The University at Stony Brook
State University of New York
Stony Brook, NY 11794-0605

Non-Profit Organization
U.S. Postage Paid
Permit No. 65

UNIVERSITY AT STONY BROOK • SUNY

CURRENTS

— FOCUS —

REGIONAL IMPACT

NOVEMBER, 1989

VOLUME 7, NUMBER 23

FOCUS

WHERE TO FIND IT

In a special supplement, *Currents* provides a comprehensive guide to resources offered by Stony Brook to the Long Island region. See insert at the centerfold.

Can Long Island compete? Stony Brook confronts the challenge of an economy in transition.

Researchers Convert Waste into Resources

By Sue Risoli

Faced with a 1990 deadline for closure of all landfills, Long Islanders will be turning to incineration of waste as a disposal alternative. But this option brings another dilemma: what to do with theash that incineration leaves behind.

"Even if we meet the state's goal of reducing the waste stream by 50 percent," says Jerry R. Schubel, dean and director of Stony Brook's Marine Sciences Research Center (MSRC), "we'll still produce a quarter of a million tons of ash each year, in Nassau and Suffolk alone."

To transport a quarter million tons of ash to out-of-state landfills would cost Long Island at least $25 million annually, an amount that would, he says, "further aggravate the cost of living in a region already strained almost to the breaking point."

Long Island will have to find a cheaper solution if it is to keep the cost of doing business competitive with other regions, continues Schubel. At the same time, he adds, that solution must be environmentally safe. Researchers from the MSRC's Waste Management Institute may have found the answer.

It turns out that ash substitutes nicely for rock and gravel in the manufacturing of concrete blocks. In the process, the ash is chemically and physically stabilized, as scientists have discovered in monitoring two artificial fishing reefs made of such blocks off Long Island's north shore.

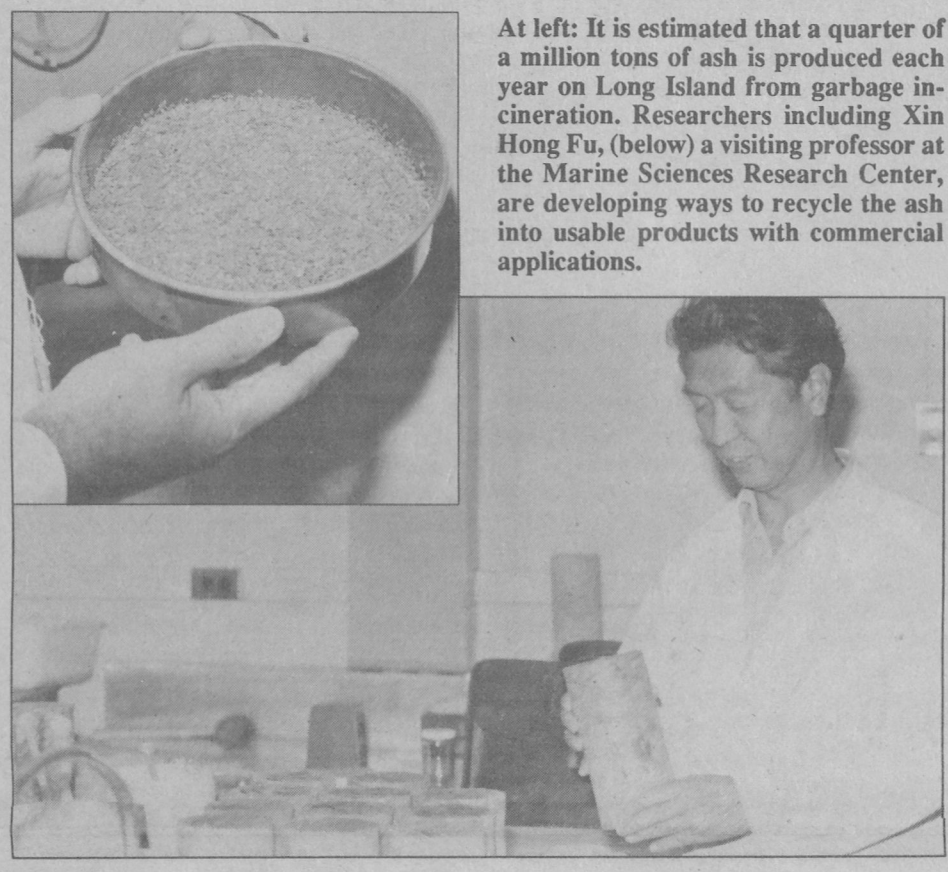
Construction on another test structure, a boathouse to be used as storage for smaller research vessels operated by Marine Sciences, is scheduled to begin within the next few months. And, researchers suggest, there may be other uses for the blocks, such as roadway construction.

The boathouse is a way to turn an environmental negative into a positive, says research professor Frank Roethel. "If we can demonstrate that there are no adverse effects—and we'll be monitoring the building very closely for a minimum of two years—there may be many promising construction applications for these blocks," he says.

It will take 300 tons of ash from the Westchester Resource Recovery Plant in Peekskill, N.Y. to make the 15,000 blocks needed for the boathouse, Roethel explains. After the ash is processed, it will be shaped into blocks by Barrasso Brothers, a Long Island cement block firm, according to a cement/ash ratio already determined by Marine Sciences researchers. "It should take no more than a day to fabricate all the blocks," says Roethel. A steel frame and roof are already in place at a site on the grounds of the MSRC, and delivery of the blocks to the center is expected sometime within the next few weeks.

The process sounds simple, but it's been a while in the making. MSRC scientists have spent the past two years in the laboratory, experimenting with different amounts of concrete and ash until they arrived at just the right recipe for blocks that would be structurally sound as well as

continued on page 8



At left: It is estimated that a quarter of a million tons of ash is produced each year on Long Island from garbage incineration. Researchers including Xin Hong Fu, (below) a visiting professor at the Marine Sciences Research Center, are developing ways to recycle the ash into usable products with commercial applications.

Koppelman Tackles Tough Social, Economic Issues for Long Island

By Wendy Greenfield

Though his demeanor evokes calm, Lee Koppelman is a man who does not sit still.

A year after he assumed the post as director of Stony Brook's Center for Regional Policy Studies, Koppelman is juggling three research projects, teaching, advising local governments and planning more research projects.

"It's been an exciting year," says Koppelman, who is also executive director of the Long Island Regional Planning Board and former director of the Suffolk County Planning Department. "We put out a number of grant applications and got every one we applied for."

The center has received a $90,000 grant from the state Urban Development Corporation (UDC) to analyze the labor force of Nassau and Suffolk counties to the year 2010. The study will examine the number and types of jobs available. It will also help Stony Brook plan educational programs to meet the changing needs of a regional economy.

Koppelman says the study will serve as the first part of a strategic economic development plan for both counties, and is expected to be completed by the spring of 1990. Results of the study are expected to have applications for other regions throughout the state and country.

The center also received a $90,000 grant from Suffolk County to examine worker productivity in large county government agencies, beginning with the Department of Social Services. Center researchers are analyzing work flow in departments that are occupied with extensive paperwork, and ways to increase

Lee Koppelman

employee efficiency and morale. Koppelman says the study may provide a useful management tool for Commissioner Ruth Brandwein, former dean of the School for Social Welfare. He also expects to analyze work patterns in other large agencies, including the police, health and public works departments.

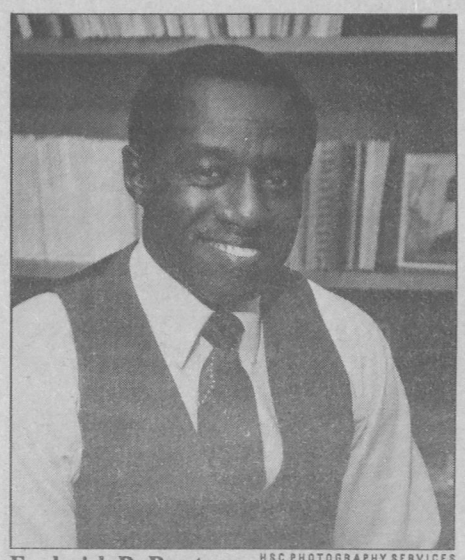
Tourism is the subject of the third study the center has undertaken. A $40,000 grant from the UDC will be used to examine the tourism industry of eastern Long Island, which is the area's largest economic base. The study will look at ways to make the tourism industry stronger, and investigate changes in state law that would make funding available for tourism promotion.

Though his plate is full, Koppelman has more ideas. He is applying for a $90,000

continued on page 8

ALMANAC

KUDOS



Frederick R. Preston HSC PHOTOGRAPHY SERVICES

Frederick R. Preston, vice president for student affairs, has been named to the prestigious National Vice President's Group whose members are drawn from the nation's top research universities. Membership is by invitation. The group, which meets biannually, focuses on major issues, concerns and new developments in the area of student affairs. Preston will be inducted in January.

Preston is one of the nation's top experts in the field of human relations. At Stony Brook, he oversees 430 professionals and support staff who provide a variety of services to the student body including counseling, campus residences, student activities and financial aid.

Andrew P. Jardine, assistant professor of materials science and engineering was part of a four person team to receive the 1989 Shop Note Award from the Vacuum Technology Division of the American Vacuum Society. Jardine's group was recognized for their paper, "A Simple Ultrahigh Vacuum Shape Memory Effect Shutter Mechanism." The award includes a $250 prize.

Students in the Department of Physical Therapy in the School of Allied Health Professions were recognized by Marquette University for participating in the first Marquette Challenge issued to all physical therapy clubs to raise money for research through the Foundation for Physical Therapy. Stony Brook was among 14 institutions which contributed to the total of $7,400. USB raised $300 through massage-a-thons and a bake sale.

Andy Golden, Min-Mei Huang and **Sandy Madigan**, graduate students in the School of Medicine, are the recipients of this year's Irving Abrahams Memorial Award. The award, named after the late adjunct professor in the Department of Microbiology, is given to one or more graduate students with outstanding potential for basic research. It carries a cash award of $300.

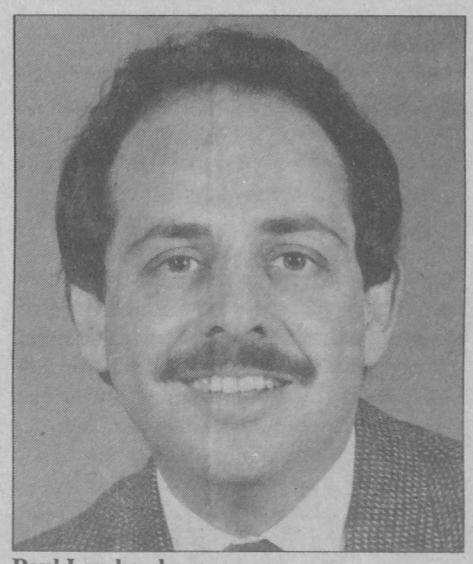
Molly Mason, assistant professor of art, has sold pieces of sculpture for public display in Brisbane, Australia, and the Long Island Cultural Center's Allen Sak Memorial. Both pieces are made of stainless steel and copper. She also received a Research Foundation grant to create sculpture in cast bronze at the Tallix Foundry in Peekskill, N.Y. this year.

Jonathan Levy, professor of theatre arts, was included in the 25th annual National Playwrights Conference held in July at the O'Neill Theater Center in Waterford, Conn. His play, *Song Without Words*, was presented to a group of directors, actors, designers, technicians and fellow playwrights who helped prepare the work for the stage.

Florence Millet

Florence Millet, graduate student of music, was a semi-finalist in the William Kapell International Piano Competition held July 22, 1989 at the Kennedy Center Concert Hall in Washington, D.C. Out of 127 entries, 42 were selected representing 20 countries, and 12 were accepted into the semifinals. Millet made her Paris debut in 1985 at the *Théâtre du Châtelet*, and has been a soloist with the Polish Chamber Orchestra, the Calgary Philharmonic Orchestra, the *Orchestre Philharmonic de l'Ile de France* and the *Orchestre de Prix du Conservatoire de Paris*.

Ronald Roseman, artist in residence in music, was in very distinguished company last April 12, 1989. The composer's work, "Psalm XXII," was given its world premiere performance at Avery Fisher Hall, Lincoln Center, by the National Chorale. The other composers represented that evening were Bach, Brahms and Mozart. Roseman received three curtain bows.



Paul Lombardo

Paul Lombardo, chair of the physician assistants program at Stony Brook, was named president of the American Academy of Physician Assistants. The organization represents more than 18,000 physician assistants (PAs) who are practicing medicine under the supervision of physicians.

Lombardo pledges to promote quality, cost-effective and accessible health care and to promote the professional and personal development of physician assistants. He said he would also like PAs to become more integrally involved in health policy development.

Thomas J. Prusa, assistant professor of economics, has been awarded a postdoctoral fellowship from the Carnegie Corporation of New York and the Humanities Endowment to study the rise of fair-trade laws from a legal and historical perspective. He is one of 33 recipients nationwide.

OBITUARIES

David J. Kreis, Jr., former director of emergency services, chief of the trauma division at University Hospital, and associate professor of general surgery and emergency medicine died Oct. 8 after a long battle with cancer. He was 38.

Dr. Kreis worked to improve treatment procedures in Suffolk County. He was instrumental in getting the county to buy a medical evacuation helicopter.

A charter member of the Eastern Association for the Surgery of Trauma, Dr. Kreis was nationally known for his research on the development of hospitals committed to trauma treatment and the financial difficulties that befall them. He wrote one book and edited another on the treatment of shock and trauma, and contributed to many professional journals.

Dr. Kreis is survived by his wife Kristen; two daughters, Kelly, 9, and Sandra, 7; his mother, Niki, and father, David Kreis, Sr. of Orange, Conn., and a brother, Steven, of Hollywood, Fla.

BRIEFINGS

GRANTS

Jordan J. Cohen, dean of the School of Medicine, was awarded a federal grant of $66,576 from the National Institutes of Health for the small-instrumentation program.

PRESENTATIONS

Thom Thompson, instructional support specialist, had his photographs displayed at the Wilkov - Goldfeder Gallery, New York City, March 15 - May 15.

James Rubin, professor and chair of the Department of Art, spoke on French revolutionary art at the International Congress of the History of the French Revolution in Washington, D.C. in May and at the Metropolitan Museum's "Sundays at the Met" series in June. Rubin also presented a paper on the "unfinished" portraits of Jacques-Louis David, a leading painter of the French Revolution, at the International Congress of the History of Art in Strasbourg, France, which ran from Sept. 1 - 10.

Allen Meek, chair of the Department of Radiation Oncology, discussed "Radiation Oncology in the Multimodal Management of Cancer" at the Sept. 27 dinner meeting of the Long Island Section of the American Nuclear Society.

Martin Levine, assistant professor of art, will have a one-person show of prints and drawings at the Nora Eccles Harrison Museum of Art in Logan, Utah, from Nov. 11 through Dec. 22 and is included in an exhibit of American printmakers which is traveling throughout the United Kingdom through May.

PUBLICATIONS

Michele H. Bogart, assistant professor of art history, *Public Sculpture and the Civic Ideal in New York City, 1890 - 1930*, University of Chicago Press.

David Dilworth, associate professor of philosophy, *Philosophy in World Perspective: A Comparative Hermeneutic of the Major Theories*, Yale University Press.

Hugh J. Silverman, professor of philosophy and of comparative literature, *Derrida and Deconstruction*, second in a series titled "Continental Philosophy," Routeledge.

Howardena Pindell, professor of art, "Art World Racism: A Documentation" in *New Art Examiner*, March 1989.

Edmund McTernan, dean and professor, School of Allied Health Professions, and Lee J. Holder, "Allied Health Professionals," in *World Health*, May 1989.

STONY BROOK IN THE NEWS

Mel Pekarsky, professor of art, was featured in an article which appeared in *American Artist*, April 1989. Several photographs of the artist and his paintings were included in a discussion of his artistic techniques and his concern for the "moral imperative in contemporary art."

Randall Susman, associate professor of anatomical sciences, has been featured twice in *Discover* (April and August, 1989) for his extensive knowledge of the *Paranthropus robustus*, a cousin to our ancestor, *Homo habilis*, both of whom lived about 1.8 million years ago. Susman challenged the notion that the *Paranthropus*, also known as *Australopithecus robustus*, was a primitive apelike creature incapable of walking erect or making tools.

C.N. Yang, Albert Einstein Professor of Physics and director of the Institute for Theoretical Physics, was highlighted in an article titled "U.S.-Chinese Scientists See Dreams Imperiled," which appeared in *News and Comment*, June 1989. The article explains, "in the Chinese-American community, no researcher is regarded as more energetic and successful in furthering Chinese-American science ties than physicist Yang Chen Ning."

University Hospital residents were interviewed by CBS News June 30. The residents expressed their views on regulations limiting the number of hours residents could work.

Currents, serving the extended community of the University at Stony Brook, is published monthly during the academic year by the Office of Public Relations, 322 Administration Building, University at Stony Brook, Stony Brook, N.Y. 11794-0605, (516) 632-6310.

Vicky Penner Katz: USB Administration
Sue Risoli: Biological Sciences, Engineering, Marine Sciences Research Center, Physical Sciences and Mathematics
Wendy Greenfield: University Hospital, Social & Behavioral Sciences
Tamar Asedo Sherman: Arts & Humanities, Health Sciences Center

Patricia J. Teed
Vice President for University Affairs
Dan Forbush
Associate Vice President for University Affairs
Patricia A. Foster
Director of Publications
Mark A. Owczarski
Managing Editor
Kenneth Wishnia
Assistant Managing Editor
Tom Giacalone
Design Director

First Step Taken in Construction of Cogeneration Plant

In putting a call out for qualified bidders, the State University Construction Fund last month took the first step towards development of a cogeneration plant at Stony Brook.

The Request for Qualifications for Development Services (RQD), which appeared in legal notices in the *New York Times, Newsday* and elsewhere, asked anyone interested in constructing, operating and managing a cogeneration plant at Stony Brook to provide the Construction Fund with a detailed description of their experience and expertise by Friday, Oct. 20. Successful applicants, who had to spell out their depth of knowledge in financing, designing, constructing, owning, operating and/or maintaining such a facility, will form the basis of a bidders' list.

The State University Construction Fund plans to oversee the construction of the natural gas-fed cogeneration plant which would rise near to the existing power plant on the main campus. Such a facility would not only make Stony Brook energy self-sufficient, but could also produce surplus electrical energy that could be sold back to the Long Island Lighting Company, says Carl E. Hanes, deputy to the president for special projects.

Planned for several years, a cogeneration plant would not only generate electricity, but would capture the heat by-product, using it to generate steam and high temperature water to run the university heating and cooling systems.

"Cogeneration will end Stony Brook's reliance on oil," Hanes predicts, and at its optimum, would produce a sizeable revenue flow to the university which, in turn, could be used to resolve general deferred maintenance problems, and to upgrade campus facilities, landscaping and roads. Existing power plants on the main campus and at the Health Sciences Center would be retained as a back-up.

While options for its construction, operation and financing have been discussed, until the next stage of the request for proposals is completed, no definitive description of the cogeneration plant in terms of power, size, underwriting or management can be made, Hanes explains.

"The project's range is from 24 to 80 megawatts," he says, "the final size and scope to be determined further down the line."

At peak periods, Stony Brook uses 31 megawatts of electricity to operate more than 100 buildings on the 1,100 acre campus. Though USB has managed to save $1 million in energy costs as the result of a major energy conservation effort begun in May 1988, its bill for electricity and fossil fuel exceeds $25.8 million a year. "With projections of higher electric and fossil fuel costs in the future, the time for cogeneration has come," Hanes adds.

Construction of a cogeneration plant could begin as early as January, 1991, with the facility going on-line by late 1993.

Vicky Penner Katz

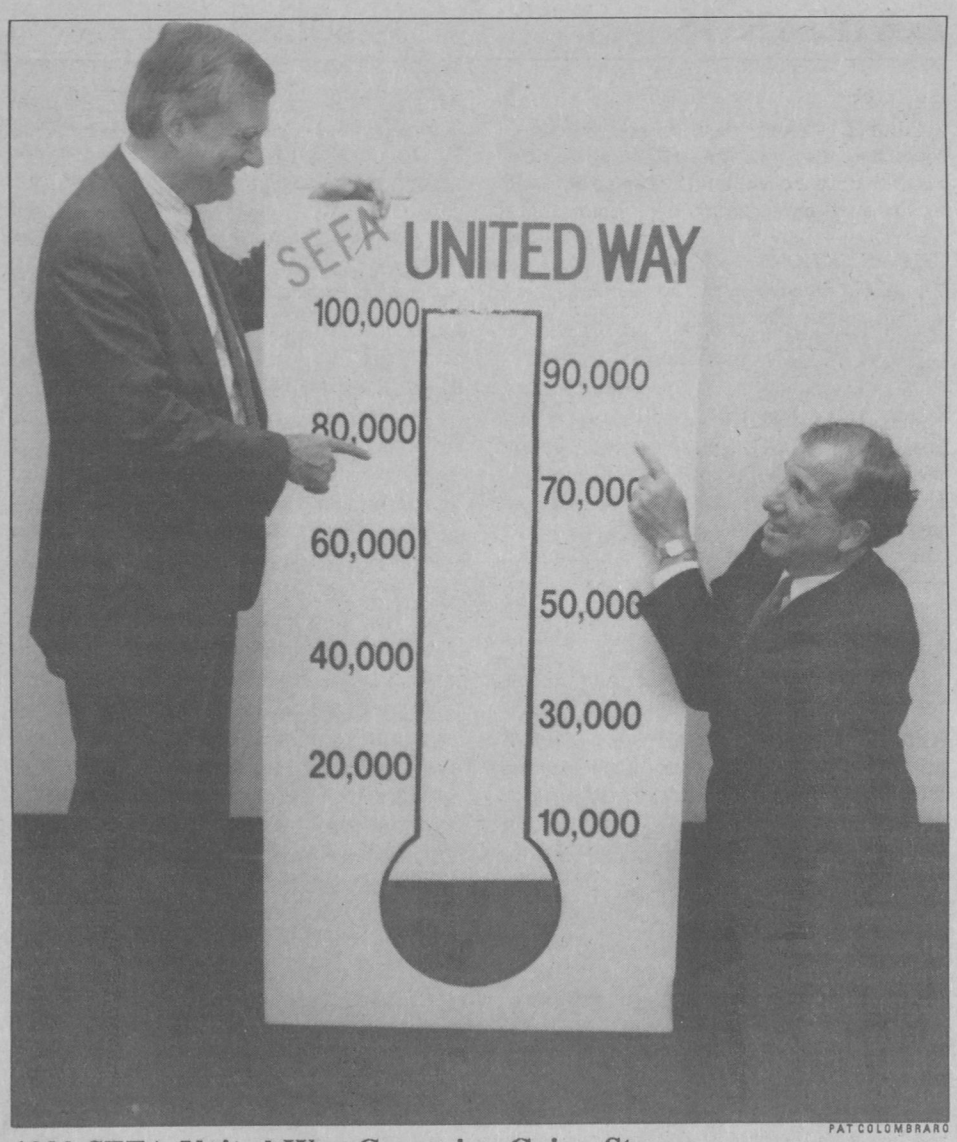
Few Scars from Melville Library Fire

Few signs remain of a small fire that damaged a 10-foot-wide, 65-foot-long basement corridor in the Frank Melville, Jr. Memorial Library late last month, just outside the Barnes and Noble bookstore.

The Monday, Sept. 25 fire, which officials branded "suspicious," was detected around 9 p.m. in a recycling bin filled with cardboard and paper. The Setauket Fire Department, assisted by departments from surrounding communities, arrived within minutes and quickly extinguished the fire.

Fire damage was contained to the hallway. The bookstore and neighboring Omega Travel suffered smoke and water damage, the latter caused by a sprinkler that was set off as firemen opened the firedoor to the corridor.

The bookstore closed for two days, Omega Travel for three while repairs were made. Repairs to the corridor, including ceiling and wiring replacement, floor tiles and repainting, were to be completed by the end of October. About a dozen fire doors which contained the fire are being replaced at a cost of about $20,000. Total cost of the corridor repair is about $100,000.



PAT COLOMBRARO

1989 SEFA-United Way Campaign Going Strong
President John H. Marburger (left) and Alan Entine, the SEFA-United Way campaign coordinator and manager of employee and labor relations, point the way to contributions for the 1989 campaign now underway. In the first couple of weeks, main campus employees donated more than $50,000 to the drive. The campaign, which began with a kick-off breakfast Thursday, Sept. 28, runs through Wednesday, Nov. 15.

Teed to Leave Stony Brook, Plans Return to Native Texas

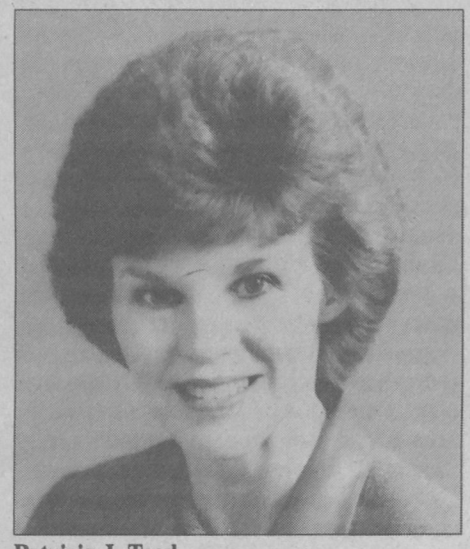
Patricia J. Teed, vice president for university affairs, has informed President John H. Marburger that she will resign effective Dec. 31.

Easily spotted around campus by her "Native Texan" bumper sticker, Teed said she plans to relocate to Austin now that her son has virtually completed his degree at Syracuse University.

Accepting her resignation with regret, Marburger praised Teed's leadership over the last five years and cited significant gains in support from alumni and other private sources, relations with state and local government, and in the quality of campus communications, conferences and events. "Her interest in and appreciation of the academic life has added an important dimension to the division," he added.

Teed joined Stony Brook in 1984. She was previously assistant chancellor at the University of Houston, where she served for nine years. A graduate of Rice University, Teed has deep family ties to the Texas Panhandle.

Marburger said he will form a search committee immediately to search for her successor.



Patricia J. Teed

Denise Coleman

HSC PHOTOGRAPHY SERVICES

Cohen to Head SB Foundation

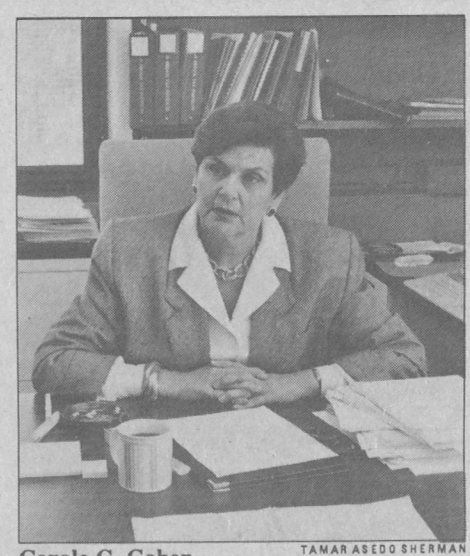
Marburger also announced that Denise Coleman, associate vice president for development and executive director of the Stony Brook Foundation, had resigned effective Oct. 25 to become executive director of the National Alliance for Research on Schizophrenia and Depression. Coleman, a Stony Brook graduate, had joined the university in 1980 as director of alumni affairs.

"To her we owe the enormous success of the foundation during the past half decade and much of the recent substantial increase in philanthropic support to the university," Marburger said.

To fill what otherwise would be "an intolerable vacuum of leadership" in the development area, Marburger has appointed Carole G. Cohen, formerly associate chancellor for development at the University of Illinois at Chicago and most recently director of external affairs for the Touro College Law Center, to a two-year appointment as associate vice president of university affairs for development and alumni affairs.

Commenting on Cohen's appointment, Marburger said, "We have been extremely fortunate in finding an individual who has experience as the chief development officer for a significant public university. I am grateful to Ms. Cohen for taking on this responsibility on relatively short notice."

Cohen brings 20 years of fundraising experience to the position. In addition to her recent experience, she has served since 1969 as a campaign consultant with Matt Reese and Associates, director of special programs at Brandeis University, director of public information and development at the University of Massachusetts Medical Center and director of university relations for the University of Massachusetts System, and director of development with United Charities of Chicago.



Carole G. Cohen

TAMAR ASEDO SHERMAN

Cohen and her husband, Jordan J. Cohen, moved to Long Island 18 months ago. Dr. Cohen is dean of the School of Medicine.

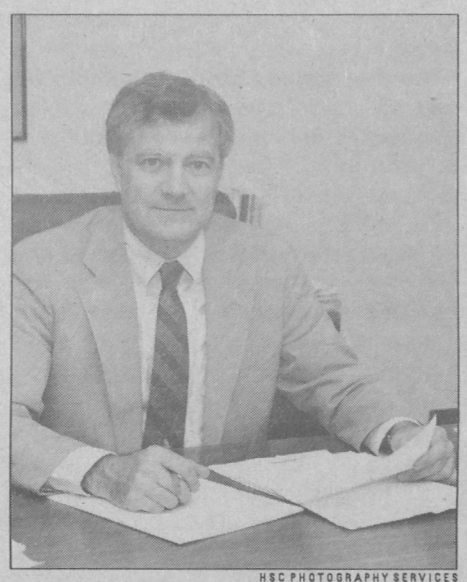
FOCUS

REGIONAL IMPACT

Stony Brook Poised for Key Role in Regional Development

In the early part of the 1980s, Long Island's economy was red hot; between 1980 and 1988, the number of jobs grew 25 percent to 1.1 million. But that picture has sharply changed. In the first six months of 1989, Nassau and Suffolk counties lost a total of 5,000 jobs. Clearly, an economic slowdown is upon us.

A research university plays a special role in the industrial strength of any region. In the following interview, President John H. Marburger discusses recent initiatives on which Stony Brook has embarked to keep the regional economy running strong.



HSC PHOTOGRAPHY SERVICES

"The high technology incubator is a strategic concept to preserve the vitality of the Long Island economy and help to reorient it to face the competition of the coming decade and the new century. . . Our role is to influence the growth and evolution of Long Island's mix of industry so that we can preserve a competitive position in new circumstances."

John H. Marburger

CURRENTS: Economic development has always been one of Stony Brook's basic missions. What, if anything, has changed in the nature of Stony Brook's commitment to this mission in recent years?

MARBURGER: There is a new emphasis and a new pointedness to the issue today. In the early sixties after *Sputnik*, there was a fear that the United States might lose its technological supremacy to the Soviet Union. That fear now is a reality.

We have lost the lead in certain key technologies not to the Soviet Union, but to Japan, West Germany and nations we used to view as Third World countries. There is now a new environment of concern that is, if anything, more serious than the concern we felt about the Soviets in the sixties. Appropriately, the state is reemphasizing its commitment to support economic development through its state university system.

It is only within the last decade that Long Island has really begun to see a payoff from the state's investment in its research university. The hospital only began to open in 1980. The push for biotechnology development only began in the late seventies and early eighties. So the outreach of the university to the economic community here on Long Island and elsewhere in New York is a relatively recent phenomenon simply because of where we are in our growth curve.

But within the last decade there has been a dramatic increase in externally sponsored research and in the total number of technical personnel at the university. In the life sciences, growth has been stimulated by the opening of the hospital and medical school. Fortunately, all of these things are coming together at a time when the region and the state most need them. The regional economy is in transition, and the university is developing new mechanisms to apply these strengthened resources to regional needs.

CURRENTS: What's the next step?

MARBURGER: The key missing element is the Long Island High Technology Incubator. With all of the other pieces now in place, with the regional need apparent, funding for this project has to be our top priority initiative for regional development.

We already have proven the effectiveness of the incubator concept by the success of the campus' interim incubator program. Other regional research and higher education institutions are involved. The not-for-profit corporation to manage the project has been formed.

The incubator has had strong regional support from such sources as the Long Island Association (LIA), the Long Island Forum for Technology (LIFT), both counties, and Brookhaven and Islip Towns. Senate Higher Education Committee Chair Ken LaValle and Stony Brook's Senator Jim Lack have played leadership roles. Now we need to capitalize on this momentum and make it happen this year.

CURRENTS: What will be the incubator's key contribution?

MARBURGER: The high technology incubator is a strategic concept to preserve the vitality of the Long Island economy and help to reorient it to face the competition of the coming decade and the new century. The incubator is designed to encourage specific kinds of industry matched to Long Island's special characteristics, such as its well developed technological base and highly educated work force.

We're talking about developing an attractive environment for firms in the high-tech field, such as biotechnology, computer software, artificial intelligence, information technologies, new materials, and electronic technologies which are very much a part of the modern markets in health care, service and consumer industries.

The idea of the incubator is specifically to grow or attract small companies that have promise in these areas, and to provide a setting in which existing Long Island companies can explore new technology directions.

Our role is to influence the growth and evolution of Long Island's mix of industry so that we can preserve a competitive position in new circumstances. We want to create a place for new ventures by both entrepreneurs and established companies.

CURRENTS: What other initiatives do you foresee in the university's regional development role?

MARBURGER: We'll certainly see a continuation of the massive surge toward life science activity, both in research and in health care and in the translation of research into products for diagnostics and cures. The emphasis on health and life sciences will continue throughout the next several decades at Stony Brook. It's always going to be a big part of our mission.

But along with that, we're also becoming much more sophisticated in our computer-related fields, such as computer software, the joining of hardware and software and the utilization of sophisticated computer systems for practical problems. Computer vision, robotic control, artificial intelligence and cognitive aspects of computing are all becoming important.

I think it's absolutely essential that we strengthen the College of Engineering and Applied Sciences; the development of electrical engineering in particular will complement other things that are happening at the university, including our emphasis on the life sciences.

In another area completely, Stony Brook already has such great strengths in high energy physics, astrophysics and planetary science that I think we will continue to excel in the very big science that's being undertaken in our country's space program, the Superconducting Super Collider (SSC), and the National Accelerator Laboratory at Fermi Lab.

Stony Brook's considerable strength in all the basic sciences and in mathematics, both pure and applied, will ensure that Long Island will continue to attract young people of exceptional talent from throughout the world. Areas such as risk analysis, complexity theory, game theory, theoretical economics, and statistical modeling that are feeding ideas into high technology commercial applications are already important at Stony Brook.

Developments in professional education will be an important aspect of the next decade of Stony Brook's advance. This, of course, is compatible with our assistance to the regional economy. We're doing very well in transforming Harriman into a management school with excellence in both the public and private sectors. The various programs within the Harriman School are very relevant to Long Island concerns and issues. Quantitative management and the management of people in entrepreneurial settings are important for Long Island and we'll see initiatives of this sort grow.

Part-time programs, on-site training and specialized management training are also facilitated by the new Center for Corporate Continuing Education and Development. And over a dozen undergraduate majors are now offered on a part-time basis for a work force that seeks to remain highly educated and prepared to meet changing conditions. The Center for Regional Policy Studies and the Marine Sciences Research Center provide expert support for policymakers in addressing critical regional issues that are technically complex.

The education of teachers for the secondary school system also is important for Long Island. There will be a general teacher shortage, we know, and there is already a shortage of teachers in areas such as mathematics and physics. Stony Brook aspires to become a major national center for studies in the preparation of teachers.

Another area of great potential is in facilitating relationships with those other countries that are now our economic competitors. For example, we should expand our programs in Asian studies, where we already have pioneered a number of exchange programs, not only because we have a very large Asian/American community in the metropolitan region, but for those who might be dealing with the continuing growth of Asian business opportunities, or who just want to learn about the increasingly important cultures of the Pacific rim.

I personally would like to see a substantial expansion of Asian studies generally but also studies in other international areas. We can take advantage of Long Island's diverse population and the proximity of the New York City metropolitan area with its airports that bring people here from all over the world. We ought to be able to build excellent international studies programs that are relevant to the aspirations of Long Island businesses to be a force in the world market.

After all, Japan is an island culture that has done very well internationally. Why shouldn't Long Island be a little Japan? If we can be as smart as the Japanese have been in understanding the cultures that represent the markets of the future, Long Island business will have a major competitive advantage.

Coming Next Month

FOCUS

THE HUMANITIES

- An interview with Don Ihde, dean of humanities and fine arts;
- The interdisciplinary teaching of popular culture;
- The theatre arts curriculum.

A High-Tech Center Is Emerging Near the Stony Brook Campus

By Diana Shaman

A million-square-foot industrial and office park now under construction in East Setauket less than two miles from the State University of New York at Stony Brook—one of the nation's premier research search institutions—is expected to signal the start of a high-technology center that could have major implications for Long Island's economy.

"Without the university, this park would not exist," said Robert T. Coughlan, who is developing the project, the Stony Brook Technology Center, with Marvin L. Olshan, a Manhattan lawyer, under the partnership name of C.O.L Properties.

"Business used to locate near sources of labor and raw materials," said Coughlan, whose project is about one third completed. "The raw material we need is the university and what it produces—intellectual stimulation, information, and highly trained people."

Later this year, construction is expected to start on a similar project double the size of the first on 400 acres in the same community. Its developer, AVR Realty Company of Yonkers, also plans facilities designed to attract companies with affiliations to the university. And Lemark Associates of Ronkonkoma will be building 350,000 square feet of technology-oriented space on 27 acres in East Setauket.

"The limitations we have on water, sewer and transportation dictates that we have to rely on our brainpower, and we need high technology, which is the production of ideas, to survive," said Arthur H. Kunz, director of planning for the Long Island Regional Planning Board.

Four years ago, when Coughlan and his partner first considered developing their 102-acre site, it was a risky undertaking. Commercial growth was concentrated around the Long Island Expressway and other areas more easily accessible to trucks than was their East Setauket location.

But the developers gambled that the project would attract science-based companies more concerned with being close to the university and University Hospital than with proximity to major highways. They had visited several university-related parks and decided that the concept could work on Long Island, where none had as yet been established.

There are 115 such parks around the country including ten in New York State, according to the Association of University Related Research Parks, a trade group in Tempe, Ariz. "Good people and good ideas fuel successful technology and both of those exist at universities," said Michael H. Wacholder, a past president of the association who is director of the Rensselaer Technology Park in Troy, N.Y.

That was the concept that the East Setauket developers felt they could successfully market on Long Island where the scientific community includes not only the University at Stony Brook, but also the Cold Spring Harbor Laboratory, a leading biological research institution, and Brookhaven National Laboratory in Upton, which is noted for its work in medical research and the physical sciences. The three institutions work closely together.

For Stony Brook, a commercial development close to the campus also had important implications. With the creation five years ago of its Center for Advanced Technology in Medical Biotechnology, it laid the foundation for the development and growth of biotechnology companies, which it felt would help give the region's economy a new direction.

Biotechnology is the application of genetic engineering to the treatment of disease. The industry is expected to generate billions of dollars in sales annually by the turn of the century.

"It's a new industry for the entire country, and now is the time to plan and make it an industry for Long Island," said Francis P. Hession, manager for advanced technology at Stony Brook.

To help start-up companies, Stony Brook has been providing temporary incubator space in its Life Sciences building, and is seeking state funds for a permanent incubator facility on campus that would provide laboratory space and support services for fledgling companies.

But once companies move beyond the incubator stage they need facilities into which to grow. Curatech, a biotechnology company, for example, moved into 13,000 square feet at the Stony Brook Technology Center last summer, after 18 months of occupying incubator space in the university's Life Sciences building. Among its 40 employees are 20 scientists and researchers. The company has developed a wound care product used in treating conditions conventional therapy has not been able to help.

As never before, Long Island's economy needs the diversification that high technology promises to provide. Service industries are growing, but the region is racing major cutbacks in defense-related industries, which accounts for about 35 percent of the region's manufacturing jobs.

In 1987 and 1988, 14,000 of 72,000 defense-related jobs were lost, according to a study by Pearl M. Kamer, chief economist for the Long Island Regional Planning Board. The study, which was released last December, projects that 10 to 30 percent more of those jobs could be lost over the next decade.

An oversupply of new office space in Suffolk has led to vacancy rates over 23 percent in some areas. But at the Stony Brook Technology Center, space is being released, or in the case of office condominiums, is being purchased almost as quickly as it goes up.

"We have our own little market niche because there is nothing else like us," said Philip M. Heilpern, a broker with Coldwell Banker Commercial Real Estate Services in Jericho, N.Y. who represents C.O.L Properties.

Although early tenants of the park included several-industrial users, of the 300,000 square feet completed since construction began in 1987—some by outside developers who purchased land in the park—about 95,000 square feet is occupied by medical and science-related businesses. C.O.L. Properties itself will build out the balance of the development.

An additional 35,000 square feet has been rented by University Hospital for administrative and nurse training offices. Of 150,000 square feet under construction, 86,000 square feet are medical offices, both rental and condominium.

A 72,000 square foot building on which C.O.L Properties plans to start construction this year would, if approved by the Town of Brookhaven, provide 36,000 square feet of low-cost intermediate space for start-up companies moving out of the university's incubator-facility, but not quite ready to move into fully finished office space.

And 222,000 square feet of offices to be started by C.O.L Properties this year and next will be marketed to high technology companies relocating from New York City and other areas of Long Island.

Discussions are also under way between the developers and the university for a joint venture day care center that would serve employees at both the university and the office park.

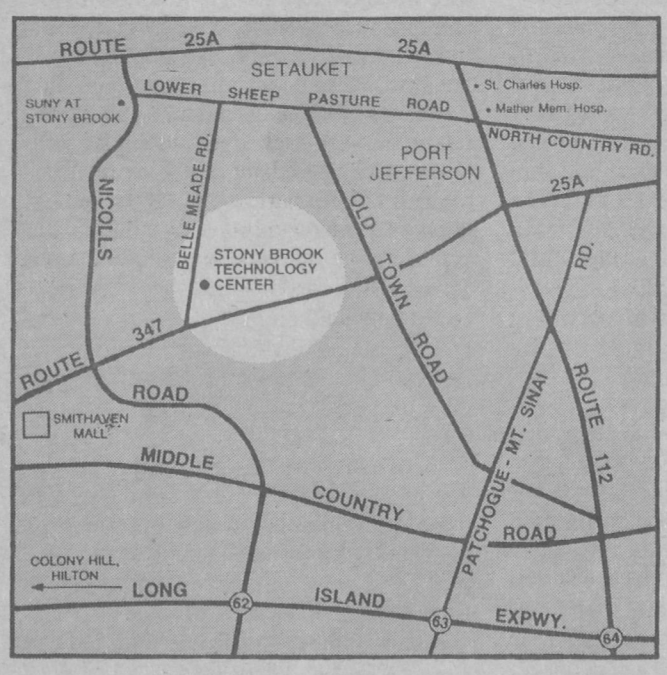
John H. Marburger, president of USB, said he often drives visitors to the Stony Brook Technology Center because he considers it a demonstration of what can be accomplished for the mutual benefit of academia and private developers.

"The university is the source of intellectual stimulation, but to have development like this is essential," Marburger said. "It's a symbiotic relationship that's good for all."

An aerial view of the Stony Brook Technology Park. The Stony Brook campus is located in background.

"Good people and good ideas fuel successful technology and both of those exist at universities"

Diana Shaman is a reporter for The New York Times.



Computer Visualization Promises to Revolutionize Research

By converting data into pictures, analysis that once took years can be accomplished in a matter of days

By Wendy Greenfield

Arie Kaufman is building a space shuttle. But instead of using metal, he uses hundreds of polygons that form a three-dimensional image. His workbench is a SUN Microsystems computer and his tools are tiny three-dimensional cubes called "voxels."

Kaufman, a professor of computer science at Stony Brook, is among a new breed of computer scientists developing "artificial" tools that turn millions of numbers into pictures. The tools promise to increase the productivity of scientists and engineers by reducing the time it takes to analyze data from supercomputers, satellites or medical scanners from several years to a few days.

"A picture is worth a thousand words," Kaufman says. "Visualization is worth a thousand pictures."

"Visualization is going to revolutionize the way scientists do science," adds Jack Heller, a professor of computer science.

Pioneered 20 years ago by physicists at NASA and Los Alamos National Laboratory, visualization has become one of the hottest fields in computer science. Today, most of the research in this area is being conducted at the University of North Carolina, Cornell University, California Institute of Technology, George Washington University and University of Hamburg in West Germany.

At Stony Brook, visualization has become "a key research direction" in the Department of Computer Science, says Phillip Lewis, chair of the department—so much so that the university would like to establish a $60 million science and technology center devoted to the field. The university, in conjunction with the University of Minnesota and George Washington University, has applied to the National Science Foundation for a $17 million grant to establish the interdisciplinary program. The proposal also includes 20 organizations, including national research laboratories and numerous companies, which would help share the cost of the center.

"The concept of visualizing data is important to the information processing and analysis part of business," says David Yulke of Applied Digital Data Systems, one of the companies associated with the science and technology center. "The human mind has the ability to perceive trends and changes from a well-presented visual image much more quickly than if presented information in a columnar, numerical form. Visualization will be an essential tool for business in the 1990s."

Kaufman is one of eight principal investigators of the center. Another is computer scientist Alessandro Giacalone, who is developing tools that will enable scientists and engineers to interact with pictures of what they are studying.

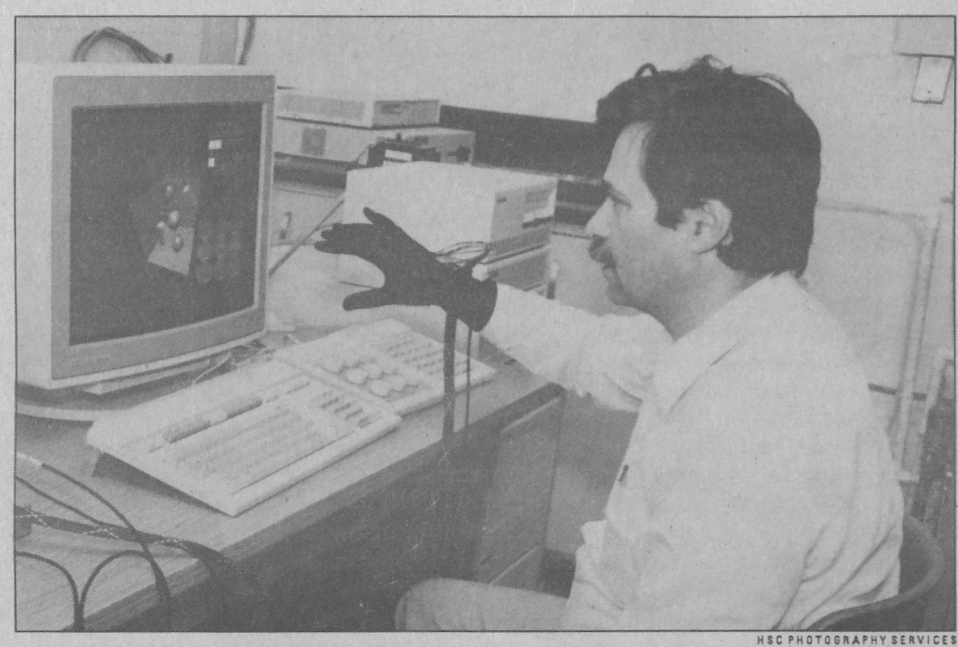
Currently, scientists who need a graphic model of a research project must write a specialized visualization program—a process that can take years of work because there are no advanced software programs to create such models. It is as if each time a carpenter builds a house, he must first make the bricks.

Giacalone is developing a graphics program that would eliminate the need for scientists to write their own visualization programs. For example, engineers studying air flow around airplane wings would be able to change the shape or material of the wings directly on the computer screen, without having to write a program instructing the computer to do this.

Kaufman works in three-dimensional visualization. His cube technology enables researchers to peer inside shapes, rotate them or split them down the middle, perspectives that could not have been accomplished before. He can also put pictures together to simulate motion. Using medical scans, he can "walk" into the human body, examining its inner structures.

"This is the wave of the future in three dimensional computer graphics," Kaufman says.

Wendy Greenfield is a senior writer in the Office of News Services.



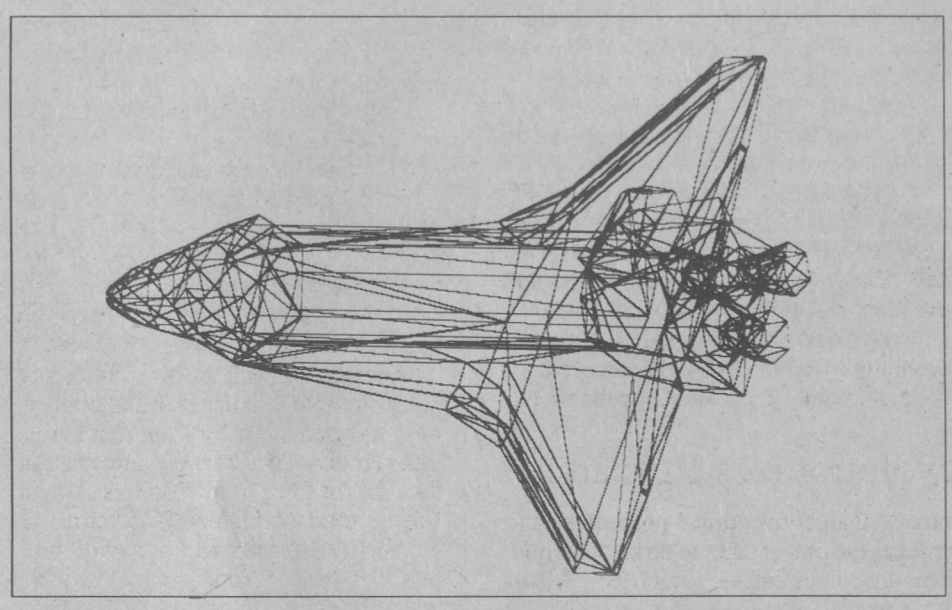
HSC PHOTOGRAPHY SERVICES

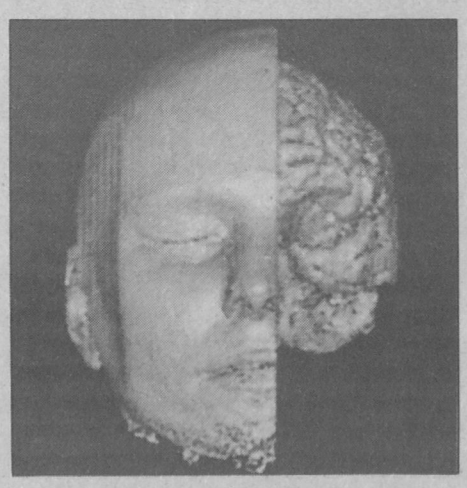
Arie Kaufman is able to interact with a three dimentional work station by wearing a "data" glove that is connected directly with the computer.

Kaufman has received grants totaling $500,000 from the National Science Foundation to support his visualization research. The Hughes Aircraft Co. of Long Beach, Ca., has awarded him $115,000 in research support to develop a software package to design artificial aerial views for flight simulation. "Sitting in front of the computer is much cheaper and safer than

continued on page 7

"A picture is worth a thousand words. Visualization is worth a thousand pictures."





The development of computer visualization has enabled researchers at Stony Brook to create life-like graphic models of a variety of objects on the computer. A reconstructed MRI image of a human head (left) is partially sliced to reveal the brain. Kaufman used 16 million voxels to generate this image which could be used for surgical planning or radiation therapy. A line drawing, in this case of the space shuttle (above) is often the first step in generating a finished computer graphic; a teapot (right) was generated by Kaufman's cube system using 128 million voxels.

Supercomputers Enable Researchers To Simulate Laboratory Experiments

Robert Cess is plotting the future course of the greenhouse effect. But instead of working in his laboratory, he uses a Cray II supercomputer at the Lawrence Livermore National Laboratory. There, he runs five global climate models comparing increases in atmospheric carbon dioxide. These models suggest that clouds play a substantial role in global warming.

Cess, leading professor of atmospheric sciences, is among a cadre of experimental scientists from disciplines as diverse as biology and marine sciences who have, in essence, moved their laboratories "inside" a computer. The power of today's supercomputers enables researchers to mimic a variety of physical experiments by using computer hardware and software in place of lab ware. The promise of computational science has led some researchers to suggest that the field will eventually grow into a third domain of science—coequal with the traditional fields of theory and experimentation.

Computer experiments allow scientists to gather data and test hypotheses in ways that were previously unavailable to them. Supercomputers provide researchers with reams of numbers that need to be analyzed. Computer scientists at Stony Brook are developing software that will convert these numbers into pictures, allowing scientists and engineers to "see" and understand the systems they are studying in a new light. Scientists like Cess are collaborating with computer scientists to use these graphic tools in their research.

At Stony Brook, scientists are using computer modeling in place of, or in addition to, physical experiments in various disciplines. Malcolm Bowman and a team of marine scientists at the Marine Sciences Research Center are modeling ocean currents to understand how the ocean works. These large software programs are run on IBM supercomputers at Cornell University's National Supercomputing Center. Bowman says the advantage of using the supercomputer is that it allows him to simulate motions of currents worldwide with unprecedented resolution.

"We can obtain more and more detail of the ocean circulation and mixing," he says. "It's like bringing an image into sharper focus."

Bowman has begun working with computer scientist Arie Kaufman to turn these mathematical models into pictures. Bowman wants to see a three-dimensional picture of waves to analyze the effect of tides inside a closed basin.

James Glimm, professor and chair of

continued on page 8

Center for Biotechnology Provides Foundation for New Industries

By Sue Risoli

The experts agree: biotechnology is ready to explode on Long Island.

The University at Stony Brook's Center for Biotechnology is playing a key role in nurturing already fertile conditions for the growth of the biotechnology industry here. As one of ten CAT (Center for Advanced Technology) locations throughout New York, Stony Brook's facility (designated as a Center for Advanced Technology in Medical Biotechnology) serves as an interface between the Long Island's life sciences research community and biomedical industry.

The center invests in early phase, high-risk research projects, operates an "incubator" facility for fledgling companies—offering advice, resources, and low-cost space—and sponsors programs to bring together scientists and businesspeople.

Its location at Stony Brook, says center director Richard K. Koehn, "enables the center to be particularly well positioned to serve as a focus for the transfer of technologies from the research laboratories to the marketplace." More than 600 researchers are engaged in biomedical research, he points out.

Adds Francis P. Hession, manager for advanced technology in Stony Brook's Research Administration office, "The university's research expenditures total $78 million per year; $33 million of that is biotech-related."

The center opened in 1983 with funding from the New York State Science and Technology Foundation. It receives $1 million each year from the foundation, a sum that is matched annually by an additional $1 million in funds from private, for-profit corporations.

Entrepreneurs with hot new ideas can turn to the center for help through its seed grant program. Half a million dollars each year is earmarked for innovative research in its early stages; this year the center sponsored 15 of these efforts. Twenty percent of the investments the center has made in such companies have resulted in full-fledged companies or licensing agreements between researchers and industry. Other new companies are getting a start in the center's on-site "incubator" facility.

This year the center initiated a small business development grant program. It will soon begin providing grants of up to $25,000 to New York State biotechnology companies with less than 50 employees, which work with state-funded research institutions.

The center played a leading role this fall in the first collaboration between Long Island's four major research institutions. Center staff organized a conference that enabled scientists to present their work to members of the biotechnology industry. The three-day invitation-only event, co-sponsored by the Long Island Forum for Technology (LIFT), Cold Spring Harbor Laboratory, Brookhaven National Laboratory and North Shore University Hospital Cornell University Medical College, focused on developments in cancer biotechnology, neurobiology, molecular and structural biology and new applications in biotechnology.

"We're moving nationally into a post-industrial economy, which indicates a move toward the service sector. Biotechnology is a service industry."

The center also operates a number of outreach programs. Each year it co-sponsors, with the Cold Spring Harbor Laboratory, a workshop for high school science teachers. Educators take the workshop on the road each summer to 14 locations throughout the United States, and train 300 teachers a year in biotechnology. The seminar is also offered at Stony Brook as a three-credit graduate course.

Monthly breakfast meetings organized by the center bring together representatives from the university, state and local economic and industrial development agencies and departments, and trade organizations such as the Association of Biotechnology Companies (ABC) and LIFT. The center also works closely with two other CAT centers—the Cornell University Center for Agricultural Biotechnology and the SUNY at Buffalo Center for Health-Care Instruments and Devices Institute, to ensure a coordinated approach to development of biotechnology in New York State.

The seeds for the success of biotechnology on Long Island have already been planted. Says Richard Koehn, "Biotechnology is a rapidly growing industry that promises to diversify Long Island's economic base from a historical dependency on the defense industry."

George Soos, president of LIFT, agrees. "Biotechnology is a natural fit for Long Island's in-residence experts. We have a highly educated community, and excellent research institutions."

Even a downward turn in Long Island's economy wouldn't stop the progress of biotechnology, says Lee Koppelman, executive director of the Long Island Regional Planning Board and director of the university's Center for Regional Policy Studies. "We're moving nationally into a post-industrial economy, which indicates a move toward the service sector. Biotechnology is a service industry."

Long Island's population "is an aging one, demographically," he continues. "That means the problems of geriatric care are upon us. There are potential spin-offs for biotech."

"With our resources—major research institutions and a tertiary care hospital at Stony Brook—we see biotechnology as an area that will continue to grow on Long Island."

Sue Risoli is a senior writer in the Office of News Services.

Computer Visualization Revolutionizes Research

continued from page 6

using real planes," he notes.

Kaufman has filed five patents with the Research Foundation of the State University of New York, three of which will be licensed by Hughes.

Other applications of his research are in medicine, including medical diagnosis, surgical planning, radiation therapy, reconstructive surgery and medical education and research.

Kaufman uses CT and MRI scans to reconstruct three-dimensional models of body parts and organs. Using electronic scalpels, tissues can be "cut" entirely or "peeled" to reveal inner structures.

If, for example, a doctor wants to repair a missing bone in a jaw, he can "step inside" the gap and determine the exact shape of the graft. The technology is more precise than conventional procedures and reduces the time it takes to do an operation. This translates into lower costs. "A surgeon will be able to do five procedures a day, instead of one," he notes.

Kaufman is working with researchers from Memorial Sloan-Kettering Cancer Center in Manhattan on applications for radiation therapy. He is also working with a biomedical company, MediCAD of Setauket, N.Y., on a cranio-facial work station to plan reconstructive surgery.

At Stony Brook, Kaufman is collaborating with Ilan Spector, associate professor in the Department of Anatomical Sciences, to construct three-dimensional models of a cell. "Volume visualization is the only way to go if you want to investigate the inner structures of a cell," Kaufman says.

New Medical Treatments Result From Biomedical Collaborations

Nearly 600 of Stony Brook's 1400 researchers—from 30 academic departments—are conducting research in the biomedical sciences. Their work serves as a bridge between the biotechnology industry and the needs of patients who may one day benefit from new therapies being developed at the university.

One particularly promising project has found a new use for an old drug. Several years ago Lorne Golub, Thomas McNamara and Nungavarm Ramamurthy (all of the Department of Oral Biology and Pathology) discovered that tetracyclines, used for decades to fight infection, could also be used to block the destruction of a substance in the body called collagen, a major component of gums, skin and bone. Normally, excess collagen in the body is broken down by the enzyme collagenase. In the presence of certain disorders, however, collagenase runs rampant, destroying bone and other connective tissue.

The researchers chemically modified tetracycline to remove its antibiotic properties—eliminating the unwelcome side effect of tetracycline-resistant bacteria—while retaining its anti-collagenase abilities. Applications of the work have expanded to include use of tetracyclines to treat periodontal disease, osteoporosis, rheumatoid arthritis, corneal ulcers, diabetes-induced kidney disease and—on the test tube level only—cancer.

Golub and colleagues have now tentatively identified the site of the anticollagenase activity on the tetracycline molecule. "Theoretically," he says, "this should allow us to custom design a tetracycline for a particular disease, to allow even more effective treatment."

Another biotech effort, producing monoclonal antibodies in the laboratory, has produced a test for *Papilloma* virus that can give doctors more information than the currently used "Pap" test. David Baker, head of high-risk obstetrics at University Hospital and associate professor of obstetrics and gynecology, and Lorne Taichman, professor of oral biology and pathology, have developed a test that can determine the type of *Papilloma* virus present. (The virus is a sexually transmitted infection that causes genital warts and is linked to cervical cancer.) The antibodies selectively attach to the type of *Papilloma* associated with malignancies.

The only other test available to detect the type of virus is expensive and time-consuming. The Pap test given during routine gynecological examination identifies abnormal cells that have *Papilloma* virus, but cannot tell which type it is.

Monoclonal antibodies are also being used by Barry Coller of the Department of Medicine to improve treatment of heart attack and certain types of strokes. During these conditions, excess clotting of blood platelets occurs when platelets bind with a protein in the blood called fibrinogen. The antibodies bind to the platelet site that fibrinogen usually binds to, preventing the platelet clumping.

"The next generation of this work will be to find new ways of getting at the monoclonal antibody," says Coller. "The Center for Biotechnology is funding this next step."

Probing a person's DNA to check for exposure to environmental carcinogens is a possible outcome of Arthur P. Grollman's research. Grollman, chairman of the Department of Pharmacological Sciences, is exploring the use of site-specific modifications of DNA as a method of determining the degree of harm caused by chemical carcinogens.

"If you take a chemical and add it to a cell, it reacts all over the cell," he explains. "We are putting DNA in a test tube and manipulating it so that it reacts in only one spot when chemicals are added." The approach, he continues, is "novel and very powerful."

"It has applications to epidemiology," Grollman points out. "We might be able to look at a person's DNA to determine whether a particular chemical has reached that level. This will tell us if a person has been harmed by exposure to a that chemical."

The Department of Chemistry's Thomas Bell is working with artificial receptors—molecular structures, created in the laboratory, that can bind to a particular ion or molecule. "When the binding occurs, a complex is formed," he explains. "That complex produces a signal, which lets you determine the concentration of a molecule."

Such receptors could be used to determine the concentrations of materials in blood or other body fluids. "With this kind of binding you could remove from the blood heavy metals, or drugs in the case of drug overdose," says Bell. "You can monitor the amount of medication in a person's blood. For example," he continues, "lithium salts are used for a number of therapies. If you developed a receptor for lithium, that would bind only to it and reject the sodium, you'd be able to monitor the amount of lithium in the blood."

"The blood chemistry market represent a billion dollars a year," Bell points out. "With these receptors, you could determine blood chemistry more effectively."

Center for Regional Studies Tackles Issues Facing Long Island

continued from page 1
grant from the Regional Economic Development Council to study day care in Nassau and Suffolk counties—to study what the needs are, where the centers should be located and how they should be funded.

He also hopes to tackle the problem of financing primary and secondary school education. This came about as a result of research conducted two years ago by the Long Island Regional Planning Board. Koppelman studied the relationship between high school student performance and the amount of money spent per pupil. He learned that a large amount of money spent per pupil does not necessarily guarantee good student performance. Koppelman has met with state senate majority leader Ralph J. Marino and Sen. Kenneth P. LaValle to discuss funding for the study, which would cost about $400,000. If approved by the state legislature, the study would be "one of the major research projects of the center," Koppelman notes.

Traffic congestion is another problem Koppelman wants to address. He plans to apply for a $500,000 grant from the National Science Foundation to establish an institute for traffic analysis on Long Island. The institute would offer courses in traffic engineering and traffic safety, as well as research. It would also place particular emphasis on recruiting students from traditionally underrepresented groups, Koppelman says. Traffic analysis offers career opportunities at the state, local and federal government levels.

Besides research projects, Koppelman, who has worked in government for 30 years, has been asked to advise the Town of Islip on its second master plan.

In the area of education, the center has worked with Paul Edelson, dean of the School of Continuing Education, and Mark Schneider, chair of the Department of Political Science, to establish an 18-credit graduate certificate program in Long Island regional policy studies. Koppelman says the program draws a number of town and county government workers.

"As far as the outside community is concerned, Lee is Mr. Long Island," Edelson says. "He is easily the most quoted authority when it comes to regional planning and development issues. It's clear that having him at the university will increase the points of contact between Stony Brook and Long Island. I'm looking forward to working with him on a variety of outreach projects, especially those which affect the future of Long Island's workforce."

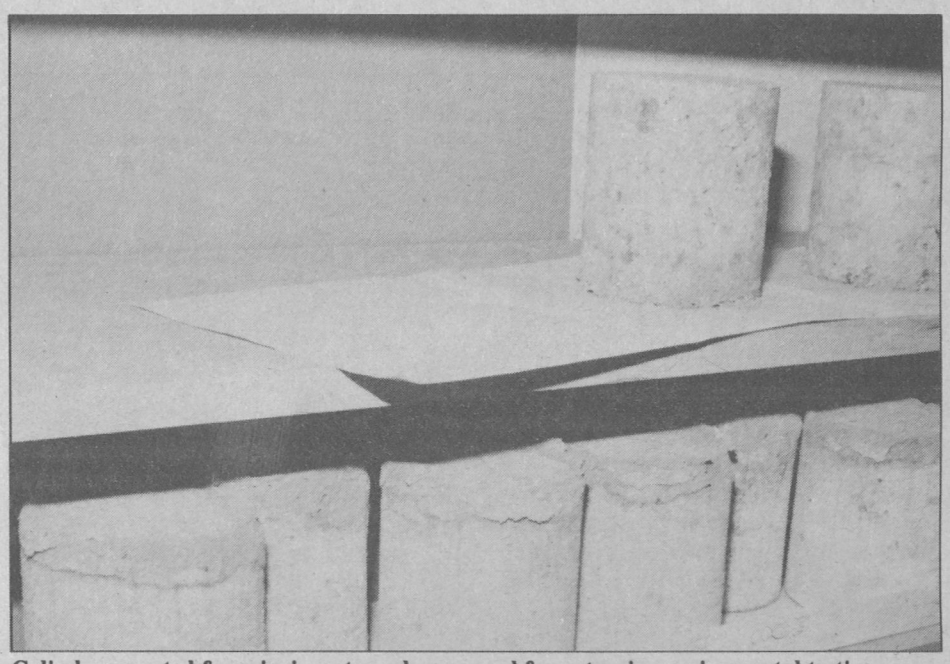
Schneider says that Koppelman will play a major role in improving the efficiency of local government and keeping local taxes under control. "This is critical for the future economic development of Long Island because taxes in the region are so high and the cost of local government is beginning to affect the continued expansion of the region," he says.

Noting that Koppelman carries out his research with the help of 10 doctoral students and four research fellows, Schneider adds, "Lee continues to play a major role in training the next generation of government managers who will improve the level of services on Long Island."

Koppelman, who holds the rank of leading professor and has been on the university's faculty since 1967, also spends part of his time teaching. This fall, he teaches a graduate course, "American Federalism and Intergovernmental Relations."

In the spring, he will teach a course in coastal zone science and management at the Marine Sciences Research Center. He also co-instructs a course with Jerry R. Schubel, dean of the Marine Science Research Center, on "Long Island in the Year 2000." Koppelman is also working with Schubel to create an institute for groundwater resources.

"The fact that the university was able to recruit Lee Koppelman is a major victory," Schubel says. "The center positions us to service the emerging needs of Long Island over the next decade. Lee has an intimate knowledge of the problems and opportunities facing the region and will be a valuable source of advice and guidance for the university."



Cylinders created from incinerator ash prepared for extensive enviromental testing.

Converting Waste into Resources

continued from page 1
environmentally safe. They will spend the next two years testing the boathouse and the area around it.

"We'll monitor the structural integrity of the blocks themselves. We'll also take air quality samples inside the building, working with state and federal health and environmental agencies," says Roethel. Scientists will also take periodic soil samples, he continues, "to look for changes in soil chemistry. We'll use as a baseline samples we've analyzed from the area over the past two years."

Concrete/ash blocks are proving to be good news for fishermen. MSRC researchers have been studying two artificial reefs placed in 25 feet of water in Conscience Bay. Each reef—one built in 1987, the other a year later—sits next to a "control" reef built with blocks containing concrete only. Blocks used in the project have been made by Barrasso and scientists at Alpina Community College in Michigan.

MSRC divers retrieve blocks from the reefs twice a year, to bring them back to the lab for analysis, and perform a number of other tests at the site on a monthly basis. They also take monthly photographs of the reefs to document how many fish and other sea animals are making new homes there.

"Physically, the blocks have held up well. They are the same strength they were when we first submerged them," says Vince Breslin, an MSRC researcher.
So far, the scientists see "no release of metals, including metals like lead or cadmium," says Breslin. "Preliminary results of testing for dioxins and furans indicate a similar trend."

The reefs have attracted a wide variety of welcome guests. "The reefs have attracted lobsters, starfish, urchins, snails, and finfish such as cunner and blackfish," says Breslin.

In addition to the blocks themselves, divers also bring those species back to the lab for testing. "We have tested for metal uptake in the tissues of hydroids and blue mussels," says Breslin. "There's been no metal uptake thus far."

With 1990 approaching, MSRC scientists are continuing their work to find safe, practical uses for blocks made from incinerator ash. "Long Island is the first region in the country to rely so heavily on incineration, because of the 1990 deadline," says Schubel. "It's appropriate that we take the lead in this area."

Schubel points out that the quarter million tons of ash that will be produced each year could be translated into seven million construction blocks. "Ash could be a resource rather than a liability," he asserts. "We must continue to develop creative and safe uses for it."

Supercomputers Enable Researchers to Simulate Experiments

continued from page 6
the Department of Applied Mathematics and Statistics, uses Cray II supercomputers at the University of Minnesota to model the chaotic mixing of fluids, including salt domes in geological strata and fluid flow in oil reservoirs.

"Once you believe the computations [from supercomputers] are scientifically valid, they provide much more detailed information than what you get from a laboratory experiment or from direct measurements," says Glimm. Pressure and temperature in an oil reservoir, for example, can be measured with standard equipment at an oil well site. However, computation experiments can provide these measurements at various locations from the well, allowing better management of the reservoir.

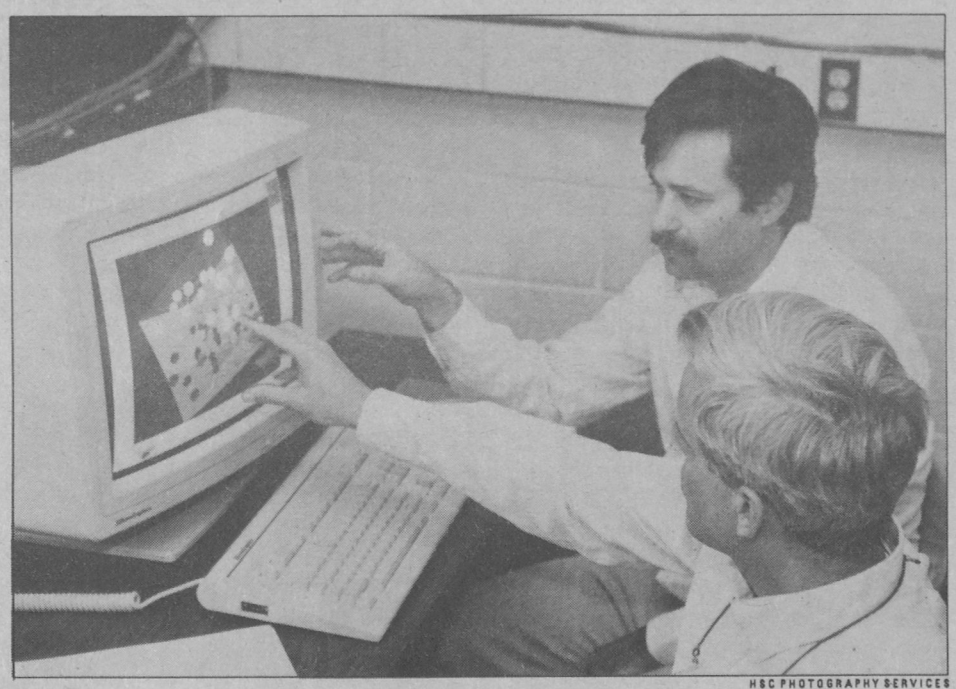
Reginald Tewarson, leading professor of applied mathematics and statistics, is using supercomputers at Cornell University to model the function of kidneys. He can measure such variables as the effect of high blood pressure or the impact of kidney disease on urine output.

"Computer modeling is perhaps one of the best ways to understand the behavior of the kidney," Tewarson said. "It's efficient and much faster and cheaper than using animal models." Tewarson said computer modeling will not replace animal models, but will cut down on animal experimentation in some basic research.

Physicist Philip Allen is using computer modeling to identify atoms in non-crystalline matter, such as glass. Allen is working with collaborators at Brookhaven National Laboratory and the Naval Research Laboratory in Washington, D.C. The research may have applications for such uses as improving the quality of glass. Allen is also working with Arie Kaufman in creating three-dimensional pictures of atoms and bonds in liquid semiconductors.

With new generations of computers, scientists foresee a day when they will be able to accurately model such highly complex systems as the distribution of acid rain over entire regions, the formation of the Milky Way galaxy, chemical interactions between complex organic compounds and earthquakes in the Californian crust.

"With supercomputers, we can do calculations much more quickly," says Bowman. "In the old days, it took many days to do them and you had to wait for the results. Now, we can interact in 'real time' and look at the results immediately."



HSC PHOTOGRAPHY SERVICES

Physicist Philip Allen examines a three-dimentional computer graphics model of a liquid semiconductor molecule with Arie Kaufman. Allen, who is working with other scientists at Brookhaven National Laboratory and the Naval Research Laboratory in Washington, D.C., is using computer modeling to identify atoms in non-crystalline matter, such as glass.

Agreements on Conference Center Are Falling into Place

Agreements governing the design, construction and operation of a conference center/hotel at the University at Stony Brook are nearing conclusion.

"A ground lease agreement has already been approved by SUNY, the State Attorney General and the State Division of the Budget. The agreements provide Stony Brook Foundation Realty (SBFR) and the Stony Brook campus with important rights of approval over design, construction, financing and operation of the conference center/hotel," says Larry Siegel, SBFR executive director. The proposal is now being reviewed by the state comptroller.

An earlier feasibility study recommended that the facility, which would be located on a campus site near the main entrance, contain 175 guest rooms, approximately 15 meeting rooms, a faculty club, dining facilities, lounges and a health club. The conference center/hotel would be available for community as well as campus use. It's anticipated that ground breaking will take place in 1990 and that the facility will open in 1992.

As a major research center, Stony Brook has long required conference facilities for its expanding program of symposia, conferences, professional association meetings, continuing education and special events.

Lacking suitable facilities, the university frequently has had to forego or limit the size of gatherings important to its research and educational missions. At the same time, it has been unable to accommodate a rising number of campus visitors including guest lecturers, visiting scholars, conference attendees, alumni and families of University Hospital patients.

In June, 1986, the state legislature passed a bill sponsored by senators Kenneth LaValle and James Lack and assemblymen I. William Bianchi and Robert Gaffney authorizing the development of a conference center and hotel on campus.

The law authorized the State University of New York to enter into a land lease agreement with a non-profit corporation, SBFR, which was activated by the Stony Brook Foundation, to manage the project.

SBFR's president, Vincent R. O'Leary, is the chief executive officer of the Nassau-Suffolk Lumber and Supply Corporation of Hauppauge.

Other members of the SBFR board are Gerald Cohen, vice president and general manager of Lawrence Aviation Industries, Port Jefferson Station; Leah Dunaief, publisher of *The Village Times*, Setauket; James Simons, board chairman, Renaissance Technologies, Manhattan; Stony Brook President John H. Marburger; John Scaduto, Nassau County treasurer; Erwin Staller, president of Staller Associates, Hauppauge; Jacob Stein, president of Jacob Stein Realty, Hicksville; and Stony Brook alumnus Richard Gelfond of Drexel Burnham Lambert, New York.

In addition to numerous meetings with local civic and business groups about the project, the SBFR used published notices, mailings and briefings to inform the metropolitan area realty community about the proposed facility. It invited developers to submit proposals to design, finance, build and run the complex.

SBFR also commissioned the national accounting firm of Pannell-Kerr-Forster to conduct a formal, preliminary study of the project's feasibility. The firm, which has particular expertise in examining proposed hotel and conference centers, was asked to give special attention to the strength of the overall market for the facility. The resulting report said that the proposed center and hotel were market-justified, and made particular note of the extensive university demand for the facility. The consultants also confirmed that the university and university-related activities would form the overwhelming demand source for the conference center and hotel.

In September, 1987 SBFR selected the Conference/Hotel Development Group (CHDG) to design, construct and operate the facility as well as to obtain financing for the project. The CHDG group includes James Rubin of Leebar Management Corporation, Manhattan; Paul Goldberg, a developer of university research parks at the University of Connecticut and the University of Maine; the New York office of Perkins and Will, an architectural firm; and MacArthur Construction Corporation, New York.

Vicky Penner Katz

Refuse Removal Savings Is Key Economic Incentive of Recycling Program

Despite a severe drop in waste paper market prices, Stony Brook continues to save a great deal of money through its paper recycling program because of savings from refuse removal cost avoidance.

"While the university will now be required to pay to recycle its newspaper, magazines and the paper that the recycling crew does not have time to sort, the refuse removal cost avoidance benefit to the university is estimated to be more than $300,000 in the 1989-90 fiscal year," says Ken Fehling, campus waste management and recycling coordinator. "This savings makes recycling all waste paper a viable waste disposal alternative for Stony Brook.

"Those who have claimed paper recycling is not cost beneficial are talking about newspaper recycling, and they are landfill or incinerator operators who advocate an alternative waste disposal method at low or no external cost per ton rates," Fehling explains. "The university doesn't have either, and must pay over $100 per ton for refuse removal."

In October, Stony Brook received notice from its paper broker that the price of many paper grades would drop. In some instances, the university will have to pay to recycle its paper.

"The price modifications will reduce the income to the university from the sale of waste paper by about $6,000 per year," says Fehling. "However, that accounts for less than two percent of the financial benefit of the coordinated recycling/waste management program when the refuse cost avoidance factor is taken into effect.

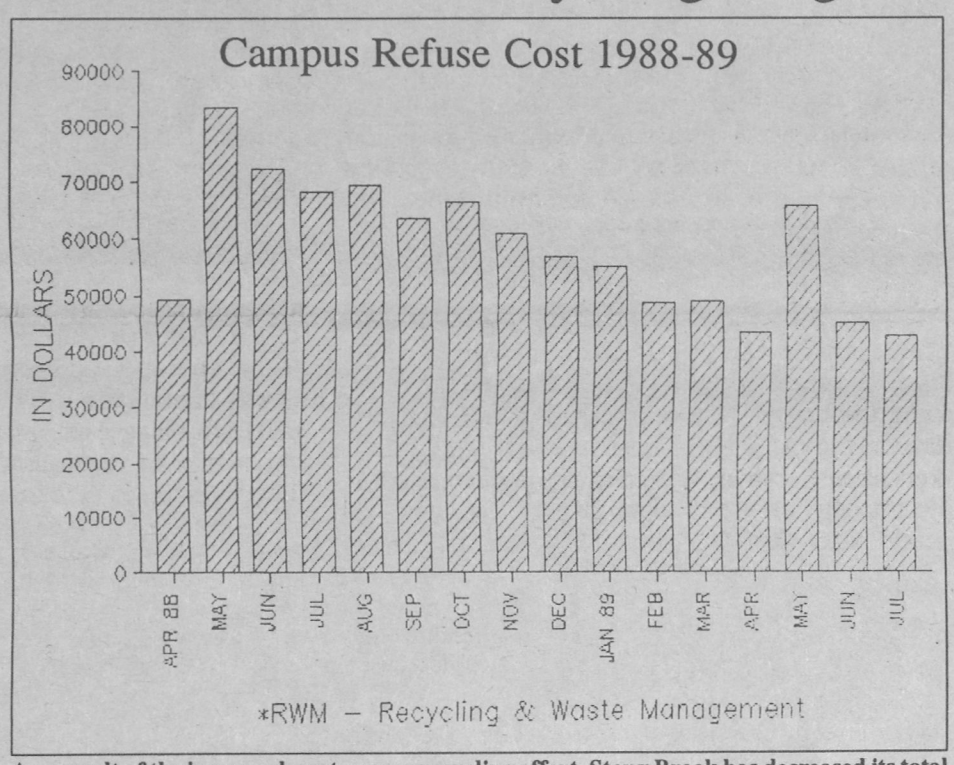
"Newspapers and magazines account for less than 25 percent of the university's waste paper," notes Fehling. "But to counteract that loss, Stony Brook will now be paid more for its high grade computer paper because it's in greater demand."

The high grade waste paper can be recycled into computer paper, writing and printing paper, toilet tissue and paper towels. "The mixed ledger we produce from our recycling program is identical to that which is used to make the toilet tissue and paper towels Stony Brook purchases from the Scott Paper mill in Winslow, Maine," Fehling added.

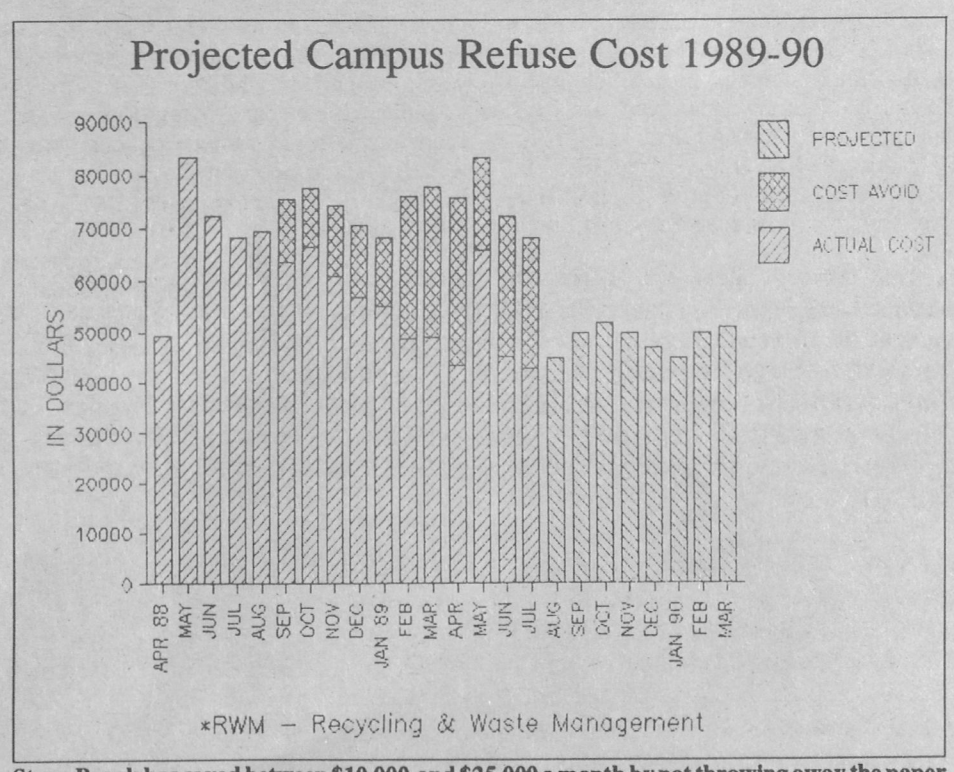
"In recent conversations with the coordinator of the Post Consumer Waste Project at the Scott Paper Co. and the EPA, I've learned that the main reason paper mills are not using more high grade post consumer waste paper in making toilet tissue and paper towels is the availability of a reliable paper supply," Fehling notes. "The university is helping to fulfill that need."

Prices for Recycled Paper (Per Ton)

Computer Paper	Was	$162.50	Now	$172.50
Mixed Ledger	Was	$62.50	Now	$37.50
Cardboard	Was	$12.50	Now	$5
Newspapers/Magazines	Was	$10	Now	-$13
Unsorted	Was	$5	Now	-$25



As a result of the increased waste paper recycling effort, Stony Brook has decreased its total amount of trash, and with it, the cost to remove that trash. As a result, the university expects to save between $250,000 to $300,000 a year on garbage disposal costs.



Stony Brook has saved between $10,000 and $25,000 a month by not throwing away the paper it recycles. As recycling efforts improve, the refuse cost avoidance factor will increase. The money the university receives for its recycled computer paper and mixed ledger will add to the money saved.

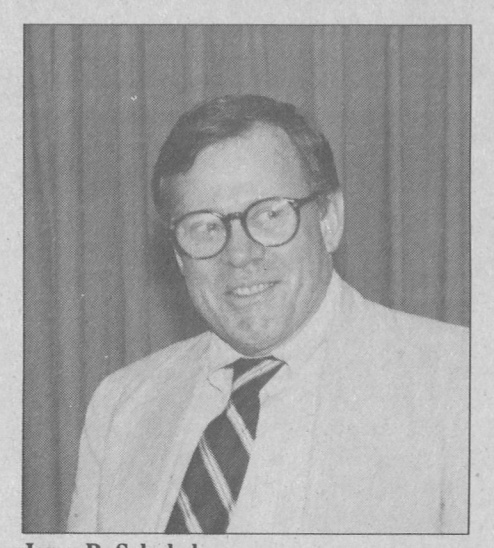
Psychology Honors Program

Junior undergraduates are being interviewed for acceptance into the Department of Psychology's Honors Program.
The program begins with an honors seminar in the spring and ends with the completion of a faculty sponsored research project.
Requirements: Overall GPA of 3.0; Psychology GPA of 3.5 (exceptions individually considered).
Applications and information are available in the Undergraduate Psychology Office, Room B-116, Psychology.

REGIONAL OUTREACH

ECONOMIC DEVELOPMENT

Schubel to Direct Task Force on Regional Development



Jerry R. Schubel

Jerry R. Schubel, director of the Marine Sciences Research Center and former provost, has been named chair of a new Regional Development Task Force geared toward identifying new needs and opportunities for regional participation and service by the university.

The task force was appointed by Provost Tilden Edelstein at the request of President John H. Marburger.

"At this critical transition in the life of our region, it is appropriate for the university to take stock of its efforts to fulfill its regional role and develop a comprehensive strategy to address the critical issues," said Edelstein in his charge to the group, which conducted its first meeting in October.

Although the task force has a two-year mandate, reports are expected during the current academic year as specific activities are completed. The task force's first action, already nearing completion, is a comprehensive survey of existing university programs having a regional impact.

Those named to the panel include Jordan J. Cohen, dean of the School of Medicine; Paul J. Edelson, dean of the School of Continuing Education; Carl E. Hanes, deputy to the president; Stewart Harris, dean of the College of Engineering and Applied Sciences; Francis P. Hession, manager for advanced technology; Richard K. Koehn, director of the Center for Advanced Technology in Medical Biotechnology; Lee E. Koppelman, director of the Center for Regional Policy Studies; Judith M. McEvoy, director of the New York State Small Business Development Center; Robert F. Schneider, associate vice provost for research; Patricia J. Teed, vice president of university affairs; and Gerrit Wolf, dean of the W. Averell Harriman School for Management and Public Policy.

"We first need to determine the full breadth of our current activities, and those guiding these programs must know the context of each other's efforts," said Edelstein. "Not the least of the results of the task force will be the opportunities for synergy and new approaches that arise simply from routinely and regularly bringing these people together."

Creation of the task force is an important step in the university's effort to respond to Long Island's increasingly pressing needs, Schubel noted. Such problems as solid waste disposal, pollution and a softening economy, he added, "are opportunities for Long Island's major research university to develop creative solutions, in partnership with regional leaders and the regional community."

As the task force proceeds with its work, said Schubel, it will look to the knowledge and experience of individuals outside the group and outside the university to join in addressing specific issues.

Scheidt to Coordinate Economic Development Efforts

To provide a focus for the university's regional development efforts, Provost Tilden Edelstein has appointed Ann-Marie Scheidt as special assistant to the provost for regional economic development.

Scheidt, who has previously held positions in the Office of the President and the Division of University Affairs, received her Ph.D. in American history last spring from Stony Brook.

"The urgency of regional needs requires new responses drawing upon the academic sector of the university," said Edelstein "Dr. Scheidt's experience and talent are a singular resource for this critical position and I am delighted she will be playing this important role."

The position also carries internal campus responsibilities.

Progress in Biotechnology the Focus of Three Day Conference

In a first-of-its-kind joint effort, the four major biomedical research institutions on Long Island presented some of their most distinguished research to invited representatives of the biotechnology industry at a three-day conference last month.

"Progress '89," focusing on areas of biomedical research that are particularly important in the development of the region's biotechnology industry, was organized by Stony Brook's Center for Biotechnology, with co-sponsorship by the Long Island Forum for Technology, Cold Spring Harbor Laboratories, Brookhaven National Laboratory and North Shore University Hospital-Cornell University Medical College.

"Biotechnology is a rapidly growing industry on Long Island which promises to help diversify the region's economic base from a historic dependency on the defense industry," said Richard K. Koehn, director of the Center for Biotechnology. "We geared the conference to draw attention to the enormous research pool in biotechnology that exists here."

For more information, call 632-8521.

SBDC Conference Focuses on Non-Military Procurement

A conference on economic diversification, co-sponsored by Stony Brook's New York State Small Business Development Center (SBDC) with three Long Island congressmen, attracted participants from more than 300 Long Island businesses.

The one-day conference, held at the Radisson Hotel Islandia with Congressmen George J. Hockbrueckner, Thomas J. Downey and Robert J. Mrazek, was geared to help small Long Island companies compete for contracts with non-military procurement agencies. NASA, the Army Corps of Engineers, the Office of General Services and the New York State Office of Economic Development procurement office were among those represented.

The session, which focused on competing for contracts directly with procurement agencies as well as subcontracting with larger companies, was the first of several that SBDC Director Judith McEvoy expects to schedule in coming months to help Long Island businesses diversify in face of declining defense spending.

On another front, the SBDC is planning a major conference with National Westminster Bank on the legal and financial aspects of franchising. The session, to be conducted in January, is intended for entrepreneurs who are interested in starting their own businesses but "want the security of a franchise," said McEvoy.

For more information, call 632-9070.

Agricultural District Needed for North Fork, Says Economist

Although 25 vineyards and 10 wineries have sprouted on Long Island's North Fork, the region's wine industry is not yet secure against future intrusion of commercial and residential development, says Stony Brook economist Michael Zweig.

In a study quoted extensively in a recent article in *The New Yorker*, Zweig argues that existing North Fork farmland-preservation programs can protect agriculture in the area if they are expanded and combined with large-lot zoning of 25 acres or more—an approach that has proved successful in California's Napa Valley.

"Wine grapes are a prime example of a new and economically viable direction for East End farming, although potatoes and other traditional crops will continue to be important as well," Zweig wrote in the report, which was conducted for the Southold Town Board and the Suffolk County Industrial Development Agency.

"The process which has so totally transformed the rest of Long Island in recent decades need not be repeated" on the East End, he declares. "Usually, the term 'developer' has connoted suburban, residential, industrial or commercial development, as though those economic activities were the only forms of progress. On the East End, development can be driven by agriculture instead."

Zweig has proposed that Southold establish a 9,000-acre "agricultural district," from which any other business would be rigorously excluded. "The rural character of the area is slipping away. Yet it is exactly a rural character that will attract, and then be sustained by grape growing for premium wineries."

For more information, call 632-7536.

Technology Center to Provide Space for New Companies

A fresh idea in university-industry collaborations is helping new companies get a more secure start, creating jobs and providing universities with an innovative way to use private dollars.

Industrial parks are joining forces with academic research centers to house biotech firms that need the knowledge and expertise of university scientists. "The oldest of these parks is only five years old," says Ginny Llobell, assistant director of Stony Brook's Center for Biotechnology. "It's a chance to be energetic and creative, to design your own approach."

Stony Brook is part of the trend. The university has formed a not-for-profit corporation to negotiate with C.O.L. Properties, developers of a high-technology park under construction near the campus, to operate an incubator facility for new high-tech companies.

The million-square-foot industrial and office park is under construction in East Setauket, less then two miles from the university, and is about one-third completed. It is located near USB, say the developers, to allow companies to form collaborations with university researchers.

For the university, the park, known as the Stony Brook Technology Center, could provide a place for companies that get their start with help from such on-campus resources as the university's biotech center, School of Engineering, Health Sciences Center, W. Averell Harriman School for Management and Policy, and the Harriman School's Small Business Development Center. To house such companies, Stony Brook provides temporary incubator space in its Life Sciences building, and is seeking state funding for a permanent incubator on campus that would provide laboratory space and support services.

However, the new center would provide facilities for companies once they have moved beyond the initial founding phase. Toward that end, the Stony Brook Foundation and the SUNY's Research Foundation, which administers all research grants and contracts, have formed the not-for-profit corporation to enter into a contract with C.O.L. Properties to operate an incubator at the technology center.

The new incubator would not replace the university's on-campus start-up facilities, says Francis P. Hession, acting president of the corporation and Stony Brook's manager for advanced technology. It would, however, serve as the next step for small companies as they expand.

"We envision a four-tier program," he says. "Companies would grow first from basic science research conducted on campus. They would then move from the applied research incubator on campus, to a 'nursery'-type incubator off-site, to such commercially available properties as the technology center, Southgate University Park in Stony Brook or Flowerfield Industrial Park in St. James."

CuraTech, Inc., a biotechnology company that has developed a wound care product, has already moved into the center after "incubating" for a year on campus. The company has grown from three scientists to a 40-employee firm housed at the technology center. CuraTech also operates 14 wound care clinics, staffed by 40 additional employees, around the country.

Another on-campus incubator tenant, Olympus Biotech Division, is expected to graduate to 10,000 square feet of space at the technology center, early in 1990. Olympus is an arm of the Olympus Corp., based in Lake Success for the past 25 years.

A new Currents *feature, "Regional Outreach" provides a monthly update on Stony Brook's partnerships with the Long Island region. Items related to Stony Brook's missions in cultural and social development, economic development and health care should be directed to Mark Owczarski, managing editor, Office of University Affairs, 322 Administration Building, ZIP-0605. Phone: 632-6310.*

HEALTH CARE

Videotape to Help Area Physicians with AIDS Counseling

A 26-minute videotape titled "AIDS, Pregnancy and You" has been produced by the AIDS Education and Resource Center of the School of Allied Health Professions to help area physicians improve the validity and thoroughness of HIV test counseling, while significantly saving on provider cost and time.

New York state law requires that pregnant women be counseled prior to having blood drawn for the HIV test and again before getting the results of the test. However, effective counseling is a time-consuming process, says Edmund J. McTernan, dean of the School of Allied Health Professions, and is costly to the health care provider.

"Effective counseling is a two-step process which must include the provision of basic information about HIV and the test, as well as the provision of answers to specific questions posed by the patient," he said.

Too often patients are not provided enough information on HIV upon which they can formulate questions. The videotape can address that issue. It includes basic information on the HIV infection and AIDS, how it is acquired, how it is transmitted and the meaning of the test results.

The videotape can be used in one of two ways. Either the practitioner can set up a projector in the corner of the office so patients can view the tape there, or the videotape can be loaned to patients to view at home.

Copies of the videotape are available for $20, plus $4 shipping. For information contact the AIDS Education and Resource Center at the School of Allied Health Professions or call 444-3209.

Workshop to Address Why People Get Sick of Work

Physicians who are not properly trained may overlook the relationship between working conditions and illnesses. To assist health professionals understand this important link, the Division of Occupational Medicine will sponsor a day-long conference, "Methods for Prevention and Treatment of Major Occupational Health Problems," Wednesday, Nov. 8 at the Royce Carlin Hotel in Melville.

Participants who attend the conference may attend workshops on solvents in the electronics industry; repetitive strain injuries; indoor air pollution, also known as "office building syndrome"; or the use of video display terminals (VDTs).

The program is designed for family practitioners, internists, preventive medicine specialists and other physicians who manage occupationally related diseases, as well as nurses and other health professionals engaged in treating and maintaining occupational health.

Case studies will be utilized at each workshop. Attention will be paid to the findings of recent investigations, management of the suspected environmental problems and methods used in resolving those problems.

The conference is also sponsored by Stony Brook's Department of Preventive Medicine of the School of Medicine together with the Long Island Association of Occupational Health Nurses. It is funded in part by a grant from the State Occupational Health Clinics Network.

There is a $75 conference registration fee. For information call 444-2094.

Two Doctors Join Stony Brook's Occupational Medicine Service

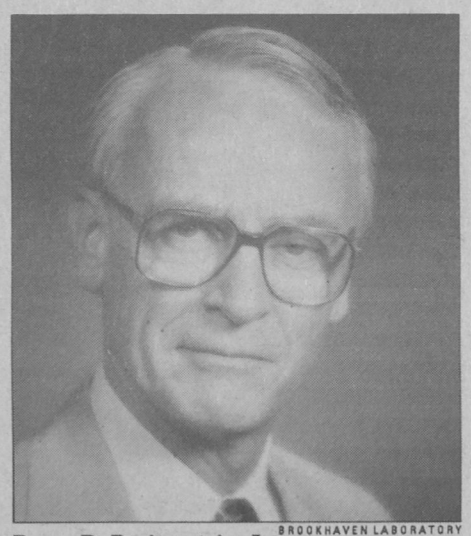
Two physicians have joined the Occupational Medicine Service at the University at Stony Brook to diagnose and treat work-related illnesses.

They are Bryce D. Breitenstein, Jr., formerly president of the Hanford Environmental Health Foundation in Richland, Wash., and Washti Hailoo, former medical director of a state occupational medicine clinic in Buffalo, N.Y.

Dr. Breitenstein, a specialist in radiation exposure, is also medical director at the Brookhaven National Laboratory. Dr. Hailoo is a specialist in pulmonary diseases.

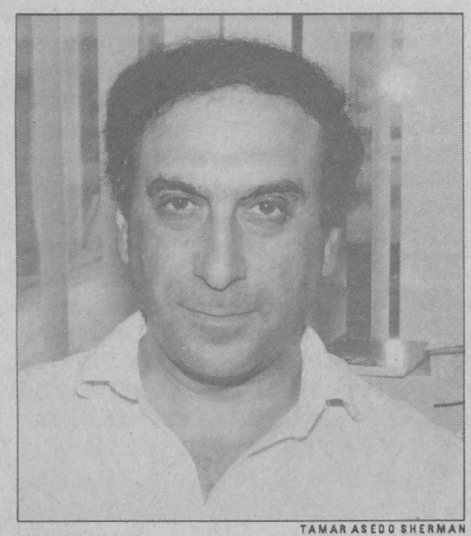
They see University Hospital employees for annual exams, pre-employment physicals, and for illness on the job. The clinic also sees patients with work-related illnesses from throughout Nassau and Suffolk counties. Clinics are held once a week at Winthrop University Hospital in Mineola and will be available beginning in November at the Community Health Plan of Suffolk in Hauppauge.

For appointments, call 444-3481.



BROOKHAVEN LABORATORY

Bryce D. Breitenstein, Jr.



TAMAR ASEDO SHERMAN

Washti Hailoo

SCHOOL PARTNERSHIPS

Center Assists High School Math, Science Teachers

The University at Stony Brook is one of 12 regional resource centers assisting in the development of learning modules to enhance the teaching of science and mathematics through the use of telecommunications and microcomputer technology.

The program is focused on improving the teaching of science and mathematics in grades seven through 12. Twenty science and mathematics teachers from Suffolk County schools are involved.

Stony Brook's involvement in the project, conducted by Technical Education Research Centers (TERC) of Cambridge, Mass. under the auspices of the U.S. Department of Education's Federal Star Schools Program—is directed by Professor Thomas T. Liao, chair of the Department of Technology and Society. The program is co-sponsored and partially supported by the Center for Excellence and Innovation in Education.

The philosophy TERC brings to Star Schools is one of engaging students in active, hands-on science and mathematics investigations by taking full advantage of new technologies available to schools, said Liao.

In all modules, students start with a hands-on, investigative activity developed by TERC. They then are encouraged to pursue related projects which they devise themselves. In the classroom, students, like scientists, work in teams. They use computers to record and display data. Through the telecommunications network they share results with classes across the country, establishing a scientific community among their peers, Liao added.

Through the network, teachers remain in touch with Star Schools resource staff, consult scientists who serve as advisers, and share questions, ideas and teaching strategies with their colleagues. University trainers and a graduate student at the Department of Technology and Society will continue to provide technical assistance throughout the academic year.

Teachers were recruited for Stony Brook's part in the project from STEP (Science and Technology Entry Program) high schools, secondary schools that are affiliated with the Westhampton Beach Teacher Training Center as well as other Suffolk County high schools. The STEP affiliated schools are: Longwood, Middle Country, Wyandanch, South Country, Brentwood and Riverhead.

To participate in the program schools need access to an Apple IIE, IIC, IIGS, or an IBM PC computer with a 3 1/2" and 5 1/4" disk drive, a modem and a telephone line. To take part in pilot projects in Nassau and Suffolk Counties, call the Department of Technology and Society at 632-8767 or the Center for Excellence and Innovation in Education at 632-7696. For further information about TERC, call Peggy Kapisovsky at (617) 547-0430.

Student Research Support Program Launches Second Year

The Student Research Support Program, sponsored by the Center for Science, Mathematics and Technology Education to high school students develop entries for the Westinghouse Science Competition and science fairs, has launched its second year.

Students and teachers from 30 Long Island schools attended an all-day session Oct. 18 focused on research in biology. Future sessions are scheduled on physical sciences (Nov. 8) and mathematics and engineering (Dec. 6).

The program for each session includes an introduction conducted by a USB faculty member covering such topics as: the life of a researcher, finding a topic and mentor, and accessibility to libraries and laboratories. This is followed by presentations by high school students who have conducted successful science projects, round-table brainstorming sessions led by Stony Brook faculty, and visits to Stony Brook laboratories.

For more information, call 632-7075.

Liberty Partnership Designed to Assist 'At Risk' Students

This fall, the University at Stony Brook is joining more than a dozen campuses of the State University of New York to implement the state's new Liberty Partnership program designed to protect at-risk students across the state from dropping out of high school.

Fifteen of the program's 41 grants were awarded to SUNY, amounting to $3.6 million of the $10.3 million first-year funding. The largest SUNY grant—$400,000—was awarded to Stony Brook. The funds will support several programs with area school districts that provide tutoring, mentoring and other assistance to 320 junior high and high school students with personal or social obstacles to learning, such as poverty, pregnancy, substance abuse or behavior problems.

The Liberty Partnership program provides post-elementary and secondary school students—those who are potential dropouts—with the educational and social services to help them complete school and go on to college or employment.

"The Liberty Partnership program is a timely and vital advance against an unhealthy tide of school dropouts," said SUNY Chancellor D. Bruce Johnstone. "These grants will go far in accelerating the school-college relationships that many of our campuses have already established in their respective regions."

Seminars Offered for High School Science Teachers

In a program partially sponsored by the National Science Foundation, the Center for Science, Mathematics and Technology Education is sponsoring a series of one-day seminars to give high school science teachers an opportunity to get briefed on new developments in their fields, get ideas for curriculum enrichment and meet university and school colleagues.

Programs remaining in the fall semester include "The Greenhouse Effect and Global Change" (Nov. 9), "Experiments for General Chemistry" (Nov. 15), and "Long Island Ecology: Preservation of Long Island Waters and Pine Barrens" (Dec. 1).

There is no charge for the seminar, and lunch is provided. A $10 reservation fee, refundable upon attendance, is required with all applications.

Seminars meet from 8:45 a.m. to 3 p.m. on regular school days. Schools must provide released time for participation.

For more information, call 632-7075.

UNIVERSITY NEWS

New Dining Facilities Get Great Reviews

Patrons are giving an "A" for ambiance to two popular eating spots in the Stony Brook Union that were renovated over the summer.

The two—the End of the Bridge restaurant/nightclub and the Bleacher Club, formerly the Stony Brook Union Cafeteria—have bold, new looks, says Ira Persky, executive director of the Faculty Student Association (FSA) which helped underwrite the $300,000 remodeling job. The FSA oversees the operations of food services across the campus.

The End of the Bridge was completely redesigned. Its new art deco look, designed by Llewellyn Johnson and Scott Accardo of Miller & Associates, Port Jefferson, extends to the black and white ceramic tile floor, matching booths, chairs and tables and heavy use of glass blocks which defines entry and dining areas. An acoustic ceiling and fabric covered walls splashed with pastel accents, complete the picture.

The End of the Bridge, located on the second floor of the union, seats 186 and is open Monday through Friday, noon to 8 p.m. Nightclub entertainment is offered Monday through Saturday, 9 p.m. to closing. The End of the Bridge is open to the university community and their guests. Patrons must be 21 or older after 8 p.m.

The former Stony Brook Union Cafeteria has been transformed into the Bleacher Club, the California-look tailored by the design and construction arm of DAKA Inc., the Massachusetts-based company that supplies USB with food services. Included in the makeover are new terracotta tone quarry tile floors, new booths and tables and a raised seating area that can double as a stage. New doors to an inner courtyard, improved lighting and a color scheme of peach, teal and pink carry through the California theme.

The Bleacher Club, located on the first floor of the union, is open Monday through Friday from 8 a.m. to 8 p.m. serving breakfast, lunch and dinner. It has seating for 196 patrons.

This past summer, FSA also remodeled Roth Cafeteria installing $54,000 worth of new flooring, chairs and tables.

Vicky Penner Katz

PAT COLOMBRARO

The strong use of black and white and an art deco style have given the End of the Bridge a dynamic, new look. Nightclub entertainment is offered Monday through Saturday, 9 p.m. to closing. Patrons must be 21 years of age or older after 8 p.m.

PAT COLOMBRARO

California tiles and attractive seating provide a new atmosphere at the Stony Brook Union's Bleacher Club. The restaurant is open Monday through Friday, 8 a.m. - 8 p.m.

Attorney General Studies Appeal On Coser Case

The State Attorney General's Office will have 90 days to decide whether to appeal a Second Circuit Court of Appeals decision upholding a sex bias case involving three Stony Brook women professors and a woman administrator. The case had been in the courts for 15 years.

The "summary affirmance" handed down Thursday, Oct. 19, upholds a July, 1988 U.S. District Court ruling awarding back pay, pension adjustments, interest and legal costs to Rhoda Selvin, assistant vice-provost for undergraduate studies; Rose Coser, a retired sociology professor; Linette Brugmans, a retired French professor; and Ruth Cowan, a history professor, all who had alleged salary discrimination. The finding could cost the university upwards of $250,000, says Ellen Fried, an attorney who argued the case on behalf of the Attorney General.

The case, known as Coser-Moore, stemmed from an action filed in 1974 by 34 women employees who contended that Stony Brook had engaged in a system-wide pattern and practice of discriminating against female faculty and staff in terms of recruitment, hiring, placement, promotion, tenure and salary.

In August, 1983, the U.S. District Court ruled that Stony Brook had not engaged in a pattern and practice of sexual discrimination, a decision later upheld in the U.S. Circuit Court of Appeals.

Six of the 34 in the original suit opted to pursue individual grievances in a group action. In the most recent decision, the court upheld an earlier ruling against two of the six, history professor Carolyn Eisenberg and Ruth Miller, an English professor.

Stony Brook Offers Students Advice In Dealing With Kelly Quad Claims

Representatives from the State Dormitory Authority's insurance carrier were back on the Stony Brook campus Oct. 25 and 26 in a move to quickly settle insurance claims resulting from flooding in Kelly Quad.

Students suffered damage to clothing, furniture, books and other personal property over a period of rainy days in September and October when a membrane installed atop each building by a State Dormitory Authority roofing contractor failed to halt water from pouring into the building interiors.

Approximately 1,000 students live in the residential complex. Some 114 claims for losses have been filed, ranging from a $5 box of detergent to a $700 computer, but it is unlikely that the claimants will receive full value for their property, advised Stony Brook officials in a special memo distributed Oct. 23 to Kelly Quad residents.

"As anyone who has ever filed an insurance claim already knows, insurance recoveries are made based on the depreciated value of the damaged item, not the replacement value. You're paid only for the life the article had left in it, not the replacement value," points out Rosemarie W. Nolan, an attorney and Stony Brook's administrator for claims records and risk in the Office of Finance and Management.

Nolan helped draw up the memo that students were able use in negotiating with the Dormitory Authority's insurance adjustors. For many students, it was their first experience in seeking compensation for insured losses.

"Anyone who owns a home, rents an apartment or even drives a car is familiar with how insurance companies operate. Few if any compensate for losses on replacement value. It's the industry norm to settle claims based on depreciated value," Nolan pointed out.

Students were urged to document their loses.

"The best evidence of the value of an item is the receipt or bill of sale," Nolan said. "And if they didn't have that, we suggested the students bring a pictured advertisement of the article of the same brand with a price or a letter or estimate from a dealer or store manager."

Nolan cautioned students to be realistic about their claims. "For example, we told them not to expect to receive compensation for items that were not permanently damaged such as sneakers which are normally designed to withstand water. We felt the company would probably refuse to pay if they felt that the item could be restored easily by washing."

"We told them not to expect a windfall because insurance companies are not in the windfall business. Though it might cost $500 to replace it, an old stereo is still an old stereo in the eyes of an insurance company and is therefore worth only a small fraction of its original value. From their standpoint, you've had the use of the stereo for a long time," Nolan added.

Two representatives of the insurance firm, Crawford and Company, were to meet individually with students. One of the two, David Haft, previously advised students whose computers were damaged to get them repaired and present the repair bill.

The insurance company was expected to pay replacement value for inexpensive items such as up to $7 each for wall posters and to provide money for laundering or cleaning items of clothing and cleaning rugs and carpeting.

Stony Brook officials plan to monitor the way in which Crawford and Company handles claims and take whatever action deemed necessary through SUNY if the final result is not satisfactory.

Vicky Penner Katz

Meters Installed Along Fine Arts Loop to Ease Short-term Parking

A ticket in the windshield has become a relic of the past for motorists parking in the Fine Arts Loop—unless, that is, they've run out of quarters.

It now costs a quarter for 10 minutes of parking in one of 11 new metered spaces in the loop, up to a maximum of 30 minutes. Handicapped spaces continue to go unmetered.

"There was a demonstrated need for short term parking," explains Herbert Petty, assistant director of public safety who is overseeing the metering program. "We needed greater turnover on the loop, to allow people to park for short term business such as purchasing tickets at the Staller Center for the Arts or seeing someone in the Administration Building."

Up until the meters were installed, all but handicapped parking was prohibited from the loop flanked by the Staller Center for the Arts, the Fine Arts Building and the Administration Building. Motorists were given a 15 minute grace period before tickets were issued by traffic officers.

For now, meters will be operational between 7 a.m. and 11 p.m. although exceptions may be made for Staller Center performance nights. "We intend to study the habits of motorists," says Petty, "before we formalize final hours and exceptions."Public Safety has not determined if there will be a limit on the number of times a motorist can feed the meter.

"Financially it won't make much sense to keep putting quarters in the meter if you plan to park all day. That would cost about $12 whereas you can park in the garage adjacent to the administration building for a maximum of $5 a day," Petty says.

The new meters, which cost $195 each, are tamper-proof. The meters will be emptied daily into a tamper-free "lock-box" guaranteeing the contents won't be touched until the appropriate agency adds up the day's return.

Each of the spaces will be 22 feet long, notes Petty, a length gleaned from measuring the parking spaces in nearby Patchogue which, he said, appeared to have an effective parking system.

Income from the meters will go into the traffic IFR (Income Fund Reimbursable) account with the proceeds used to benefit traffic control on the campus. While there are no plans to extend the metering beyond the Fine Arts Loop, other locations where there is a need for rapid turnover, may be considered in the future, Petty says.

PAT COLOMBRARO

Public Safety's Herbert Petty demonstrates how coins will be collected from a string of meters being installed in the Fine Arts loop. Proceeds will be put into a "lock-box" for later counting.

Nominations Being Accepted for 1989-90 Professional Service Awards

Nominations are now being solicited for the 1989-90 Awards for Excellence in Professional Service. These awards provide an opportunity to recognize outstanding performance by campus professional employees.

Winners of these awards will be appropriately recognized and rewarded. They will receive a framed certificate, an inscribed medallion and a $500 cash award. They will also be honored at a dinner party at the president's home and at a campus reception co-hosted by President John H. Marburger and the Professional Employees Governing Board.

Nominees for these awards must have a non-teaching, full-time professional appointment at Stony Brook, the Research Foundation or any other integral unit of the university and must have completed at least one year of continuous full-time professional service in the position for which nominated prior to September, 1989. Vice presidents and individuals acting in those capacities are not eligible for these awards, nor are previous award winners.

Nominees for the award should be individuals who have repeatedly sought improvement of themselves, their campuses and ultimately the State University of New York, and in doing so, have transcended the normal definitions of excellence. At all position levels, nominees shall be those individuals who can serve as professional role models for a university system in the pursuit of excellence.

The following criteria shall be used in selecting persons for nomination of the award:

• *Within the position description :* The candidate must perform superbly in fulfilling the job description for the position held.

• *Beyond the position description:* The candidate should also demonstrate excellence in professional activities beyond the parameters of the job description. The ideal candidate shall satisfy the standards in a creative and innovative fashion while demonstrating flexibility and adaptability to institutional needs.

Consideration should be given to capabilities and accomplishments in the areas of leadership, decision making and problem solving. Evidence in this category would include professional recognitions, initiation of ideas, development of proposals and committee activities.

Any members of the campus community may nominate candidates for the Awards of Excellence in Professional Service. Nominators are responsible for compiling support files for their nominees. A strong support file is essential for the ultimate success of a nomination. Each file shall include the nominees curriculum vitae and supporting statements.

Completed files must be submitted to the Selection Committee no later than Dec. 4, 1989. Please send nominations files to Selection Committee, Awards for Excellence in Professional Service, Room 310, ZIP-0701.

Stony Brook Council Approves New Policy to Limit Smoking on Campus

The no-smoking sign is going up across the Stony Brook campus, thanks to new regulations just approved by the Stony Brook Council, the university's local policy-making body.

Effective immediately, smoking is prohibited in classrooms, lecture halls and auditoriums, buses, elevators, rest rooms, conference rooms, indoor athletic facilities, museums and art galleries, lobbies, corridors, hallways and stairwells, libraries, dining areas and other public places except in areas specifically designated for smoking. By the spring, the regulations will extend to student housing.

"Society is becoming more health conscious and the desire for a smoke-free environment is one example of that," says Louis Rose, director of Human Resources, whose office will be launching an education campaign for employees and students to address the hazards of smoking.

On January 1, 1990, he adds, policies like Stony Brook's will be mandated under a new state law that will bar smoking in all public places such as shopping centers, elevators, public buildings and mass transportation.

The new law also requires companies and public and private institutions to have written "Smoking In The Workplace" policies with regulations similar, if not identical to those just adopted at Stony Brook.

Smoking is now banned in all office reception areas and service areas open to the public. It is also prohibited in interior offices, labs and other work areas occupied by more than one person, unless all occupants are smokers.

"Smoking will be permitted in one's own office provided you close the door, but if a non-smoker walks in and requests that you put out your cigarette, cigar or pipe, you must do so" Rose said. "The same goes for using a university vehicle in which there's another passenger. If they request that you not smoke, you won't be able to light up."

The smoking policy has been more than three years in the making, spurred by medical proof of the hazards of secondary smoke inhalation and a desire to make university offices and facilities healthy for all, Rose added.

Both "No Smoking" and "Smoking Permitted" signs are being installed in rooms and areas affected by the new policy. Smoking in University Hospital is regulated separately.

Free Parking for Faculty, Staff Jeopardized by Mandate

A shortage of parking spaces and a new state mandate that requires each campus to cover the cost of providing employee parking may end free staff parking at Stony Brook.

But probably not in the near future, says Glenn Watts, vice president for finance and management and Harry P. Snoreck, vice president for campus services.

"Stony Brook will not begin charging employees for parking in surface lots covered by terms of various collective bargaining agreements until special negotiations are completed in Albany. Surface lot parking is included in some of the labor contracts," says Watts.

Stony Brook could charge employees who are not so covered, but it will not, Watt promises. "Rather than create unequal rate structures, we will wait for the outcome of ongoing labor negotiations before charging any staff." If and when charges are imposed, employees could expect to pay anywhere from $10 to $12 a month for surface parking. Some employees already pay for parking, but do so by choice in one of three garages operated by the State Dormitory Authority.

The 1989-90 state budget requires SUNY to raise $3 million to cover part of the cost of providing employee parking. Stony Brook needs to contribute $399,100 toward that end. "If we're not able to begin surface parking charges at this time, a significant deficit will be created that will have to be offset by higher charges in the future," Watts adds.

The most critical parking shortage is on the east campus, Snoreck says, and "without a fee, it will be difficult to find the money to improve the situation." Moreover, parking will remain tight on the east campus until construction of a new 1,000-car parking garage is completed. Ground breaking is scheduled for this fall.

Snoreck also underscored the need for better bus service as a step towards general improvement in campus transportation. As an interim step, Stony Brook could institute or increase vehicle registration and shuttle fees, neither of which are covered by union contracts. Surface parking fees can also be imposed on lots such as those along the East Loop Road which were established after the union contracts were negotiated, Snoreck notes.

Trouble Getting *Currents*?

The Office of University Affairs would like to make sure all faculty, students and staff are receiving *Currents*. If *Currents* is not reaching you in a timely manner, or if you would like additional coppies delivered to your office or hall, please contact the Office of University Affairs, 322 Administration Building, ZIP-0605. Phone: 632-6310

ATHLETICS

Freshman Halfback on Verge of Rewriting Record Books

Despite strong individual performances, Oliver Bridges insists the team's success must always comes first

By Ken Alber

"I didn't want to let down Coach Schiavetta," recalls freshman halfback Oliver Bridges on his decision to play football at Stony Brook, instead of concentrating solely on his classes. Based on his performance in the first four games, Offensive Coordinator Lou Schiavetta and the rest of the football coaching staff are thrilled with Bridges' decision.

In the second game of the season, Bridges established himself as the team's top rusher and biggest offensive threat by rushing for 181 yards against a quality Hofstra University defense.

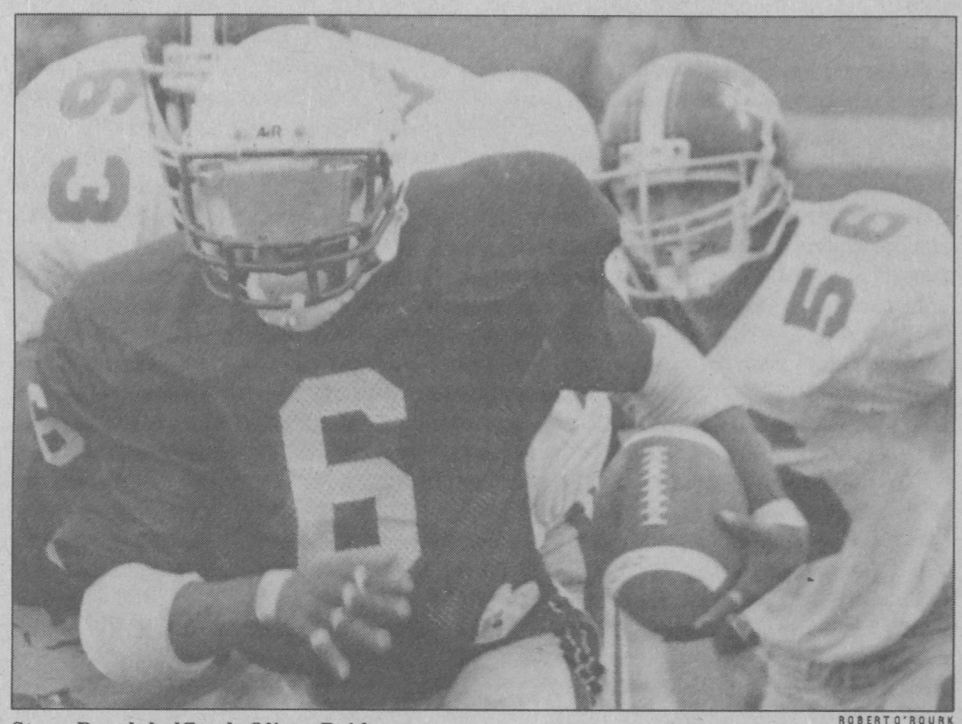
Bridges broke the old school record of 159 yards rushing in a game set by Mike Lugo. For his efforts, Bridges was named Liberty Football Conference Rookie of the Week and ECAC Co-Rookie of the Week.

The following week, Head Coach Sam Kornhauser decided to place more of the offensive load on his freshman. Bridges' responded with a 194-yard game against St. John's in which he scored all three of the team's touchdowns in a 38-21 loss. In addition to reestablishing the Stony Brook rushing record, Bridges was named ECAC Rookie of the Week for the second consecutive week.

When asked about all of the awards he has garnered in his first few weeks, Bridges responded, "Winning those awards is nice, but we're still 0-4. All of my yards are not important if the team loses." This "team before the individual" attitude is why Kornhauser refers to Bridges as "a really special kid, with an enormous amount of talent."

Kornhauser believes Bridges is the fastest player he has coached in his six years as the head coach at Stony Brook. Bridges' response to his coach's praise—a shrug of the shoulder and a slight smile as he reflects, "When I get the ball, I just look for the daylight and go. During the game I have no idea on how many yards I have because I'm concentrating on helping the team win games. If we rush the ball all the way down the field and don't score, any yards I gained don't mean a thing because the team didn't score."

Oliver Bridges is the oldest of four children of Barbara and Oliver Bridges of Wyandanch, N.Y. Oliver's high school accolades include being named the team's most valuable player, and earning all-league, all-conference, and all-county honors. In his junior year, Bridges was the starting tailback on the Wyandanch High School team that went 10-0 and won the Rutgers Cup.



ROBERT O'ROURK

Stony Brook halfback Oliver Bridges.

It has been a tough adjustment for Bridges to play on a team that has lost four games in four weeks considering his high school club did not lose four games in all four of Bridges' years. "This team is young and in a rebuilding year," says Bridges, "The team still has a very high confidence level and right now we are making too many mistakes. Once we can cut down on our mistakes, this team will turn around."

Through four weeks, Bridges has compiled 486 yards, an average of 121.5 yards per game. That average makes Bridges the sixth leading rusher in NCAA Division III, and the second leading freshman ballcarrier in the country. Bridges needs 255 yards to break the Stony Brook single season rushing record.

If Bridges can average 85.7 yards per game for the remainder of the season, he will eclipse the 1,000 yard plateau in his rookie season—quite an accomplishment for an athlete who was unsure he would even be playing football for Stony Brook this season.

Ken Alber is Stony Brook's sports information director.

Squash, Men's and Women's Swimming Teams Prepare for Winter Schedule

As the fall varsity season comes to a close, Stony Brook's winter teams are preparing to get underway. The following summaries preview the upcoming season.

Men's Swimming

Coach John DeMarie is looking to return the men's swimming team to their championship form of recent years. With a strong nucleus of lettermen, and an excellent freshmen class coming in, the team will be vying for it's third Metropolitan Conference championship.

"We've improved over last year," says DeMarie. "We have a larger group that has really shown a desire to work hard."

Leading this year's team will be national qualifier Richard Seeley and senior sprinter Adam Becker. Seeley was the Patriots' only national qualifier last year, and hopes to earn All-America honors in this, his senior season. Becker has been named to the All-Metropolitan conference team the past two seasons, and hopes to qualify for the national championships this year.

Coach DeMarie will also be looking for strong performances from junior All-American hopeful Nick Cunard and sophomore backstroker Hainson Wu. "Both Nick and Hainson are very talented. They can win races for us in a multitude of events."

Diving coach Larry Canonico is equally pleased with the outlook for the Patriots returning divers. "We are returning three experienced people to a conference that has thinned out a bit talent-wise."

The team is very optimistic about this year's recruiting class. "The new recruits have really filled some gaps and given us a more balanced attack," says Becker. Brian Seeley will be a potent weapon for the Patriots in the sprint events. "Brian has explosive speed, and could very well be a national qualifier in his freshman year," says DeMarie.

The coach is also very impressed with freshman Jimmy Caldroney who will swim the distance events for the Patriots. "Jimmy is a tough competitor and a good finisher. He'll do very well for us."

The Patriots face a tough schedule that includes four Division I teams, including conference rivals Marist and Iona. The team will look to avenge last year's losses to Albany and U.S. Merchant Marine Academy. The highlight of the regular season comes at the end of January, when the Patriots host traditional rival SUNY College at New Paltz.

The most important meet of the year is the Metropolitan Conference Championships in February. "Usually, Division I and Division III teams have been lumped together at the conference championships," says DeMarie. "This year there will be a separate champion in each division." The Patriots will be a top contender for the Division III crown—Stony Brook has been the top Division III team at the conference championships five of the last seven years.

Women's Swimming

The Lady Patriots will be facing another rebuilding year as they try to offset the loss of All-Metropolitan conference swimmers Heather Stein and Fall Willeboardse, and All-American Maj Britt Hansen.

"We're a very small team," says Head Coach Dave Alexander. "Therefore, we're going to have to make the most of the talent we have."

This year's captains, Jo Moran and Kirsten Shore, are three-time All-Metropolitan conference selections, and will be relied on heavily. Suzanne Nevins who, under the guidance of diving coach Larry Canonico, has been the most valuable diver in the Metropolitan Conference for the past two years, will return for the Lady Patriots. "Suzanne really has the potential to be a national qualifier," says Canonico.

In addition to the returnees, Coach Alexander has brought in several new faces that should strengthen the Lady Patriots lineup. Junior Nancy Winkler, a transfer from the University of Tennessee, was a National Junior Olympic qualifier and held several metropolitan records as an age group swimmer. Freshman Kris Andreason and junior transfer Diane Grice will give the Lady Patriots a powerful combination in the breaststroke events.

The team will face it's toughest schedule to date, as they face Central Connecticut and traditional rivals New York University, Iona and Fairfield.

Squash

This year's Stony Brook squash team should be vastly improved over last year's team due to the fact that there will be seven returning lettermen, all with considerable game experience.

Stony Brook lost seven of eight 5-4 matches last season as the team fell to a mark of 4-18. The experience gained from those matches should prevent a repeat of that disappointing season.

This year's team opens the season with the return of several key players and the addition of new talent. All-American candidate senior Jay Warshaw (12-10) and standout sophomore Will Simonds (15-7) lead the list of returning players. Warshaw and Simonds were the only team members to post a winning record during the 1988-89 season.

Stony Brook will again play a very competitive schedule which includes many nationally ranked teams. For the first time in several years, the Patriots will face a defending national champion when they play at Yale University Dec. 2.

Ken Alber

Men's Swimming Schedule

Dec. 1	SUNY Albany	7 p.m.
Dec. 6	NYU**	5 p.m.
Dec. 9	at Marist	12:30 p.m.
Jan. 10	SUNY Maritime	4 p.m.
Jan. 12	at Montclair State	6 p.m.
Jan. 20	Fairfield**	2 p.m.
Jan. 22	at Iona**	6 p.m.
Jan. 27	SUNY New Paltz	2 p.m.
Jan. 31	USMMA	4 p.m.

**denotes dual meet with women's team

Women's Swimming Schedule

Nov. 9	Seton Hall	4 p.m.
Nov. 15	at Queens	5 p.m.
Nov. 18	at Relay Carnival	TBA
Dec. 2	Stony Brook Cup: Marist, Albany & SCSU	11 a.m.
Dec. 6	NYU	5 p.m.
Dec. 9	SUNY New Paltz	2 p.m.
Jan. 12	at Montclair State	6 p.m.
Jan. 20	Fairfield	2 p.m.
Jan. 22	at Iona	6 p.m.
Feb. 6	at Manhattanville	7 p.m.
Feb. 9-11	at Metropolitan Conference Championships	

BRIEFS

Enrollment Up at USB, SUNY

Enrollment at Stony Brook totaled 16,977 this fall, some 276 students more than targeted and 249 more than the fall semester of 1988. Enrollment was also up statewide on SUNY's 64 campuses, with 10,578 more students than last year, the largest study body in the system's history.

Undergraduate full-time enrollment at Stony Brook totaled 9,134 on the main campus and 368 at the Health Sciences Center, compared with 9,286 and 349 respectively last fall. Undergraduate part-time enrollment totaled 1,441 on the main campus, 201 at the Health Sciences Center compared with 1,459 on the main campus and 158 Health Sciences Center last fall.

Full-time graduate enrollment totaled 1,726 on the main campus and 875 at the Health Sciences Center, compared with 2,011 on the main campus and 940 on the Health Sciences campus last fall. Part-time graduate students totaled 2,810 on the main campus and 422 at the Health Sciences Center compared with 2,211 and 314, respectively, for the same period last year.

Freshman enrollments at SUNY campuses statewide totaled 28,829, down 2,347 from last year, says SUNY provost Joseph Burke, who pointed out that the campuses also retained 87,642 returning students, 2,723 more than the previous year.

Student enrollment at SUNY campuses statewide could increase by more than 9,000 in the next five years, according to a preliminary estimate presented in a document planning the direction of SUNY.

Stony Brook Continues to Face Serious Budget Problems

As the halfway mark nears for the 1989-90 fiscal year, Stony Brook continues to face serious budget problems.

"Although the gap remaining to balance our budget for the current year is within our means, closing it may cause some pain for campus units," warns President John H. Marburger.

The financing of west campus graduate programs has been significantly disrupted by the state's failure to fund increases in tuition waivers commensurate with rising out-of-state tuitions, Marburger says.

And, he adds, several measures taken to close the SUNY budget gap will have a major negative effect on the Stony Brook campus. Though the $399,100 assessment for staff parking may be rolled over, a nearly $250,000 assessment for "Increased Recovery of Faculty Salary Offset Funds from Grants and Contracts" is onerous, Marburger says. "This charge appears to me to be a new form of the old Research Foundation 'tithe.'"

In addition to these new problems, Stony Brook is still struggling with the mid-year reductions from the 1988-89 budget which, Marburger notes, "were only partially addressed last year with permanent reductions."

World's Oldest Theatre Form Performs at Staller Center

India's classic art form, *kutiyattam*, is coming to the Staller Center for the Arts for two weekends, Thursday, Nov. 16 through Sunday, Nov. 19 and Thursday, Nov. 30 through Sunday, Dec. 3.

Dramatization of episodes from the Sanskrit epic, the *Kutiyattam Ramayana*, will be performed by students under the guidance of guest artists from India. These professionals, Sri Rama Cakyar and Sri Eswaran Unni, are visiting from the State Academy of Performing Arts in Kerala, South India.

Actors will portray monkeys, demons and epic characters with stylized gestures in authentic costumes and makeup to the accompaniment of ceremonial drumming of South Indian temple rituals.

Performances of the world's oldest living theatre form are made possible through a grant from the Asian Cultural Council of New York in cooperation with the Indo-U.S. Subcommission on Education and Culture.

Tickets are available for $7 or $5 for students and senior citizens through the Staller Center box office, 632-7300.

Psi Chi Accepts Applications

The Stony Brook chapter of Psi Chi, the national psychology honor society founded in 1929, is accepting applications for membership. To be eligible, students must be a registered as a psychology major, have an overall GPA of 3.0 and a 3.3 GPA in psychology.

There is a one-time $30 application fee. Interested students should contact David Neumann, chapter president, at 632-2801 or stop by the Psychology Advisement Office (Room B-116, Psychology) any Wednesday from 11:30 a.m. - 12:30 p.m.

1989-1990 New Faculty Appointments

Division of Humanities and Fine Arts

Joseph Auner	Assistant Professor	Music
Seyla Benhabib	Associate Professor	Philosophy
Ikhwan Choe	Assistant Professor	Comparative Literature
Richard Dunham	Assistant Professor	Theatre
Laura Henigman	Assistant Professor	English
Lori Repetti	Assistant Professor	French & Italian
V. Roncero-Lopez	Assistant Professor	Hispanic Languages
J.R. Williams	Assistant Professor	Germanic & Slavic Lang.
Daniel Weymouth	Lecturer	Music

Division of Social and Behavioral Sciences

Abdul Alkalimat	Visiting Associate	Africana Studies
Robert Boice	FISO Director/Professor	Psychology
Tilden Edelstein	Provost/Professor	History
Stanley Feldman	Professor	Political Science
Nancy Franklin	Assistant Professor	Psychology
Robert Frick	Assistant Professor	Psychology
Dorothy Ko	Assistant Professor	History
Richard Larson	Associate Professor	Linguistics
Tse-min Lin	Assistant Professor	Political Science
Abraham Neyman	Leading Professor	Economics/Applied Math
Wolf Schafer	Associate Professor	History
Charles Taber	Assistant Professor	Political Science
Camille Wortman	Professor	Psychology
Paul Wortman	Professor	Psychology

Division of Physical Sciences and Mathematics

Benjamin Bielefeld	Assistant Professor	Mathematics
Marvin Geller	Director/Research Prof.	Earth & Space Sciences
Jainendra Jain	Assistant Professor	Physics
Laszlo Mihaly	Professor	Physics
Lazar Milin	Visiting Assistant	Mathematics
John Milnor	Leading Professor	Mathematics
Bradley Plohr	Associate Professor	Mathematics/Applied Math
A. Rabinovitch	Visiting Lecturer	Physics
Mohit Randeria	Assistant Professor	Physics
Martin Schoonen	Lecturer	Earth & Space Sciences
Scott Sieburth	Assistant Professor	Chemistry
John Spielberg	Visiting Assistant	Mathematics
Daniel Strongin	Assistant Professor	Chemistry
Scott Sutherland	Assistant Professor	Mathematics
Grzegorz Swiatek	Assistant Professor	Mathematics
Folkert Tangerman	Assistant Professor	Mathematics

Division of Biological Sciences

Paul Brehm	Associate Professor	Neurobiology & Beh. Sci.
J. Peter Gergen	Assistant Professor	Biochemistry
William Lennarz	Chair/Leading Prof.	Biochemistry
Gail Mandel	Associate Professor	Neurobiology & Beh. Sci.
Axel Meyer	Assistant Professor	Ecology & Evolution

Frank Melville, Jr. Memorial Library

Roxanna Herrick	Assistant Librarian	

Marine Sciences Research Center

Bruce Brownawell	Assistant Professor	Waste Management
Jeanette Yen	Assistant Professor	

College of Engineering and Applied Sciences

Antony Bourdillon	Visiting Professor	Materials Science
Ahmed Chouse	Assistant Professor	Electrical Engineering
Randolph Cops	Lecturer	Technology & Society
James Glimm	Chair/Leading Prof.	Applied Math
Chinsan Lee	Visiting Assistant	Applied Math
William Linquist	Associate Professor	Applied Math
Elias Manolakos	Lecturer	Electrical Engineering
Dan Marchesin	Visiting Professor	Applied Math
Ilona Rashkow	Assistant Professor	Computer Science
Qiqing Yu	Visiting Assistant	Applied Math

W. Averell Harriman College for Policy Analysis & Public Management

Eugene Feinberg	Professor
Manuel London	Professor
Donald Siegel	Assistant Professor
D. Skorin-Kapov	Assistant Professor
Eric Stubbs	Assistant Professor

Institute for Mathematical Sciences

Karen Brucks	Research Assistant
Peter Veerman	Research Assistant

Institute for Theoretical Physics

John Collins	Visiting Professor

Health Sciences Center

Wyman Bethune	Assistant Professor	Radiation & Oncology
Richard Bronson	Associate Professor	OB/GYN
William Deturk	Associate Professor	AHP Div. Therapy
Henry Donahue	Research Assistant Prof.	Medicine Services Research
Deborah French	Assistant Professor	Pathology
Solomon Friedman	Clinical Assistant Prof.	Medicine
Jack Fuhrer	Assistant Professor	Medicine
Pierce Gardner	Professor	General Medicine
Martin Gruber	Associate Professor	Orthopedic Surgery
Howard Heller	Instructor	Medicine
Jonathan Holt	Assistant Professor	Psychiatry
Philip Hubel	Assistant Professor	Medicine
Arnold Katz	Professor	General Surgery
David Kayden	Assistant Professor	Medicine
Martin Kohn	Assistant Professor	Medicine
Fred Landes	Clinical Assistant Prof.	Medicine
Marilyn Lieber	Clinical Associate Prof.	School of Nursing
Carol Ann Mitchell	Professor	School of Nursing
Eric Spitzer	Assistant Professor	Pathology
Carol Sturtz	Assistant Professor	Social Welfare
B. Wajsbrot-Kandel	Associate Professor	Radiology
Edward Weissman	Instructor	General Medicine
Jonathan Whittaker	Assistant Professor	Endocronology

Upcoming Events

STONY BROOK EVENT HIGHLIGHTS

Art Exhibits

Nov. 8 - Dec. 19: Fiber Explorations: Barbara Kay Casper, Sheila Fox, Kiyomi Iwata, Gerhardt Knodel, Libby Kowalski, Heidi Lichterman, Elaine Reichek, Cynthia Schira and Bhakti Ziek. University Art Gallery, Staller Center for the Arts.

Nov. 9 - 22: Student Exhibition, featuring the acrylic and oil paintings of Sanford Lee and Donald Lond. SB Union Gallery.

Nov. 28 - Dec. 11: Exhibition, featuring the sculpture of Richard Brown and the paintings of Ellen Colcord. SB Union Gallery.

Dec. 12 - 21: "Math/Art," students in the Department of Mathematics present their final projects by combining mathematics and art. SB Union Gallery.

Films

Nov. 10 - 11: COCA Film, "When Harry Met Sally." 7 and 9:30 p.m., midnight, Jacob K. Javits Lecture Center. $1.50, $1 with SBID.

Monday, Nov. 13: Humanities Institute Latin American Film Series, "Up to a Certain Point" (Cuba). Guest speaker: Roman de la Campa, professor of Hispanic languages and literature. $3. 8 p.m., Theatre Three, 412 Main Street, Port Jefferson.

Nov. 17 - 18: COCA Film, "Say Anything." 7 and 9:30 p.m., midnight, Jacob K. Javits Lecture Center. $1.50, $1 with SBID.

Monday, Nov. 27: Humanities Institute Latin American Film Series, "They Don't Wear Black Tie" (Brazil). Guest speaker: Barbara Weinstein, associate professor of history. $3. 8 p.m., Theatre Three, 412 Main Street, Port Jefferson.

Dec. 1 - 2: COCA Film, "Lethal Weapon II." 8 and 10 p.m., midnight, Jacob K. Javits Lecture Center. $1.50, $1 with SBID.

Dec. 8 - 9: COCA Film, "Batman." 7 and 9:30 p.m., midnight, Jacob K. Javits Lecture Center. $1.50, $1 with SBID.

Monday, Dec. 11: Humanities Institute Latin American Film Series, "Improper Conduct," interviews with Cuban exiles. $3. 8 p.m., Theatre Three, 412 Main Street, Port Jefferson.

Wednesday, Dec. 13: Alain Tanner's "In the White City." 7 and 9:30 p.m., SB Union Auditorium. Sponsored by the Stony Brook Film Society. $2.

Dec. 15 - 16: COCA Film, "Dead Poets Society." 7 and 9:30 p.m., midnight, Jacob K. Javits Lecture Center. $1.50, $1 with SBID.

Lectures

Monday, Nov. 13: Department of French and Italian Lecture, "Modern Stagecraft and the Revolutionary Imagination," Pierre Lagueunière, Université de Clermont-Ferrand and the Comédie Saint Just. 4:30 p.m., Room N-4065, Melville Library.

Monday, Nov. 13: Diffusion of the Humanities: Special Visiting Lecture Series, "The Intellectual Journal as Adversary Culture," Robert Boyers, editor-in-chief, *Salmaqundi*. 4:30 p.m., Room E-4340, Melville Library.

Wednesday, Nov. 15: Campus NOW colloquium, "Date Rape," Sally Sternglanz, Women's Studies Program. Films will be shown. Noon, Room S-216, Ward Melville Social and Behavioral Sciences Building.

Wednesday, Nov. 15: Humanities Institute Faculty Colloquium Series, "Political Painting and Social Space: David/Courbet," James Rubin, professor of art history. 4:30 p.m., Room E-4340, Melville Library.

LEE SNIDER

The New York Gilbert & Sullivan Players perform *The Pirates of Penzance* Saturday, Nov. 11 at the Staller Center for the Arts. Tickets are $20, $18 and $16. For information, call the Staller Center Box Office at 632-7230.

Thursday, Nov. 16: Institute for Social Analysis Lecture, "AIDS in America and on Long Island," Dolores Klaich, coordinator of education for Long Island for AIDS care. 11:30 a.m. - 12:50 p.m., Room 143, Engineering.

Tuesday, Nov. 21: Humanities Institute Visiting Scholar Lecture, "Chinese Politics and Culture in Relation to Recent Chinese Cinema," Chen Mei, senior editor, *World Cinema*. 4:30 p.m., Room E-4340, Melville Library.

Tuesday, Nov. 21: University Distinguished Lecture Series, "The Constitutional Implications of *Roe v. Wade*," Sarah Weddington, successfully defended "Jane Roe" in the controversial Supreme Court case. Sponsored by the Office of the Provost and *Newsday*. 8 p.m., Main Stage, Staller Center for the Arts.

Monday, Dec. 4: Diffusion of the Humanities: Special Visiting Lecture Series, "Intellectual Journals and Journalism in France," Olivier Mongin, director of the French journal *Esprit*. 4:30 p.m., Room E-4340, Melville Library.

Wednesday, Dec. 6: Museum of Long Island Natural Sciences Special Lecture Series, "Caribbean Coral Reef Ecology," Bruce W. Fouke. $5 non-members, $3 members. 8 p.m., Museum, Earth and Space Sciences.

Monday, Dec. 11: Diffusion of the Humanities: Special Visiting Lecture Series, "The Founding of a New Journal: *Tikkun*," Michael Lerner, founding editor of *Tikkun*. 4:30 p.m., Room E-4340, Melville Library.

Thursday, Dec. 14: Distinguished Corporate Scientist Lecture Series, "Hepatitis C Virus: A Major Etiological Agent of Transfusion-Associated and Community-Acquired Non-A, Non-B Hepatitis," Amy J. Weiner, research scientist, Chiron Associates. Sponsored by the Center for Biotechnology. Noon, Lecture Hall 6, Level 3, Health Sciences Center.

Music

Tuesday, Nov. 14: Contemporary Music Series, "The Music of John Lessard" performed by the Contemporary Chamber Players. Tickets $5, $3 students and senior citizens. 8 p.m., Recital Hall, Staller Center for the Arts. for information call 632-7230.

Wednesday, Nov. 15: The Chamber Music Series, featuring Charles Rosen, pianist. Tickets $14. 8 p.m., Recital Hall, Staller Center for the Arts. For information call 632-7230.

Saturday, Nov. 18: Stony Brook Symphony Orchestra, Timothy Mount, conductor. Performance features Stony Brook Chorale and Camerata Singers. Tickets $5, $3 students and senior citizens. 8 p.m., Main Stage, Staller Center for the Arts.

Wednesday, Nov. 29: Contemporary Chamber Players, perform with Stony Brook composers. 8 p.m., Recital Hall, Staller Center for the Arts.

Saturday, Dec. 2: Stony Brook Opera Ensemble. Benefit concert for the Long Island Center for Italian Studies and the Stony Brook Opera Ensemble. A program of operatic favorites featuring Giovanni Consiglio, tenor, and other guest artists. $25 suggested donation. 8 p.m., Main Stage, Staller Center for the Arts.

Tuesday, Dec. 5: Contemporary Music Series, featuring the Contemporary Chamber Players. Tickets $5, $3 students and senior citizens. 8 p.m., Recital Hall, Staller Center for the Arts.

Friday, Dec. 8: The Chamber Music Series, featuring the Beaux Arts Trio. Tickets $14. 8 p.m., Recital Hall, Staller Center for the Arts.

Saturday, Dec. 9: Stony Brook Symphony Orchestra. Tickets $5, $3 students and senior citizens. 8 p.m., Main Stage, Staller Center for the Arts.

Tuesday, Dec. 12: Stony Brook Chamber Singers and Chorale. Program features Christmas and Hanukkah music. Tickets $5, $3 students and senior citizens. 8 p.m., Recital Hall, Staller Center for the Arts.

Wednesday, Dec. 13: University Wind Ensemble, Jack Kreiselman, conductor. Florence Hechtel, mezzo soprano, will be featured. Tickets $5, $3 students and senior citizens. 8 p.m., Main Stage, Staller Center for the Arts.

Friday, Dec. 15: Stony Brook Collegium Musicum, Lucy Cross, director; and Camerata Singers. Tickets $5, $3 students and senior citizens. 8 p.m., Recital Hall, Staller Center for the Arts.

Readings

Thursday, Nov. 9: Robert Hamburger will be reading from his non-fiction book, *All the Lonely People: Life in a Single Room Occupancy Hotel*. Sponsored by the Poetry Center. 7:30 p.m., Room 238 Humanities. For information call 632-7373.

Wednesday, Dec. 6: Jana Harris, author of *The Sourlands*. Sponsored by the Poetry Center. 7:30 p.m., Room 238 Humanities. For information call 632-7373.

Theatre

Nov. 16 - 19, Nov. 30 - Dec. 2: Department of Theatre Arts Production, *Kutiyattam*, an ancient dance drama featuring guest artists from India. Tickets $7, $5 students and senior citizens. Performances begin at 8 p.m., Sundays at 2 p.m. Theatre I, Staller Center for the Arts.

Dec. 5 - 10: Department of Theatre Arts Performance, John Cameron's *The Only Song I Know*. World premiere. Tickets $7, $5 students and senior citizens. Performances begin at 8 p.m., Saturday and Sunday at 2 p.m. Theatre II, Staller Center for the Arts.

Courses

Friday, Nov. 3: Non-instructional Figure Drawing Workshop. Practice from a live model. No preregistration necessary, $4 fee at the door. 7:30 - 9:30 p.m., SB Union Crafts Center. Meets every Friday through Dec. 15.

Saturday, Nov. 4: Museum Workshop in Scientific Illustration. $12 fee. 1 - 4 p.m., Museum of Long Island Natural Sciences, Earth and Space Sciences. To register call 632-8239.

Thursday, Nov. 16: First of six sessions, "Advanced Topics in the Use of Lotus 3.0." Designed for students who have an elementary knowledge of spreadsheet software and want to learn more about its practical application to their work. $195 course fee. Meets Nov. 16, 21, 28, 30, Dec. 5, 7. 5:30 - 7:30 p.m. on the USB campus. For information call the School of Continuing Education 632-7071.

Tuesday, Dec. 12: First of five sessions, "Supervising New York State: The Introductory Program." A five day basic course in the fundamentals of supervision, including "The Art of Delegation," "The Counseling and Discipline Process," "Motivation and Performance," "Supervisory Styles," "Decision Making," "Written Communication Skills," and "Equal Opportunity and Affirmative Action." $32 course fee. Meets Dec. 12, 14, Jan 9, 11, 18, 9 a.m. - 4:30 p.m, Room 226, SB Union. For information call 444-2523 or 632-6140.

USB Events

Saturday, Nov. 11: United University Professions Fifth Annual Dinner Dance. $10 per person. 7 p.m., Miller Place Inn, North Country Road, Miller Place. For information call 632-7135.

Nov. 13 - Dec. 1: Advance registration for spring semester.

Wednesday, Nov. 15: Introduction to All-in-1. 10:30 a.m., Room 214, Old Chemistry.

Wednesday, Nov. 15: Interfaith Thanksgiving Prayer Service and Dinner. Meal plan and non-meal plan options available. 6 p.m., Roth Quad Cafeteria. For reservations and further information, call 632-6562.

Wednesday, Nov. 15: Fraternity/Sorority Workshop, "Building a Positive Image." 7 p.m., SB Union Auditorium. For information call 632-6828.

Thursday, Dec. 7: Holiday Breakfast/Brunch, End of Year Celebration, sponsored by the Mentor Program. 8:30 - 11 a.m., SB Union Ballroom. For information call 632-7090.

Thursday, Dec. 14: Service Awards Ceremony. 4 p.m., Recital Hall, Staller Center for the Arts. For information call the Office of Conferences and Special Events, 632-6320.

Friday, Dec. 15: Last day of classes; last day to withdraw from the university (CED/GSP students must have school approval). Last day for graduate students to submit theses and dissertations to Graduate School for December graduation clearance.

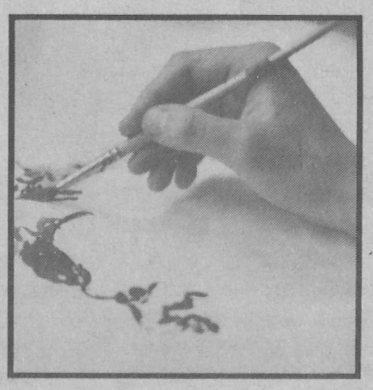
Events Listing

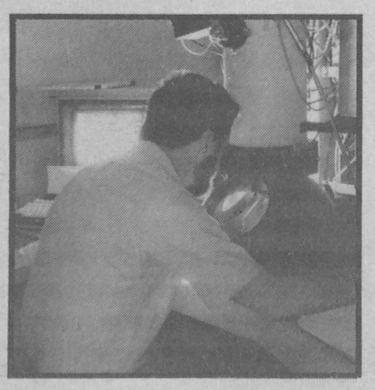
To be included in *This Month*, events must be submitted to the calendar editor at least three weeks in advance of the publication date. Listings for the December *Currents* must be received by Friday, Nov. 10. We remind all event sponsors that arrangements for parking should be made with Herbert Petty, assistant director for public safety, 632-6350.

Where to Find It

A Guide to Resources at The University at Stony Brook

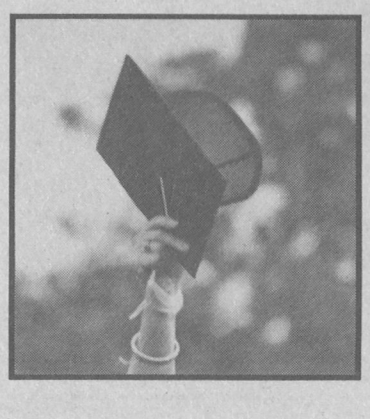
1989/90





- Degree Programs
- Cultural Resources
- Health Care
- School Partnerships
- Corporate Partnerships
- Noncredit Opportunities
- Research Centers

Compiled as a service
to the Long Island
community by the
Office of University Affairs,
University at Stony Brook,
322 Administration Building,
Stony Brook, New York
11794-0605.
Phone: (516) 632-6310.



DEGREE PROGRAMS

A challenging education at reasonable cost

Baccalaureate Programs. The College of Arts and Sciences offers 34 undergraduate majors in the humanities and fine arts, natural sciences and mathematics, and the social and behavioral sciences. The College of Engineering and Applied Science offers majors in Applied Mathematics and Statistics, Computer Science, Engineering Science, Electrical Engineering and Mechanical Engineering. The Health Sciences Center offers majors in Cardiorespiratory Sciences, Medical Technology, Physical Therapy, Physician's Assistant Education, Nursing and Social Welfare. The School of Allied Health Professions offers majors in Cardiorespiratory Sciences, Medical Technology, Physical Therapy, and Physician's Assistant Education. The W. Averell Harriman School for Management and Policy offers a major in Business Management. Call: Office of Admissions, 632-6868.

Collegiate Science and Technology Entry Program (C-STEP). Aims to increase numbers of underrepresented and economically-disadvantaged college students pursuing degrees in scientific, technological, health and health-related fields. Offers tutoring, financial aid counselling, internships and assistance in identifying summer and permanent job opportunities. Call: Department of Technology and Society, 632-8773 or 632-8716.

Combined Bachelor's/Master's Degree Programs. Enables career-minded students to enroll in programs that award both bachelor's and master's degrees in just five years. Available in engineering (call 632-8380), nursing (call 444-3200), applied mathematics (call 632-8370) and the W. Averell Harriman School for Management and Policy (call 632-7175).

Educational Opportunity Program. Provides access to the university for state residents who are educationally and economically disadvantaged and have the potential to succeed academically as undergraduates. Priority is given to applicants from families characterized by historical, educational, economic and cultural disadvantage. Call: 632-7091.

Financial Aid. Grants, loans and campus employment are available to help defray cost of attendance. To apply: complete a current Financial Aid Form (FAF-New York State specific) and a Stony Brook institutional application. Call: Office of Financial Aid and Student Employment, 632-6840.

Graduate School. The College of Arts and Sciences offers 35 graduate degrees in biological sciences, physical sciences and mathematics, social and behavioral sciences; the College of Engineering and Applied Sciences offers six degrees, and the W. Averell Harriman School for Management and Policy offers degrees in business enterprise, nonprofit management and public policy. Graduate degrees are offered in the six professional schools of the Health Sciences Center, as well as in the Marine Sciences Research Center and the School of Continuing Education. Also offers 24 doctoral programs. Assistance is available in the form of scholarships, teaching assistantships, research assistantships and fellowship programs, including the Graduate Council Fellowships, Sir Run Run Shaw Fellowships and Turner Fellowships, which supports students of historically underrepresented groups. Call: 632-7040.

Health Care Management. Advanced New York State certificate program for health care professionals (final approval pending from SUNY Central). Call: W. Averell Harriman School of Management and Policy, 632-7180.

Health Sciences Center. Provides opportunities for education in both laboratory and clinical aspects of health care. Stony Brook's five schools in the health sciences are Allied Health Professions, Dental Medicine, Medicine, Nursing and Social Welfare. Call: Health Sciences Center Student Services, 444-2111.

Labor/Management Studies. Advanced certificate program for public and private sector managers, industrial relations specialists and union representatives. Offers comprehensive understanding of labor relations and management and strengthens analytical and practical skills. Call: Labor/Management Center, Harriman School, 632-7770.

Liberty Partnerships. Suffolk Partnership Program works with Middle Country, Wyandanch, Brentwood, and Central Islip to encourage students to stay in school and to apply for state-funded Liberty scholarships. Program includes a residential component on the Stony Brook campus. Call: 632-6546.

Long Island Regional Studies. Advanced certificate program focused on the history, economy, natural environment and political environment of the Long Island region. Call: School of Continuing Education, 632-7050.

Mentor Program. Designed to allow students, particularly those in underrepresented groups, to personalize their college experience. Students are paired with university faculty, administrators, and staff who share their career, academic and advising needs. Call: 632-7090.

Minority Student Apprentice Program. Aims to increase number and success of individuals from traditionally underrepresented groups in graduate education. The departments of economics, political science and psychology will sponsor 12 to 14 students in research projects in the summer of 1990. Call: 632-7040.

Off-Campus Graduate Courses. Offered on space-available basis at various Long Island sites, including Northport High School, the New York State Office Building in Hauppauge, West Islip Senior High School, Patchogue-Medford High School, Farmingdale-Howitt School, Shoreham-Wading River High School, Minnesauke School in Setauket and the Cumberland Adult Center in Great Neck. Call: 632-7050.

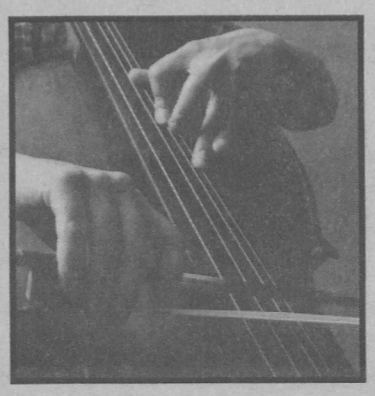
School of Continuing Education (CED). Serves part-time evening students studying at the graduate level. Offers a variety of degree programs, including: Master of Arts in Teaching, Master of Arts in Liberal Studies, and Master of Arts in Professional Studies. Also offers advanced graduate certificate programs in Long Island Regional Studies, Coaching and Waste Management, as well as a variety of non-credit professional licensing programs. All CED courses are open to degree and non-degree graduate students. Call: 632-7050.

Summer Session. Offers more than 200 undergraduate courses and 50 graduate courses during the day and evenings. Call: 632-7070.

Teacher Opportunity Corps. Encourages college students from traditionally underrepresented groups to become teachers and trains them to work effectively with students who are at-risk of dropping out of school. Call: 632-6546.

Undergraduate Evening Program. Offers more than 100 undergraduate courses in late afternoon and evening. Programs are offered in: Africana Studies, Anthropology, Applied Mathematics and Statistics, Art History and Criticism, Comparative Literature, Computer Science, Earth and Space Sciences, Economics, Education, Engineering, English, French, History, Irish, Italian, Korean Studies, Linguistics, Mathematics, Music, Philosophy, Physical Education, Political Science, Psychology, Religious Studies, Sign Language, Social Sciences, Sociology, Spanish, Studio Art and Theater Arts. Call: 632-6868.

Young Scholars Program. Provides opportunity for academically-talented high school students to enroll at Stony Brook for college credit in up to 30 courses. (See listing in "School Partnerships.")



CULTURAL RESOURCES

Offerings as diverse as Long Island itself

Bach Aria Festival and Institute. Brings outstanding young performers together with Bach specialists and leading interpreters of the Baroque style for two weeks of master classes, rehearsals and a rich menu of public performances of solo, chamber, instrumental and vocal works. Call: 632-7239.

Center for Italian Studies. Aims to increase appreciation and understanding of the Italian-American contributions to the United States, and Italy's contributions to Western civilization. Sponsors lectures, theatrical presentations, concerts, films and symposia. Also sponsors elementary and Saturday classes in Italian. Call: 632-7441.

Center for Korean Studies. Aims to deepen understanding of Korean culture in the United States and to support the university's program in Korean Studies. Call: 632-7314.

Conferences. University facilities are available for one-day and multi-day conferences. Range of conference services is provided, including: housing, promotion development, menu planning, preregistration activities and on-site registration. Call: Office of Conferences and Special Events, 632-6320.

Currents. Stony Brook's monthly newspaper carries an extensive calendar of events taking place on campus. Subscriptions are $4. Call: Office of University Affairs, 632-6310.

Distinguished Lecture Series. Free lecture series sponsored by Office of the Provost and *Newsday* will bring to the Staller Center six nationally prominent speakers in 1989-90, including author Neil Sheehan, Chinese journalist Xiaopo Huang, lawyer and educator Sarah Weddington, author Mark Mathabane, actress Phyllis Frelich, and scientist Arno Penzias. Call: Office of the Provost, 632-7000.

Film. More than 50 films will be screened in 1989-90 on the Stony Brook campus in three series: COCA's "Weekend Series" on Friday and Saturday nights in the Javits Lecture Center; the Stony Brook Film Society series, screening films monthly in the Stony Brook Union Auditorium, and the Humanities Institute's Latin American Series which—in collaboration with the Greater Port Jefferson Arts Council and Theatre Three—is presented on six evenings from October through December. Call the Stony Brook Union information desk at 632-6830, the "Voice of Student Activities" hotline at 632-6821, or—for information on the Latin American series—the Humanities Institute at 632-7765.

Frank Melville, Jr. Memorial Library. Holds 1.6 million bound volumes and 2 million publications in microformat, and maintains subscriptions to 12,000 periodicals. Collections include the William Butler Yeats archives and papers of Sen. Jacob K. Javits. Through the Long Island Library Resources Council, holdings are available by inter-library loan to any Long Island resident with significant research needs. Call: 632-7110.

Humanities Institute. Promotes interdisciplinary research in theory, criticism and interpretation, stressing historical and social analytic approaches. Sponsors film series and guest lectures, seminars and fellowships. Call: 632-7765.

Institute for Long Island Regional Archaeology. Aims to preserve Long Island's cultural resources by performing archival and archaeological field work required by State Environmental Quality Review Act (SEQRA). Also serves as a resource to individuals with questions or problems regarding SEQRA regulations, properties with potential for historic or prehistoric remains, or artifacts. Call: 632-7618.

International Art of Jazz, Inc. Sponsors the jazz subscription program at Stony Brook, Sunday afternoon cabaret-style concerts in Garden City, a summer jazz festival at Heckscher State Park in Islip, and dozens of community concerts throughout the year. Also presents jazz workshops for young people and special programs coinciding with Black History Month in February. Offices of the nation's oldest professional non-profit jazz organization are on the Stony Brook campus. Call: 632-6590.

International Theatre Festival. Brings theatre companies from around the world to the Stony Brook campus for a six-week festival in the Staller Center from early June through July. Call: Staller Center, 632-7230.

Latin Day. Annual event held in March (coinciding with the Ides) to bring together high school students for day of classical skits, lectures and projects involving Roman pottery, coins, clothing and mosaics. Call: 632-6546.

Poetry Center. Devoted to making poetry accessible by inviting regional and national writers to give informal readings. Sponsors writing workshops that concur with creative writing courses and offers a large library of contemporary poetry. Call: 632-7373.

Pollock-Krasner House and Study Center. Sponsors programs on art and art history for the scholarly community and general public. Houses two research collections on the art of Jackson Pollock and Lee Krasner. Located in East Hampton, the center is open to the public by appointment. Operated by the Stony Brook Foundation. Call: 324-4929.

Staller Center for the Arts. Long Island's most comprehensive arts facility, the Staller Center houses the 1100-seat Main Stage, the 400-seat Recital Hall and three smaller theaters, plus the two-story University Art Gallery. Presents varied annual program that includes nationally prominent artists in dance, theater and music, as well as graduate and undergraduate student performers. A monthly calendar of events is available to members of Friends of the Staller Center. For information about performances and tickets, call the Staller Center box office, 632-7230.

Sundays at Stony Brook. Weekly forum sponsored by Office of the Provost brings together Stony Brook faculty and community members to explore ideas and issues of general interest. All programs are free and open to the public. Call: Office of the Provost, 632-7000.

University Bookstores. Barnes & Noble operates bookstores on both West and East campuses—on the library plaza facing the Stony Brook Union and on the second level of the Health Sciences Center. West campus store: 632-6550; East campus store: 444-3685.

WUSB-FM. Stony Brook's campus radio station—found at 90.1 FM—operates 24 hours per day, featuring wide range of music and public affairs programming. Program guide available. Call: 632-6500.

FOR THE FAMILY

Astronomy Nights. Lectures focused on recent developments in astrophysical research are followed, weather permitting, by viewing sessions with the university's telescopes. Programs are usually conducted on first Friday of each month, except in January. Call: 632-8221.

Gymnasium. Features three combination basketball/volleyball courts, four racquetball courts, four squash courts, a dance studio, an exercise room, two Universal weight rooms, one free weight room and a six-lane 25-meter pool that includes a one- and a three-meter diving board. Facilities are available to those in the general community through individual and family memberships. Facilities are also available to off-campus groups during periods when they are not needed by members of the university community. Call: 632-7200.

Intercollegiate Sports. Stony Brook's 20 intercollegiate sports teams play extensive schedule from September through May. Women's soccer and men's lacrosse recently received NCAA Division I status. Most events are free. Call: 632-7200.

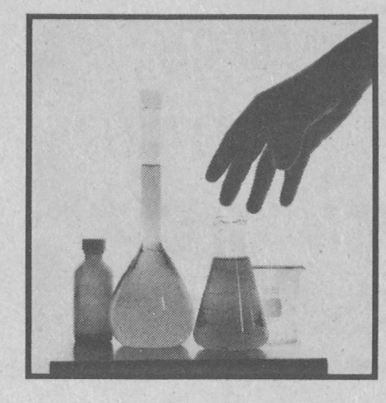
Museum of Long Island Natural Resources. Offers public programs in geology, paleontology, botany and the natural history of Long Island. Sponsors nature walks, illustrated lectures, live animal demonstrations, children's programs, teacher enrichment workshops and guided trips to zoos, parks and other attractions. Open 9 a.m. to 5 p.m. Monday through Friday. Call: 632-8230.

Parent-Child Partnership in Chemistry. Provides opportunity for parents and young children to explore chemistry through "hands-on" experiments using household chemicals. Call: Chemical Education Resource Center, 632-7992.

Saturday Science. Saturday morning program offers courses in genetics, biochemistry and astrophysics to fourth, fifth and sixth graders. Younger children may take course in unified science. Parents and children are encouraged to enter as a team for beginning or intermediate level instruction. Call: Museum of Long Island Natural Sciences, 632-8230.

Sports Clinics. Free lacrosse, football and soccer clinics are offered by the Division of Physical Education and Athletics. Call: 632-7205.

Sunwood Beach and Gardens Club. Works with the university to keep the grounds of the Sunwood estate open and maintained. Members' yearly fees cover costs related to the use of the beach and gardens for picnics and parties. Volunteers come out for special gardening days, supplementing the basic upkeep provided by university groundskeepers. Call: 632-7008.



HEALTH CARE

An unyielding commitment to Long Island's good health

AIDS Education and Resource Center of the School of Allied Health Professions. Provides educational resources relating to AIDS to health professionals and support staff of health agencies. Main focus is the psychological and ethical issues of AIDS. Services include evaluation and needs assessments, faculty development, curriculum development and in-service and continuing education. Call: 444-3209.

Ambulance Corps. All-student squad provides ambulance service to university community and assists other local squads. Also provides training programs to public in CPR and first-aid. In event of emergency, call 632-8888. Business line: 632-6737.

Back School Program. Offers a comprehensive outpatient program for the rehabilitation of low back pain. Call: 444-1309.

Burn Center. Especially equipped, staffed and designed to provide sophisticated compassionate care to both adult and pediatric patients with major burns. Because of the highly complex needs of burn patients and their families, the staff of the Burn Unit is multidisciplinary in its approach to the planning and coordination of care for the patient. The professional burn care team includes specially trained physicians and nurses, physical therapists, dieticians, occupational therapists, respiratory therapists and social workers. Call: 444-2595.

Center for Sudden Infant Death Syndrome (SIDS). Provides support to those experiencing the tragic loss of an infant through SIDS, as well as training for police officers, ambulance and medical personnel. Call: 444-3690.

Children's Medical Center. Organizes all pediatric specialists and pediatric services in the Health Sciences Center and within University Hospital. Call: 444-2700.

Dental Care Clinic. Provides dental care services to the general public and, under contract with the New York State Office of Mental Retardation and Developmental Disabilities, to more than 800 children and adults with disabilities annually. All care is closely supervised by faculty of the School of Dental Medicine. Call: 632-8989.

Diabetes Center. Provides inpatient and outpatient services for the management of diabetes and diabetic complications with an emphasis on patient education. Call: 444-1037.

Emergency Department. Offers 24-hour comprehensive emergency evaluation and treatment of all adult and pediatric emergencies including medical, pediatric, surgical, obstetrical, gynecological and psychiatric emergencies. Call: 444-2465.

Headache Clinic. Treats patients with migraine and/or muscle contraction headaches using relaxation training, biofeedback and psychological techniques. Call: 632-8845.

Institute for Mental Health Research. Coordinates funds for research in two separate non-clinical divisions, neuroscience and psychology. Call: 444-2990.

Long Island Kidney Stone Center. Dedicated to the treatment of patients with kidney stones and kidney stone disease. Call: 444-1919.

Lyme Disease Treatment Center. Provides comprehensive testing and treatment to persons with Lyme disease. Consultant services available to area physicians with questions about the disease or specific cases. Hotline (444-3808) staffed Monday through Friday, 9 a.m. - 5 p.m. Messages are recorded during non-business hours.

Psychological Center. Available to adults, children, couples or families experiencing emotional, psychological and behavioral difficulties. Conducts psychological testing and consultation for those with questions regarding school placement, learning disabilities and other potentially problematic life decisions. Call: 632-7830.

Sibling Preparation Program. Meets twice a month to prepare a brother or sister for a new sibling. Call: 444-2960.

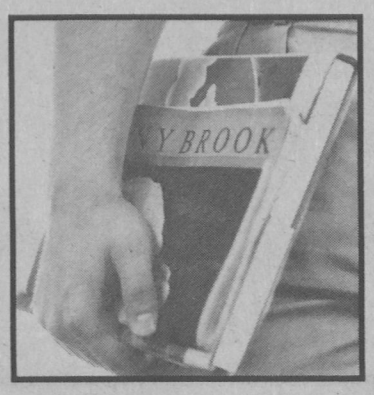
Sleep Disorders Center. Provides diagnosis and treatment of patients who have severe or prolonged difficulties going to sleep or staying asleep at night, or who have other problems associated with sleeping and waking. Call: 444-2916.

University Hospital. As a regional referral center, University Hospital dedicates more than half its 484 beds to specialized cases and intensive care.

Services include cardiology, high risk obstetrics, oncology, kidney dialysis, neonatology, neurology, nuclear medicine, and rheumatology. Surgical specialties include neurosurgery, gastrointestinal surgery, surgical oncology, orthopaedic surgery, pediatric surgery, kidney transplants, thoracic and cardiac surgery, and urological and vascular procedures.

Specialized services include an arthritis center, a burn center, a clinical research and cancer center, critical care units, cardiac diagnosis and treatment, a children's medical center, computerized tomography, diabetes care, kidney transplants, Lyme disease diagnosis and treatment, magnetic resonance imaging, newborn and high-risk obstetrical care, a sleep lab and extensive resources for those requiring further diagnostic and laboratory testing.

For information, call: University Hospital Office of Public Relations, 444-2595.



SCHOOL PARTNERSHIPS

Creating opportunities for the next generation

Archaeology Field School. Summer program provides training in archaeological sciences. Includes training in artifact recognition, cataloging, processing and surveying techniques, and conducting an archaeological dig. Complements both humanities and science graduate programs. Participation ranges from three to six weeks. Current dig focuses on early European community established on Orient Point around 1670. Call: Department of Anthropology, 632-7620.

Center for Excellence and Innovation in Education. Develops and coordinates partnership programs between Stony Brook and public schools, designs teacher education and certificate programs and performs educational research. Has established new Master of Arts in Teaching (MAT) degree programs in social science, chemistry, earth science and physics, and is developing additional MAT programs in English, mathematics, French, Italian, German, and Russian. Call: 632-7696.

Center for Science, Mathematics and Technology Education. Serves as Stony Brook's primary contact point for individuals and organizations seeking assistance in science, mathematics and technology education. Offers assistance in preparation of science teachers, as well as placement service. Also: coordinates science teacher visitor program between university and public schools; sponsors in-service conferences, short courses and graduate courses, and trains substitute science teachers. Call: 632-7075.

Chemical Education Resource Center. Offers range of assistance to elementary, junior high and high school teachers and students, such as: "Magic of Chemistry" demonstrations, one-day workshop on conducting classroom chemistry experiments, and introductory course for high school students on conducting research in chemistry. Offers special materials to teachers such as liquid nitrogen and dry ice. Call: 632-7992.

Elementary Science Mentor Training Institute. Week-long institute teaches elementary educators to use elementary science syllabus and carry out mentoring role with other teachers. Call: Center for Science, Mathematics and Technology Education, 632-7075.

Long Island Physics Teachers Association. Holds monthly meetings on campus. Call: 632-8175.

New York State Summer Institute for Science and Mathematics. Brings academically-talented students to campus for three-week residential enrichment program aimed at enhancing science and mathematics interest and aptitude. Students in teams tackle interdisciplinary projects, such as developing feasibility study for establishing a colony on the moon. Funded by New York State Education Department, program offers sliding tuition scale. Call: 632-8175.

Point of Woods Laboratory. Offers six-week remedial summer school for children in first through fourth grades experiencing behavioral and academic problems. Focuses on reading, language arts, mathematics, independent study skills, and behavior management. Also conducts research on behavior development with parents and toddler age children, offers parent workshops in toddler management in return for participating in the research project. Call: 632-7874.

SAT Preparatory Course. Provides comprehensive overview of key subject areas, including comprehension, vocabulary, algebra and geometry. Call: School of Continuing Education, 632-7071.

Science and Technology Entry Program (STEP). Encourages and prepares under-represented minorities and low-income secondary school students for entry into scientific, technical, health and health-related professions, including many where licensure is required. Academic enrichment, tutoring, supportive counseling, laboratory experiences and opportunities to explore scientific research are offered through a residential summer program, on-campus internships, and a three-credit college course for juniors and seniors. Program is offered at no charge to participants. Call: 632-8727 or 632-8761.

Science Olympiad. Brings to campus teams of students from 25 high schools throughout Long Island for competition in a dozen events encompassing biology, chemistry, physics and earth sciences. Sponsored by New York State Department of Education. Next Olympiad is scheduled for Saturday, March 3. Call: Center for Science, Mathematics and Technology Education, 632-7075.

Science Resource Personnel Program. Provides pool of scientists, mathematicians and engineers who are available to consult with teachers and students regarding their research specialities. A list of participating faculty is available. Call: Center for Science, Mathematics and Technology Education, 632-7075.

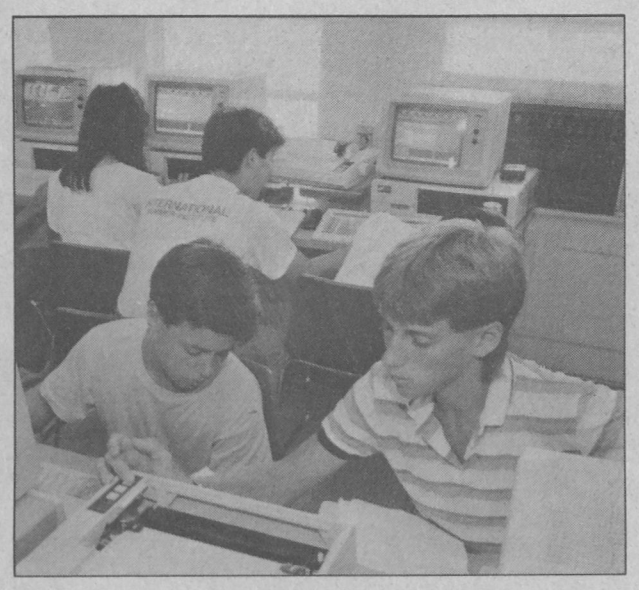
Set Design Workshop. Stony Brook Theatre Design Professor Richard Finkelstein provides workshops in set design to assist in staging high school productions. Call: Department of Theatre Arts, 632-7277.

Speakers. University departments lend assistance in identifying speakers for community groups and civic and professional organizations. Among them: Arms Control Resource Center, 632-7075; Center for Science, Mathematics and Technology Education, 632-7075; Office of University Affairs, 632-6310, and the University Hospital Office of Public Relations, 444-2595.

Student Research Support Program. Supports development of research projects by high school students who wish to submit entries to the Westinghouse Science Competition or develop other science projects. Students attend sessions on campus conducted by Stony Brook faculty. Faculty continue to be "on call" for questions and assistance. Call: Center for Science, Mathematics and Technology, 632-7075.

Suffolk Partnership Program. Provides tutors and interns to Brentwood, Longwood, Patchogue-Medford and Wyandanch schools to assist in encouraging and developing skills in students at risk of dropping out. Also runs workshops for teachers and paraprofessionals. Call: 632-6546.

Summer Camps. Residential and commuter summer camps are offered for talented junior high and



high school students in such areas as theatre arts, science, math, English, and foreign languages. Call: Center for Excellence and Innovation in Education, 632-7696.

Summer College for High School Students. Four-week commuter program offers highly-motivated high school students taste of academic challenges encountered by college freshmen. Call: School of Continuing Education, 632-7050.

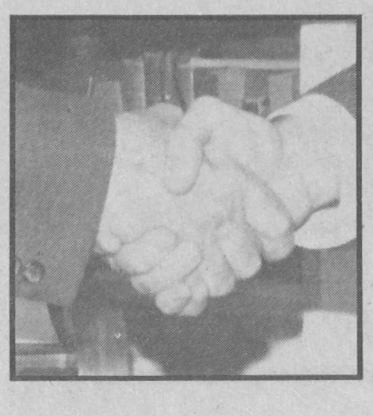
Summer Day Camp. Offered through the Division of Physical Education and Athletics for children between the ages of 3 and 15. Arts and crafts, computers, and various games and sports. Call: 632-7205.

Summer Sports Camps. Offered for elementary and high school students by the Division of Physical Education and Athletics. Programs include women's soccer camp, swimming, passing (no contact) football, and lacrosse. All camps directed by Stony Brook head coaches. Also available: goalkeeper (soccer) camp, offense/defense football camp, and camp sponsored by Long Island Junior Soccer League. Call: 632-7205.

Theatre Performance Workshop. Offers Stony Brook student-produced programs for 40-minute performances in Nassau and Suffolk County schools. For kindergarten through sixth grade, this year's production is "American Folklore," featuring story-telling and pantomime. For grades seven through twelve, this year's production features a contemporized production Shakespeare's sonnets and soliloquies. Optional question-and-answer period follows. Season begins in February. Call: Department of Theatre Arts, 632-7277. (Contacts: Nance Daniel or John Cameron.)

University Art Gallery. Offers interpretive tours and workshop activities for preschool and elementary school students in connection with many exhibitions at the gallery. Secondary school groups are welcome to self-tour. Call: 632-7240.

Young Scholars Program. Provides opportunities for academically-talented high school students to experience learning environment of a major university while earning college credits not usually available in high schools. Thirty courses are offered in a typical semester. Courses are offered afternoons and evenings, and occasionally on Saturdays. Call: 632-7080.



CORPORATE PARTNERSHIPS

Teamwork to keep Long Island strong

Center for Advanced Technology in Medical Biotechnology. Promotes biotechnology-related research and fosters development of university-industry collaboration. Invests in early-phase high-risk research projects with potential for commercialization. Affiliations with more than 100 corporate partners have produced 59 invention disclosures and 11 patents since 1984. Call: 632-8521.

Center for Corporate Continuing Education and Training. Offers custom training programs on campus and at the work site. Offerings include: teaching first-line supervision, written and oral communication, finance programs for non-financial personnel, and short-term personal/business computer training. Call: School of Continuing Education, 632-7071.

Center for Industrial Cooperation. Promotes collaboration between regional firms and College of Engineering and Applied Science. Facilitates joint project development, faculty consulting and internships. Call: 632-8518.

Interim Incubator Program. Available on the campus for start-up companies and new ventures. The Office of Research Services offers reasonable rental fees and access to state-of-the-art laboratory facilities and services. Call: 632-6960.

Industrial Associates Program. Promotes interaction between regional firms and the Department of Computer Science. Initiatives include industrial internship program and annual job fair. Call: 632-8470.

New York State Small Business Development Center. Business-education partnership using faculty, students and counselors. Funded by the Small Business Administration and New York State to aid small and starting business by providing counseling, business plan development, financial planning and marketing training and research. Sponsors training program to improve efficiency in small company environments, and provides assistance to Long Island residents making applications to the Small Business Innovation Research Program. Works cooperatively with state and local development agencies. Also helps small defense subcontractors study potential for diversification. Call: 632-9070.

Regional Economic Development. Brings into institutional focus the manifold university programming that responds to regional needs and constituencies, supports regional development outreach in the academic sector and develops new institutional responses to regional opportunities. Serves as a central contact point between external constituencies and the academic and research resources of the university. Call: Office of the Special Assistant to the Provost for Regional Economic Development, 632-7002.

ABOUT THE UNIVERSITY AT STONY BROOK

Founded: 1957. Established as small college to teach science and mathematics teachers in the "post-Sputnik" era. Moved to Stony Brook in 1962 with expanded mission as one of State University of New York's four graduate centers.

Missions: Teaching, research, health care, student life, regional cultural development and regional economic development.

Programs: Offers more than 100 bachelor's, master's and doctoral degree programs.

Research: Conducted $63 million in sponsored research in 1989-89, accounting for 27 percent of SUNY's total research volume. Is classified by the Carnegie Foundation as one of approximately 70 "Type I" research institutions in the nation as measured by such indicators as Ph.D. production and breadth of programs.

Budget: Approaching $500 million. Only 43 percent of total revenues are state appropriations. Remainder is generated chiefly through tuition, research, auxiliary services, and hospital revenues.

Economic Impact: Estimated at $1 billion annually on Long Island economy.

Undergraduate Enrollment: 11,121.

Graduate Enrollment: 5,894

Degrees Awarded Annually: 2,700

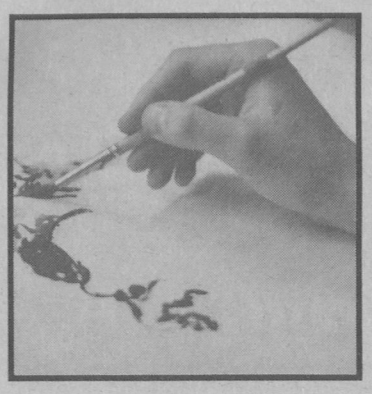
Total Alumni: 53,000

Total Faculty: 1,400

Total Employees: 8,500, including Research Foundation

UNIVERSITY AT STONY BROOK SWITCHBOARDS

West Campus: (516) 689-6000 East Campus (Health Sciences Center): (516) 689-8333



NONCREDIT OPPORTUNITIES

Instruction that takes you where you want to go

PROFESSIONAL DEVELOPMENT

Center for Education on Substance Abuse (CESA). Established as a unit of CED through a New York State legislative appropriation, is developing credit and noncredit education and training programs on substance abuse. These programs will be designed for educators, health care professionals, social workers, substance abuse counselors, and the lay public. Alcohol, illegal drugs and prescription drugs will be covered as well as intervention, education and treatment methods specifically designed for persons in business, schools or family settings. Programs will be conducted by professionals and will be scheduled on days and times convenient to the working public. Call: School of Continuing Education, 632-7061.

Insurance Licensing Course. State-approved program leads to New York State license to become insurance agent or broker. Call: School of Continuing Education, 632-7071.

Intensive English Center. Offers intensive courses in English, including 15-week program in fall and spring and short-term summer courses. Call: 632-7031.

Management and Human Resource Development Programs. Noncredit one and two-day seminars focus on such topics as human resource management, employee compensation, construction management, newsletter design and layout, increasing supervisory effectiveness, fundamentals of purchasing, planning and managing warehouse operations, computerizing your business, and effective communication skills. Open enrollment. Call: School of Continuing Education, 632-7071.

Public Service Training Program. Offers seminars and college-level courses designed for the 53,000 members of the professional, scientific and technical bargaining unit of the Public Employees Federation. Call: School of Continuing Education, 632-7071.

Real Estate Appraisal Program. Offered in conjunction with National Association of Independent Fee Appraisers. Five courses lead toward designation as a real estate appraiser. Call: School of Continuing Studies, 632-7071.

Real Estate Education Program. Provides training in such areas as real estate financing, real estate taxes, property management and town zoning. Call: School of Continuing Education, 632-7071.

PERSONAL ENRICHMENT

Foreign Language Mini-Courses for Travelers. Focus is on survival phrases and introduction to sentence structure. Languages offered: Chinese, French, German, Italian, Japanese, Korean, Russian, and Spanish. Call: School of Continuing Education, 632-7050.

Lifelong Learning Society. Aims to promote intellectual stimulation and continued learning into retirement years. Through "Round Table" approach, members take responsibility for curriculum and social functions. Call: School of Continuing Education, 632-7055.

Senior Citizen Auditing Program. Provides adults 60 and over free access to most credit-bearing Stony Brook courses on space-available basis. Catalog available. Call: School of Continuing Education, 632-7059.

Taproots Writing Workshops and Journal. Directs writing workshops for senior citizens. Stimulates writing, publishes a journal, *Taproot*, and presents public readings. Through its program, "Taproot Talks to Children," senior writers meet with young writers to share their works. Supported by the New York State Council on the Arts, the Suffolk County Office of Cultural Affairs, and USB. Donations from are always welcome and will be acknowledged in the magazine. Call: 632-6635.

Union Crafts Center. Offers wide variety of courses and workshops in such areas as ceramics, photography, fiber arts, stained glass, watercolor, wine appreciation, bartending, scuba diving and amateur radio. Also offers summer children's courses and weekly life drawing workshops. Courses are taught in Stony Brook Union. Call: 632-6822.

VOLUNTEER OPPORTUNITIES

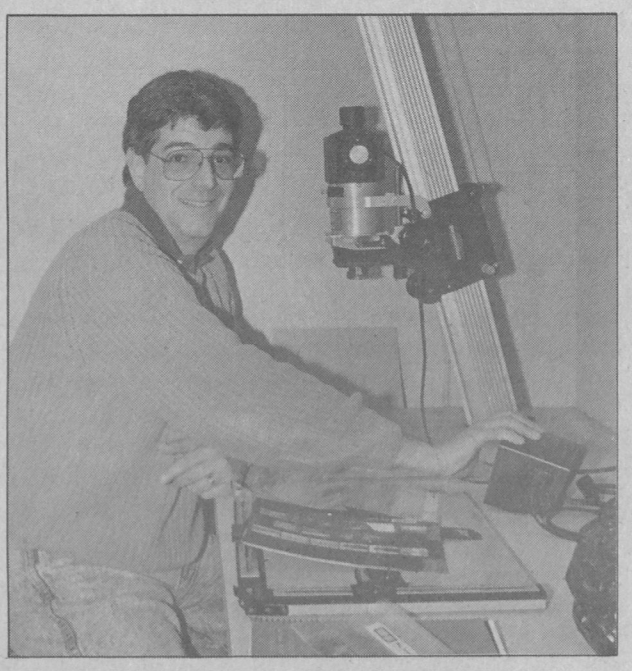
Alumni Association. Sponsors reunions, regional club events, homecoming, Alumni College Day, and special events on and off campus, and is becoming increasingly active in a career information service and student recruitment. Membership entitles alumni to use of library and gym, discount travel programs, insurance plan offerings and discount buying services. Call: Alumni Office, 632-6330.

Association for Community-University Cooperation. Created in 1962 to create bond between the University at Stony Brook and the community. Has supported beautification of campus/community borders, hospitality for university newcomers, and special events programming. Call: Office of University Affairs, 632-6300.

Friends of the Staller Center. Support group for programs and activities in dance, theatre, and music sponsored by the Staller Center for the Arts. Assists in programming, decorating, hosting receptions for artists and patrons, producing workshops, and publishing the center's monthly newsletter. Privileges include the opportunity to buy early subscriptions at a discounted rate, invitations to faculty lectures and all opening receptions in the University Art Gallery, and a newsletter and calendar delivered monthly to your home. Call: 632-7232.

Host Family Program. Aims to enrich the experience of international students studying at Stony Brook and to assist in their orientation to American culture. By involving international students in family activities, host families help to create a warm and caring environment for students far from home. Call: Office of International Programs, 632-7030.

Patriots Club. Booster club for Stony Brook varsity football. Has generated funds to purchase weight room equipment, an electronic scoreboard, an enclosed press box, and awards presented at the annual football banquet. The Patriots Club raises funds through its annual membership drive, an annual golf outing, and operation of the concession stand at



home football games. The club sponsors a kick-off luncheon for players, coaches and families at the start of each season, and also sponsors an annual "Parents Day" to honor the parents of senior players. Call: Division of Physical Education and Athletics, 632-7200.

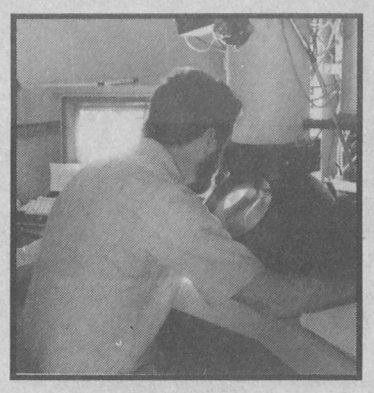
University Hospital Auxiliary. Helps University Hospital in its mission by raising funds for needed equipment and special projects, sponsoring educational programs and community service and participating in the activities of the hospital as volunteers. The Auxiliary sponsors the hospital's gift shop, a thrift shop in East Setauket, the patient library, television rental services and a newborn baby portrait service. Call: 444-2699.

Very Important Patriots Club. Booster club for intercollegiate athletics at Stony Brook. Funds are used to enhance the overall athletic program by purchasing items not available through state funding. Funds are raised through an annual membership drive and concession sales. Call: Division of Physical Education and Athletics, 632-7200.

Volunteer Firefighters Burn Center Fund. Aims to enhance the clinical and research programs of the Burn Center. The fund has contributed to the development of a special pulmonary screening program for Suffolk County firefighters. Its quarterly newsletter, *Broadside*, provides information about Burn Center developments and health-related information for firefighters to all 110 fire departments in Suffolk County. Call: 444-2492.

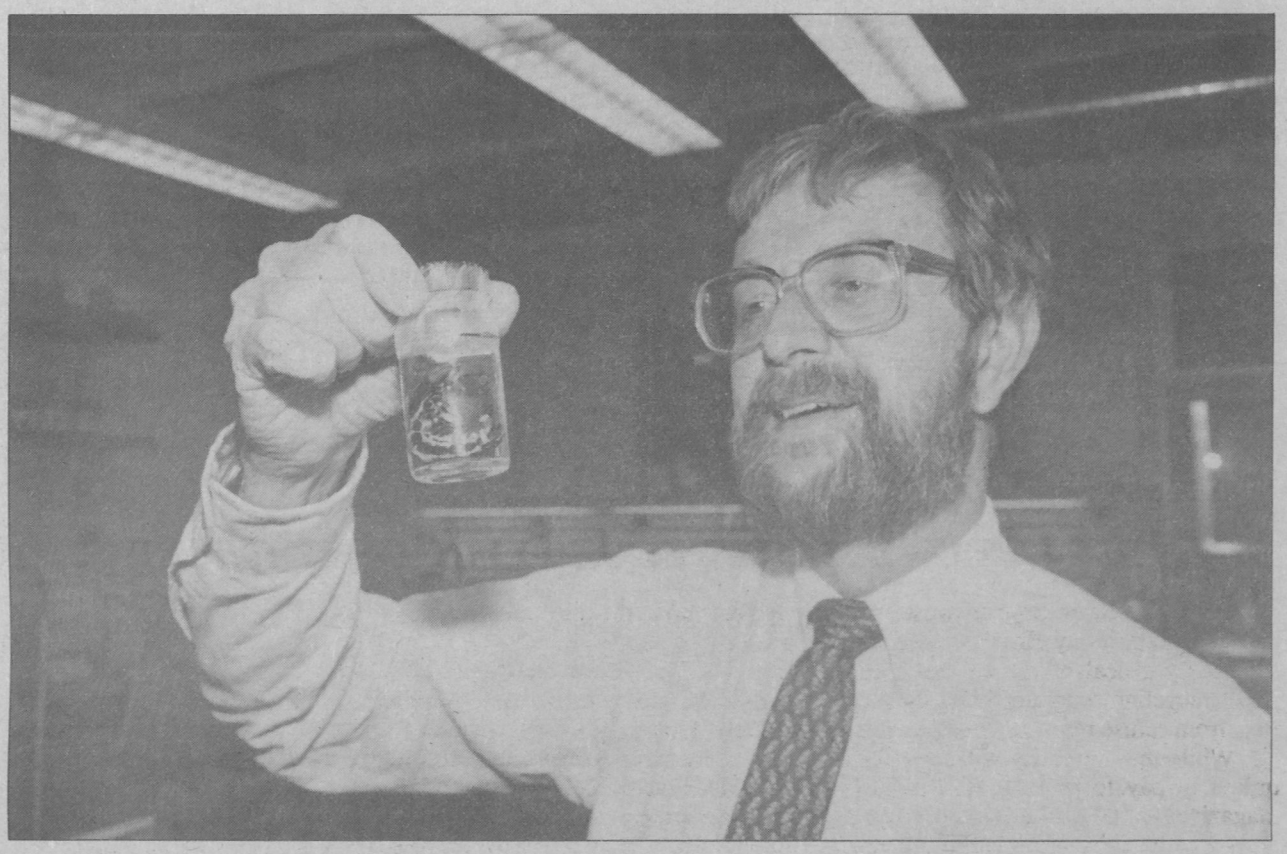
Volunteers Involved Together for Action in Life (VITAL). Coordinates and places volunteers with organizations, including University Hospital, day care centers, psychiatric centers, local schools and courts. Sponsors special events on campus such as the Special Olympics and the Big Brother/Big Sister For a Day program. Call 632-6812.

WUSB-FM Volunteers. Assist in all aspects of radio programming, production and operation. More than 100 volunteers from the campus and community are needed to keep WUSB on the air 24 hours a day, carrying music, diverse public affairs programming and live broadcasts of Stony Brook sporting events, concerts and lectures. Training is provided. Call: 632-6500.



RESEARCH CENTERS

The power of knowledge: new ideas, new solutions



ENVIRONMENT AND PUBLIC POLICY

Arms Control Resource Center. Provides access to specialized information in fields of arms control, disarmament, and peace studies. Speakers available to community groups, service organizations and political clubs. Call: 632-7075.

Center for the Study of Aging. Focuses on basic causes, diagnosis and treatment of dementia. Call: 444-1365.

Center for Regional Policy Studies. Undertakes wide range of studies related to key Long Island issues, including financing of secondary education, government productivity, and environmental planning. Call: 632-9022.

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 that knowledge to improve management of coastal areas. Call: 632-8701.

Economic Research Bureau. Performs analyses directed toward better understanding and strengthening the Long Island economy. Policies analyzed include industrial, transportation and capital markets, plant closings, industrial competitiveness and productivity, regional economic development and public and private sector employment. Call: 632-7722.

Health Services Research and Management Unit. Analyzes issues of direct concern to health care administrators, including implications and outcomes of various forms of health care financing. Call: 632-7181.

Institute for Social Analysis. Combines expertise of a wide range of researchers in the social sciences and management to address social, political, economic and cultural issues, with an emphasis on economic development and quality-of-life on Long Island. The Institute offers a full range of data collection and analysis services to university and outside researchers. Call: 632-7709.

Living Marine Resources Institute. Coordinates activities of the Marine Sciences Research Center in support of 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. Call: 632-8656.

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 education programs in biological, physical, chemical and geological oceanography, as well as in coastal zone management, waste management, and fisheries and shellfisheries science and management. Call: 632-8700.

Swan Pond Biological Station. Devoted to understanding the ecology of the Pine Barrens. Located at Robert Cushman Murphy County Park. An environmental education and research center. Programs for nature appreciation, adult education and school visits are being established so that Long Islanders can learn the ecological importance of the Pine Barrens and the Peconic watershed. Call: 632-8600.

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 and incineration methods. Call: 632-8704.

BASIC AND APPLIED SCIENCES

Center for Mathematical Economics and Game Theory. Focuses on research and training in game theory and its applications across such diverse disciplines as biology, economics, finance, management science and political science. Call: 632-6991.

Chemical Synthesis Center. Provides facilities for the custom synthesis of chemical compounds. Call: 632-7949.

Howard Hughes Medical Institute in Neurobiology. Focuses on understanding the action of chemical transmitter substances in the brain. Call: 632-8645.

Institute for Atmospheric Sciences. Coordinates interdepartmental research programs on the atmosphere of the Earth and other planets of our solar system. Active areas of investigation into the Earth's atmosphere include research into climate change, stratospheric ozone deletion, and air pollution. Planetary research uses the latest data from space probes into the atmospheres of Mars, Venus, Jupiter, Saturn, Uranus, Neptune and their moons. The Institute also coordinates graduate degree programs in the atmospheric sciences that are offered at USB. Call: 632-6170.

Institute for Interface Phenomena. Focuses on structure of surfaces of materials and dynamics of physical and chemical processes occurring on them. Pulls together researchers in chemistry, physics and materials science in search for new materials and processes that could lead to breakthroughs in electronic technologies. Call: 632-8484.

Institute for Mathematical Modeling. Focuses on developing the mathematics necessary for creating increasingly sophisticated computer simulations and models. Call: 632-8370.

Institute for Theoretical Physics. One of the world's foremost research institutes in theoretical physics. Has graduated nearly 100 Ph.D. students, many of whom are occupying top research and teaching positions around the world. Directed by Nobel Laureate C.N. Yang. Call: 632-7970.

Mathematical Sciences Institute. Focuses on research in mathematics, fostering cooperation with other related theoretical sciences, such as physics. Call: 632-8291.

Mineral Physics Institute. Focuses on physical and chemical processes occurring in Earth's interior with aim of developing new materials and processes for synthesis of materials. National Science Foundation has designated university's High Pressure Laboratory as a national facility for use by scientists around the nation. Call: Department of Earth and Space Sciences, 632-8350.

Regional NMR Center. Provides facilities for nuclear magnetic resonance spectroscopy. Call: 632-7946.

Regional X-ray Diffraction Center. Provides facilities for crystal structure determinations by x-ray diffraction. Call: 632-7944.