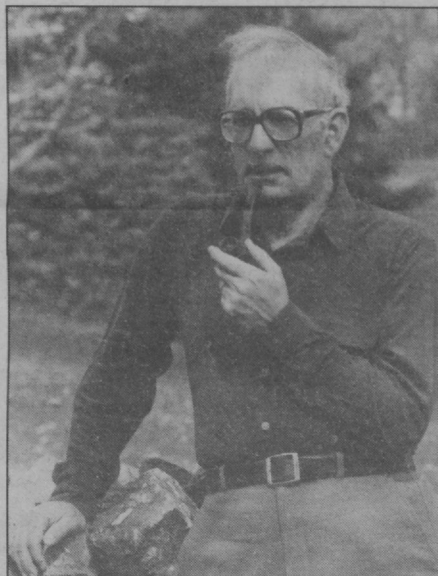
United Nations Forum. Features the model UN at Stony Brook. 7:00 p.m. Stony Brook Auditorium. Call Hannah Robinson, United Nations Association at Stony Brook, 632-7161.

WEDNESDAY APRIL 22

Pediatrics Grand Rounds, "Lead Poisoning Update," Sharon Inkeles, clinical assistant professor, pediatrics. 8:00 a.m. Level 3, Lecture Hall 6, Health Sciences Center. Call 444-2730.

Computing Services Workshop, "Vi Editor." An introduction to the UNIX editor Vi. Users should obtain an account on the HP-UNIX net work before taking this course. 10:00 a.m.-noon. To register, call 632-7795.

Student Union & Activities Environmental Program, "Earth Day Celebration." 10:00 a.m.-5:00 p.m. Fireside Lounge, Stony Brook Union. Call 632-6828.



Composer George Crumb

Department of Music/WUSB Radio Spring "Music at Stony Brook" Series, "George Crumb and His Music." 11:00 a.m.-1:00 p.m. WUSB 90.1 FM. Discussion with Gil Kalish, Tara O'Connor, Tina Togliola and a percussionist. For information, call 632-7330.

Department of Music Graduate Student Noon-time Concert Series. Recital Hall, Staller Center for the Arts. Free. Call 632-7330.

Cultural Festival-on-the-Plaza. Features "A Taste of the World" (food festival), "Hands Across Campus," international folk dance, and tie-dyeing. Noon-3:00 p.m. Fine Arts Plaza (rain location: Fireside Lounge & Ballroom, Stony Brook Union). Call 632-6828.

Campus Life Time, Football Punting Contest. 12:40-2:10 p.m. Sports Complex. Call Intramural Department, 632-7168.

Baseball vs. USMMA (Skyline Conference game). 3:30 p.m. Baseball Field. Call 632-7200.

Softball vs. Lehman. 4:00 p.m. Athletic Field. Call 632-7200.

Humanities Institute Visiting Lecturer Series: Issues in Cultural Studies, "Ancient Painting, Modern Vision: The Construction of Antiquity in the Enlightenment," Bernadette Fort, Northwestern University. (Cosponsored with the History Department's Eighteenth-Century Studies Series.) 4:30 p.m.; reception to follow. Humanities Institute, E-4340 Library. Call 632-7765 or 632-7513.

The First Annual Black History Extravaganza. Combines culture, education and entertainment. Keynote speaker: Dr. Khalid Abdul, Urban Crisis Center in Atlanta. 7:00 p.m. Main Stage, Staller Center for the Arts. \$6; \$3/ID. Available at Polity Box Office, SB Union, 632-6464.

T H U R S D A Y APRIL 23

Department of Music Colloquium, "Meet the Composer - George Crumb." All day and evening. Activities include open rehearsal, workshop with composition students and a retrospective concert of his music (8:00 p.m. Recital Hall, Staller Center for the Arts). Room 3317, Music Wing, Staller Center for the Arts. Free. For further information, call 632-7330.

Computing Services Workshop, "Networks & Mail." Focuses on using the facilities of networks such as BITNET and Internet from the various machines here at Stony Brook. Will cover the IBM, VAX, ALL-IN-1 and Unix systems. 10:00 a.m.-noon. Call 632-7795.

International Cultural Arts & Crafts Fair. 10:00 a.m.-5:00 p.m. Sponsored by Zeta Delta Phi Sorority Inc. Fireside Lounge and Lobby, Stony Brook Union. Call 632-4613.

Cultural Festival Documentary, "In the Image of the White Man." Turn-of-the-century experiments in education developed to "Anglocize" Native Americans. Discussion follows. 1:00-2:30 p.m. Stony Brook Union Art. Gallery. Call Cultural Festival Committee, 632-6828.

Chemistry Department Organic Chemistry Seminar. Scott E. Denmark, University of Illinois. 4:00 p.m. Room 412, Chemistry. Call 632-7880.

Second Language Teaching Seminar Series, "Testing Oral Proficiency," Glayol Ekbatani, St. John's University. 4:00-6:00 p.m. Room 137, Harriman. Free. Call 632-7777.

Department of Music Concert, "George Crumb and his Music." 8:00 p.m. Pulitzer Prize winning composer will appear in person and his music will be performed by graduate students. Staller Center for the Arts. Free. Call 632-7230.

Second Annual Cultural Extravaganza. Talent and cultural fashion show. 8:00-10:00 p.m. Sponsored by Zeta Delta Phi Sorority Inc. Stony Brook Union Auditorium. Call 632-4613.

"**Cultural Overdose**," a multicultural dance/party with tie-dyeing contest. 10:00 p.m.-2:00 p.m. SB Union Auditorium. \$3. Call 632-6828.

F R I D A Y APRIL 24

The Institute for Medicine in Contemporary Society Conference, "Pain and Suffering: An Interdisciplinary Conversation." (In collaboration with the Pain Center.) 8:00 a.m.-5:00 p.m. Level 2, Lecture Hall 2, Health Sciences Center. \$60; \$30/full-time SUNY faculty; free/residents, medical and graduate students on a space available basis. Call 444-2765.

School of Nursing Gerontology Project 2nd Annual Clinical Case Forum, "Aging and Behavior," Sister Rose Therese Bahr, Catholic University of America, Washington, D.C. 8:30 a.m. (registration)-1:30 p.m. (lunch). Level 2, Lecture Hall 4, Health Sciences Center, School of Nursing. (Cosponsored by Kappa Gamma Chapter, Sigma Theta Tau, SUNY Stony Brook and Veterans Administration Medical Center, Northport.) \$50/mail registration; \$55/at door; \$20/students by mail; \$25/students at door. (Fee includes continental breakfast, lunch, refreshments and parking.) Call Alice Finkle at 444-3249 or 444-3289.

Computing Services Workshop, "dBASE." Uses dBASE III for hands-on instruction. 9:00 a.m.-noon. To register, call 632-7795.

Pride Patrol (University Cleanup Day). 9:00 a.m.-3:30 p.m. (rain date, May 1). To sign up call Ann Forkin, 632-6320.

Computing Services Workshop, "DataQuery." Hands-on course introduces the beginner to the query editor using the student database files. 10:00 a.m.-noon. To register, call 632-7795.

Lacrosse vs. U.S. Air Force Academy. 3:30 p.m. Athletic Field. Call 632-7200.

Chemistry Department Biegeleisen Lecture, "Mesmerized by Metal-Metal Bonds," F.A. Cotton, Texas A & M. 4:00 p.m. Room 116, Old Chemistry. Call 632-7880.

Roth Quad Regatta (The Cardboard Boat Race). 4:00 p.m. Roth Quad Pond. For further information, call Hal at 2-2648 or Fran at 2-2655.

Keller International Talent Show and Party. 7:30 p.m.-midnight. Roosevelt Quad Courtyard. Call Wayne Blair, Keller College, 632-6796.

Annual S.A.I.N.T.S. Awards Dinner. 7:00 p.m. Stony Brook Union Ballroom. \$10/faculty & staff; \$5/students. For further information, call Judith Berhannan, 632-6872; Lucia Rusty, 632-7081; or Amelia Sarpong, 632-1192.

C.O.C.A. Film, JFK. 7:00, 9:30 p.m. & midnight. Room 100, Javits Lecture Center. \$1.50; \$1/I.D.

S A T U R D A Y APRIL 25

Alumni Association College Day, "Ethics in the 90s." 8:45 a.m.-4:30 p.m. Fashion Institute of Technology, New York City. \$20/Alumni Association members; \$30/non-members; \$45/including Alumni Association membership. Call 632-6330.

CCCET School of Continuing Education, "Advanced PageMaker Module II: Design & Layout." 9:00 a.m.-2:00 p.m.; 2nd session May 2. Room N-243, Ward Melville Social & Behavioral Sciences. \$155. Preregistration required. Call 632-7071.

The Institute for Medicine in Contemporary Society Conference, "An Encounter of Chinese & American Art & Medicine: The Story of Lam Wa." (In collaboration with the Smithtown Township Council of the Arts.) 9:00 a.m.-5:00 p.m. Level 2, Lecture Hall 2, Health Sciences Center. Call 444-2765.

University Counseling Center Group Shop Workshop, "Wild Plants of Long Island that Can Be Used for Food and Medicine." 10:00 a.m.-noon. Free. To register, call 632-6715.

Marine Sciences Research Center, Earth Day Open House. 11:00 a.m.-4:00 p.m. South Campus. Free. Call 632-8701.



Baseball vs. New Jersey Tech (Doubleheader). Skyline Conference game. Noon. Baseball Field. Call 632-7200.

Softball vs. Binghamton (Doubleheader). Noon. Athletic Field. Call 632-7200.

Latin American Students Organization (LASO) Annual Spring Semi-Formal. Reception and awards dinner. 6:00 p.m.-2:00 a.m. Stony Brook Union Ballroom. For tickets, call Manny Brea, 632-3592.

Stony Brook Gospel Choir Spring Concert. 7:00 p.m. Stony Brook Union Auditorium. For tickets, call Johnny Walters, 632-3564.

C.O.C.A. Film, JFK. 7:00, 9:30 p.m. & midnight. Room 100, Javits Lecture Center. \$1.50; \$1/I.D.

Department of Music, University Orchestra Concert. Features Saint Saens' *Carnival of the Animals* and Haydn's *Cello Concerto in C Major*. Timothy Mount, narrator; Jack Kreiselman, director. The Stony Brook Chorale performs Orff's *Carmina burana*. T. Mount, director. 8:00 p.m. Main Stage, Staller Center for the Arts. \$7; \$5/seniors & students. Call 632-7230.

S U N D A Y APRIL 26



Men's & Women's Outdoor Track & Field Stony Brook Invitational. 10:00 a.m. Athletic Field. Call 632-7200.

Baseball vs. Upsala. 1:00 p.m. Baseball Field. Call 632-7200.

C.O.C.A. and the Cultural Festival Committee Film, "Black Robe" (Native American). 2:00 p.m. SB Union Auditorium. \$2. Call 632-6828.

Students for an Accessible Campus, "Second Annual Dinner/Dance." D.J. and awards to faculty and staff. Sponsored by FSA. 6:30 p.m. End of the Bridge Restaurant, Stony Brook Union. \$10. Call Office of Disabled Students (DSS), 632-6748.

C.O.C.A. Film, JFK. 7:00 & 9:30 p.m. Room 100, Javits Lecture Center. \$1.50; \$1/I.D.

M O N D A Y APRIL 27

CCCET School of Continuing Education, "Introduction to Lotus 3.0." Hands-on exploration of basics of spreadsheet design. Versions 2.01, 2.2 and Release 3 are supported. 9:00 a.m.-noon (through June 1). \$195; preregistration required. Call 632-7071.

Computing Services Workshop, "LOTUS." Hands-on course introduces the beginner to the most frequently used commands. 9:00 a.m.-noon. To register, call 632-7795.

Computing Services Workshop, "WordPerfect." Provides an overview of the most frequently used tasks and commands. 9:00 a.m.-noon. To register, call 632-7795.

Baseball vs. Old Westbury. 3:30 p.m. Baseball Field. Call 632-7200.

Chemistry Department Inorganic/Organometallic Seminar, "Second Moment Scaling: A New Unified Theory for Electron Counting," Stephen Lee, University of Michigan. 4:00 p.m. Room 412, Chemistry. Call 632-7880.

CCCET School of Continuing Education, "Advanced Lotus 3.0 Module I." Advanced formulas and functions. 6:00-9:00 p.m.; 2nd session April 29. \$95. Preregistration required. Call 632-7071.

Department of Music, Chamber Music Festival. Features the honorary graduate ensembles and mixed groups from the chamber music program. 8:00 p.m. Recital Hall, Staller Center for the Arts. Free. Call 632-7330.

Village Cinema Film Series, The Family Game (1984, color, subtitled, 107 min.). A tutor hired to improve a son's grades disrupts the lives of an entire family. Examines traditional values under the strain of modern culture. Winner of Japan's Best Picture award. 8:00 p.m. Theatre Three, 412 Main St., Port Jefferson. \$4; \$3.50/

students, seniors and members of the Arts Council. (Cosponsored by the Humanities Institute, the Greater Port Jefferson Arts Council, and Theatre Three.) Call 632-7765, 928-9100, or 473-0136.

TUESDAY APRIL 28

Computing Services Workshop, "DOS." Introduces the beginner to the most frequently used DOS commands. 9:00 a.m.-noon. Free. To register, call 632-7795.

Computing Services Workshop, "Introduction to ALL-IN-1." Introduces the use of the ALL-IN-1 software running under VMS on the VAXcluster. 10:00 a.m.-noon. To register, call 632-7795.

Department of Psychiatry Grand Rounds. Dan Levinson, Yale University. 11:00 a.m.-12:30 p.m. Level 2, Lecture Hall 4, Health Sciences Center. Call 444-2988.

SB Campus Committee of NOW Brown Bag Lunch Meeting/Speaker Series, "Effects of Prenatal Maternal Stress on Infant Prematurity," Marci Lobel, assistant professor, psychology. Noon. Room S216, Ward Melville Social & Behavioral Sciences. Free. Call 632-7100.

Softball vs. Old Westbury. 3:30 p.m. Athletic Field. Call 632-7200.

CCET School of Continuing Education, "Advanced WordPerfect 5.1 Module III." Legal. Tuesday/Thursday, 6:00-8:00 p.m. (through May 5). \$105. Preregistration required. Call 632-7071.

L.I. Chapter - Association of Women in Science Lecture, "Habitat Selection of Oyster Catchers," Brook Lauro. 7:30 p.m. Room S-240, Math Tower. Call 473-4561.

WEDNESDAY APRIL 29

Pediatrics Grand Rounds, "HIV in the Kidney," Jose Strauss, Division of Pediatric Nephrology, Miami, FL. 8:00 a.m. Level 3, Lecture Hall 6, Health Sciences Center. Call 444-2730.

Computing Services Workshop, "Introduction to WORD." Introduces the user to the Macintosh as well as WORD 4.0. 8:30-9:30 a.m. To register, call 632-8050.

Computing Services Workshop, "Advanced LOTUS." Basic and advanced macros are introduced. 9:00 a.m.-noon. Free. To register, call 632-7795.

CCET School of Continuing Education, "Word for Windows." 9:00 a.m.-noon (through May 27). Starts with basics of Windows 3.0; learn to "switch" to other programs; learn the fundamentals of Word for Windows. Introduction to PCs or equivalent experience required. \$195. Preregistration required. Call 632-7071.

Department of Music Graduate Student Noon-time Concert Series. Recital Hall, Staller Center for the Arts. Free. Call 632-7330.

The Mentor Program, "End-of-Year Celebration Reception." 12:30-2:00 p.m. Alliance Room, Frank Melville, Jr. Memorial Library. Call 632-7090.

Campus Life Time, 2 on 2 Beach Volleyball Mini Tournament. Limited registration day of event. 12:40 - 2:10 p.m. Sports Complex. Call Intramural Department, 632-7168.

University Counseling Center Group Shop Workshop, "I Never Told Anyone." For Male Students Only. Presentation regarding complex issues of child sexual abuse. Discussion follows. Confidentiality assured. 3:00-4:30 p.m. Free. To register, call 632-6715.

Baseball vs. St. Joseph's (Patchogue). 3:30 p.m. Baseball Field. Call 632-7200.

University Hospital Sibling Preparation Program. For expectant parents and siblings. 4:00-5:00 p.m. 9th Floor Conference Room, University Hospital. Call 444-2960.

Humanities Institute's Ethnicity in the New America: The University of the Future Seminar Series, "Asian American Studies: Past, Present, and Future," Amy Ling, University of Wisconsin at Madison. 4:30 p.m. Humanities Institute, E-4340 Library. Free. Call 632-7765.

Managing and the Environment Lecture Series, "Environmental Considerations in Managing an International Business." 7:00-8:30 p.m. Sponsored by W. Averell Harriman School for Management and Policy. Room 111, Javits Lecture Center. Free. Call 632-7180.

Department of Music, Chamber Music Festival. Features the honorary graduate ensembles and mixed groups from the chamber music program. 8:00 p.m. Recital Hall, Staller Center for the Arts. Free. Call 632-7330.

THURSDAY APRIL 30

CED Trade and Technical Seminar, "The Tools and Techniques of Total Quality Management." 8:30 a.m.-5:00 p.m. Provides an understanding of the Total Quality Approach to managing an organization. \$325; preregistration required. Call 632-7071.

CED Professional Development Series, "Developing a Business Plan." 8:30 a.m.-5:00 p.m. Assists in establishing well-defined business goals and in writing a successful business plan. (Offered in cooperation with the USB Small Business Development Center.) \$195; preregistration required. Call 632-7071.

Computing Services Workshop, "WordPerfect." Hands-on course provides an overview of the most frequently used tasks and commands. 9:00 a.m.-noon. To register, call 632-7795.

Computing Services Workshop, "Introduction to AIX/370." An introduction to the AIX/370 environment, UNIX based operating system. Students should obtain an account on the HP-UNIX network before taking this course. 10:00 a.m.-noon. To register, call 632-7795.

Career Women's Network Luncheon. Dusa McDuff, professor and chair, mathematics. Noon-1:00 p.m. Stony Brook Union Ballroom. \$7.50 in advance. Call: Administration, 632-6040, 632-0301, 632-0120; Engineering, 632-8300; Library, 632-7140; Mathematics, 632-8260; or Campus Residences, 632-6974.

Second Language Teaching Seminar Series, "Emotion and Second Language Production," Miriam Eisenstein, New York University. 3:00-5:00 p.m. Room 137, Harriman. Free. Call 632-7777.

Chemistry Dept. Organic Chemistry Seminar. Ving Lee, Lederle Labs. 4:00 p.m. Room 412, Chemistry. Call 632-7880.

Department of Theatre Arts Presentation, *The Tempest*, by William Shakespeare. An enchanter weaves a spell over a cast of fantastic characters and tames a tempest until it brings to pass all things he has desired. 8:00 p.m. Thursday, Friday & Saturday; 2:00 p.m., Sunday (through May 3). Theatre One, Staller Center for the Arts. \$8; \$6/students & seniors. Call 632-7230.

FRIDAY MAY 1

Last day for advanced registration for fall semester.

CED Real Estate Licensing Program, "Income Property Appraising 1B (G2)." Friday/Saturday, 8:00 a.m.-5:00 p.m. (through May 9). Designed to further knowledge of leased values, mortgage equity analysis, discounted cash flow and debt coverage ratio. \$395. To register, call 632-7067.

Computing Services Workshop, "DOS." Overview of hardware and hands-on training for the DOS commands. Introduces the beginner to the most frequently used DOS commands. 9:00 a.m.-noon. Free. Preregistration required. Call 632-7795.

Computing Services Workshop, "dBASE." Introductory course designed to give exposure to the dot prompt commands. Uses dBASE III for hands-on instruction. 9:00 a.m.-noon. Preregistration required. Call 632-7795.



Fourth Annual Spring Dance. 6:00 - 7:00 p.m., cocktails; 7:00 p.m., dinner and dance. Sponsored by the Human Resources Employee Relations Council. For ticket information, call 632-6136.

C.O.C.A. Film, *Addams Family*. 7:00 p.m., 9:30 p.m. & midnight, Friday & Saturday; 7:00 p.m. & 9:30 p.m., Sunday. Room 100, Javits Lecture Center. \$1.50; \$1/I.D.

Department of Theatre Arts Presentation, *The Tempest*, by William Shakespeare. 8:00 p.m. Theatre One, Staller Center for the Arts. \$8; \$6/students and seniors. Call 632-7230.

EXHIBITS

Through April 2:

The NAMES Project AIDS Memorial Quilt Display. Each 3' x 6' panel is made by a friend, lover or family member. Indoor Sports Complex. Free and open to the public. For information, call 632-6339.



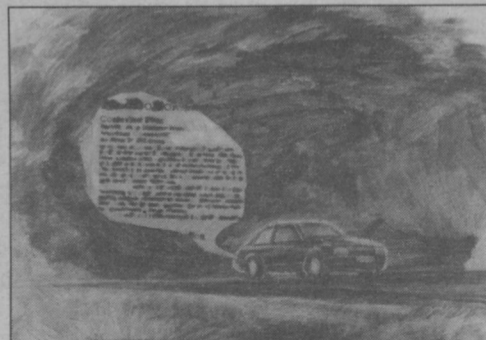
"Pile 1," by Julius Tobias (1989), charcoal and paint on canvas.

Through April 18:

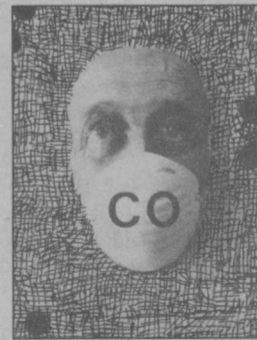
Julius Tobias Exhibition. Organized by guest curator Mel Pekarsky, it includes large-scale paintings, sculptures, drawings and prints of this expressionist and minimalist artist. Noon-4:00 p.m.; Tuesday-Saturday. University Art Gallery. Staller Center for the Arts.

April 3-10:

"The Clothesline Project." T-shirts that graphically illustrate violence perpetrated against women. Sponsored by the Center for Women's Concerns. Noon-5:00 p.m.. Union Art Gallery, 2nd Floor, Stony Brook Union. Call 632-6822.



"Car Talk," by Karen Shaw (1988), collage.



"COugh," by Karen Shaw (1989).

April 14-24:

Environmental Exhibit - "Reduce, Reuse, Recycle, Rethink." Works by students Diane Parker, Jim Metcalfe, Mary Leto, Karin Lind Ralph, and Karen Shaw. Noon-5:00 p.m.; Monday-Friday. Union Art Gallery, 2nd Floor, Stony Brook Union. Call 632-6822.

April 27 - May 8:

Landscape paintings by art student Erika Votruba. Noon-5:00 p.m.; Monday-Friday. Union Art Gallery, 2nd floor, Stony Brook Union. Call 632-6822.

Camerata Singers to Perform at St. James R.C. Church

The Stony Brook Camerata Singers, under the direction of Timothy Mount, will perform a program of early music at the St. James Roman Catholic Church in Setauket on Friday, May 1, at 8 p.m.

The concert will be a preview of the Camerata Singers' summer tour to the Netherlands and Belgium, where they have been invited to perform at the Holland Festival of Early Music in Utrecht in August. They will sing the same program at an "artist's Mass" in the historic church in Breda, as well as at concerts in Locham and Antwerp.

In addition to Renaissance a capella music, the Camerata Singers will also perform Bach's Cantata No. 150, conducted



by doctoral candidate John Curtis.

For tickets and further information, call the church at 941-4141.

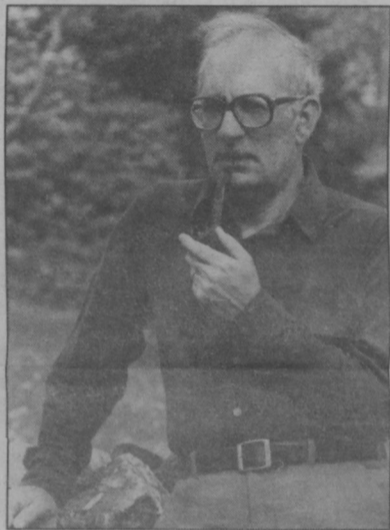
Composer George Crumb Visits Campus for Concert of his Music

George Crumb, Pulitzer Prize winning American composer, will be guest of the Department of Music on Thursday, April 23, for a visit that culminates in a public concert of his work at 8 p.m. in the Staller Center.

On the program will be "Black Angels," for string quartet (1973), "Little Suite for Christmas," for piano (1979), "Vox Balaenae" — Voice of the Whale — for cello, amplified flute and piano (1971), and "Music for a Summer Evening," for two pianos and two percussionists.

Crumb's music, known for its unique sonorities and timbres, has been performed extensively in Europe, Asia, Australia and South America. His several orchestral works have been performed by all the leading American orchestras. His appearance is made possible by a grant from Meet the Composer.

Crumb was born in Charleston, West Virginia, in 1929. He is Annenberg Pro-



fessor of Music at the University of Pennsylvania.

The concert is free and open to the public. For additional information, call the Department of Music at 632-7330.

The Circus is Coming to Town!

Elephants, acrobats, bareback riders and clowns will take to the Main Stage of the Staller Center for the Arts when the Zoppe Circus Europa arrives on Saturday, April 4. Shows are at 3 p.m. and 7 p.m.

The Zoppe Circus Europa is a fast-paced, exciting one-ring extravaganza in the grand tradition. A family circus established in 1842, Zoppe has performed on five continents and entertained royalty, the Pope, and circus lovers of all ages.

Featured performers include high wire acrobat Tino Wallenda of the "Flying

Wallendas," aerialist Jacqueline Marie Marsolais, and bareback rider Giovanni Zoppe — hailed as "the youngest superstar in the circus world today." His parents, Sandra and Alberto Zoppe, are producers of the show.

Tickets for the show are \$22 and 20; children under 12, \$11 and \$10. Discounts are available for students and senior citizens. Call the Staller Center Box Office for tickets, at 516-632-7230. Tickets are also available through TicketMaster at 516-888-9000.

Hair — the 60s Revisited On Stage at the Staller Center

"This is the dawning of the Age of Aquarius..."

Stony Brook Theatre's production of *Hair, An American Tribal Love Rock Musical*, takes a trip back in time to the psychedelic, idealistic days of the 60s.

The story of a young man torn between his conventional upbringing and the hippie counterculture, *Hair* evokes an era when the country was in turmoil over the war in Vietnam, and young idealists talked of peace and love. Memorable songs from the show include "Aquarius," "Good Morning, Starshine" and "Easy to Be Hard."

Hair, by Gerome Ragni and James Rado, with music by Galt Macdermot, will be produced by the Department of Theatre Arts and directed by John Cameron, assistant professor of theatre.

Performances, in Theatre 2 at the Staller Center for the Arts, are Thursday through Saturday, April 9-11 at 8:00 p.m. and Sunday, April 12 at 2:00 p.m. Also, Tuesday through Saturday, April 14-18 at 8:00 p.m. and Sunday, April 19 at 2:00 p.m.

Tickets are \$10 for general admission and \$8 for students and seniors at the Staller Center Box Office, 632-7230.



Julian Bream, world renowned performer on the classical guitar and lute, will appear at the Staller Center for the Arts at the University at Stony Brook on Wednesday, April 1, at 8 p.m.

Highlights of the program include works for the lute by English Renaissance composers Anthony Holborne, William Byrd and John Dowland; and for the guitar by J. S. Bach, Leo Brower and Isaac Albeniz. Bream will play Bach's Suite No. 1 in E minor, Brower's Sonata (1990) and Albeniz's "Cordoba."

Mozart's *Così fan Tutte*: Love, True and False, On a Wager

Will a woman stay faithful to her lover in the face of temptation?

Don't bet on it, says Mozart in his comic opera *Così fan tutte*, coming to the Staller Center Saturday, April 11 at 8 p.m. The title, which means "they all do it," says it clearly.

Stony Brook's Opera Ensemble and Symphony Orchestra will present a fully staged production of *Così fan tutte*. The opera tells the story of a pair of young men who — on a bet — agree to disguise themselves and woo each other's lover. Sure enough, within the space of 24 hours, Fiordiligi and Dorabella prove false to Ferrando and Guglielmo, just as the cynical old Don Alfonso had predicted.

The opera will be sung in English translation by Ruth and Thomas Martin. David Lawton, musical director of the Opera Ensemble, will conduct, and artist-in-residence Gary Glaze will serve as producer. Richard Getke, who directed Handel's *Julius Caesar* last year, will direct this production as well.

The cast is composed of students in the voice program at Stony Brook. Christine Goerke, who portrayed Marcellina in *The Marriage of Figaro* two years ago, will sing the role of Fiordiligi, and mezzo soprano Suzanne Loerch, doctoral candidate in voice, will perform the role of Dorabella. Melanie Birnbaum, who was Cleopatra in last year's *Julius Caesar*, will sing the role of Despina,

the worldly ladies' maid.

The male roles will be performed by tenor James Hopkins (Ferrando), baritone Mu-Zhen Liao (Guglielmo) and bass-baritone Seung-Pil Cheong (Don Alfonso). All are doctoral students at Stony Brook.

Così fan tutte is the last of three masterpieces written by Mozart in collaboration with the Italian librettist, Lorenzo DaPonte. It was first performed in 1790 at the Burg Theatre in Vienna. Until recently, the opera was not as popular with public audiences as the other two Mozart-LaPonte works, *The Marriage of Figaro* and *Don Giovanni*. The 1951 Metropolitan Opera production, featuring the Martin translation, turned the tide for audiences in the United States. Ever since, *Così fan tutte* has been a favorite.

Director Richard Getke has modernized the story, setting it in the Hamptons on Long Island just before World War I. Period costumes are designed by Peggy Morin and the set is by Elizabeth Popiel. The chorus will be prepared by Marga Schoutens, who conducted the Opera Ensemble's performance of *Dido and Aeneas* last November.

Tickets are \$15, \$13, and \$11. Senior citizen and student discounts are available at the Staller Center Box Office. For tickets and information, contact the Staller Center Box Office at 632-7230.

Art with an Environmental Focus

In celebration of Earth Day on Wednesday, April 22, the Stony Brook Union Art Gallery will host an exhibition of art concerned with the environment. The show, "Reduce, Reduce, Recycle and Rethink," will run from Tuesday, April 14 to Friday, April 24, and display the work of five artists from Long Island whose art reflects environmental concerns. Special demonstrations will be held on Earth Day in the Fine Arts Plaza, in conjunction with the exhibition.

Karen Shaw, from Baldwin, will present a group of thought-provoking collages. "Art's role can be to 'sensitize people,'" Shaw says.

Karin Lind Ralph of Greenlawn uses only recycled paper and paper made from plant materials in the printing, drawing and book art that are included in the show. Jim Metcalfe

and Diane Parker of Huntington, landscape designers, will exhibit blueprints showing the land as gardens and city sites. Mary C. Leto, an art student at Stony Brook who lives in Ronkonkoma, will exhibit sculpture and works on paper influenced by 19th century and older artifacts unearthed by local archaeological digs.

On Earth Day, Karin Lind Ralph will demonstrate paper making and Mary C. Leto will make plaster molds and sculptures from found objects. The demonstrations will take place from noon to 2 p.m. outside the Staller Center for the Arts. Rain site: Stony Brook Union Fireside Lounge.

The Union Art Gallery is open Monday through Friday, noon to 5 p.m. For additional information, call 632-6822.