

Carl Anderson Named Chairman of BNL's Biology Department

Senior Geneticist Carl Anderson has been named chairman of the Lab's Biology Department, effective June 1. He succeeds F. William Studier, who will return to research within the department as a senior biophysicist.

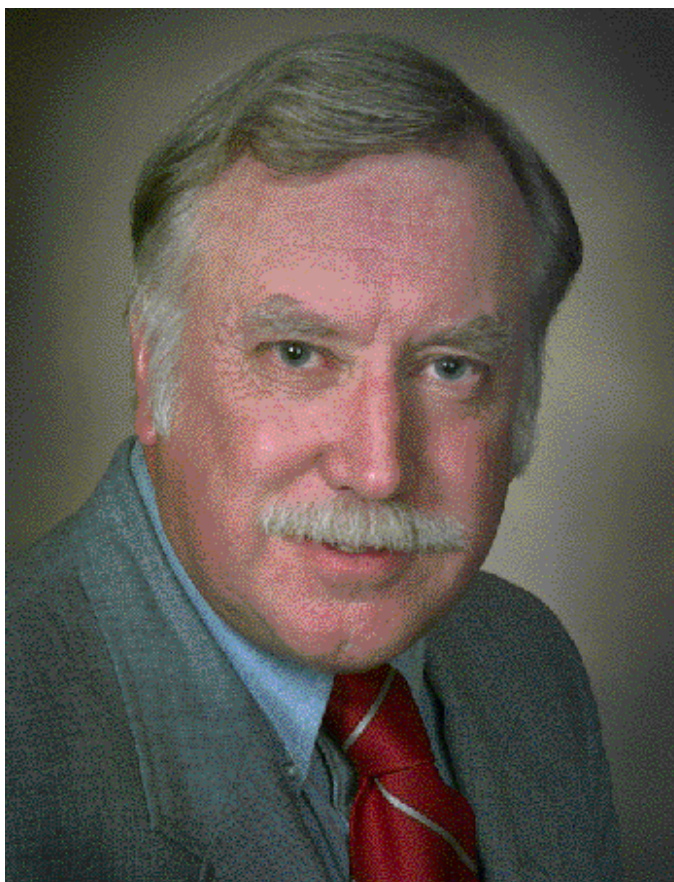
With a staff of 93, the Biology Department conducts basic research in molecular genetics, structural biology, genomics and biotechnology.

Currently, the Lab's biologists are focused on engineering plant genes to make new enzyme catalysts, developing DNA sequencing methods for the human and other genomes, determining complex protein structures, and understanding the mechanisms that repair DNA.

These basic research programs are important for creating new pharmaceuticals, producing alternative industrial feedstocks, reducing carbon emissions, and designing bacteria that may clean up soils contaminated with heavy metals or radioactive materials.

The Biology Department also operates beam lines at the National Synchrotron Light Source and, when it was operating, at the High Flux Beam Reactor. In addition, the department is home to the Scanning Transmission Microscope, a high-resolution microscope which attracts an international group of scientists to Brookhaven.

As chairman, Anderson explained, he will work to align the Biology Department's research programs closely with the goals of DOE, which is



Carl Anderson

its primary funding source. He added that he also would like the department to work in close collaboration with other Lab departments, such as the Medical Department and Department of Applied Science, to solve prob-

lems in an interdisciplinary fashion in, for example, neuroimaging, cancer research and environmental research.

Further, Anderson wishes to renew the vitality of the Biology Department by attracting bright, young scientists to its research programs.

Anderson hopes that a recent initiative within the department — what is called the proteome project — will be an expanding area of research. A large-scale effort involving several national laboratories, universities and industrial firms, the proteome project aims to determine all proteins specified by the genome of an organism. Bi-

ology is focusing on yeast proteins, with the goal to develop new methods for the rapid determination of protein structures.

Nanoscience, which is the study of extremely small structures, may be

another area for future research within the department, said Anderson. Such studies may lead to technological advances, such as new medical sensors or more efficient computer chips.

Carl Anderson earned a B.A. in chemistry and physics from Harvard University in 1966, and a Ph.D. in microbiology from Washington University in 1970.

He served as a postdoctoral fellow and then a staff scientist at Cold Spring Harbor Laboratory before joining BNL's Biology Department in 1975 as an assistant geneticist. Anderson was granted tenure in 1981 and promoted to senior geneticist in 1996.

Since 1976, he has taught within the Department of Microbiology of the State University of New York at Stony Brook, first as an assistant adjunct professor and, since 1990, as an adjunct professor.

Anderson's research has centered on the molecular biology of human adenoviruses and, more recently, on the molecular mechanisms that signal DNA damage in human cells.

— Diane Greenberg

347th Brookhaven Lecture

Seeing Is Believing: Advanced Electron Microscopy

In a quiet lab in the Department of Applied Science's (DAS) Building 480, researchers are operating an amazingly powerful scientific instrument — the new Transmission Electron Microscope (TEM).

The best instrument of its kind in the nation, DAS's TEM is tailored for solid-state physics, chemistry, biology, and materials science, as a probe of the properties and structure of materials (see sidebar on page 2).

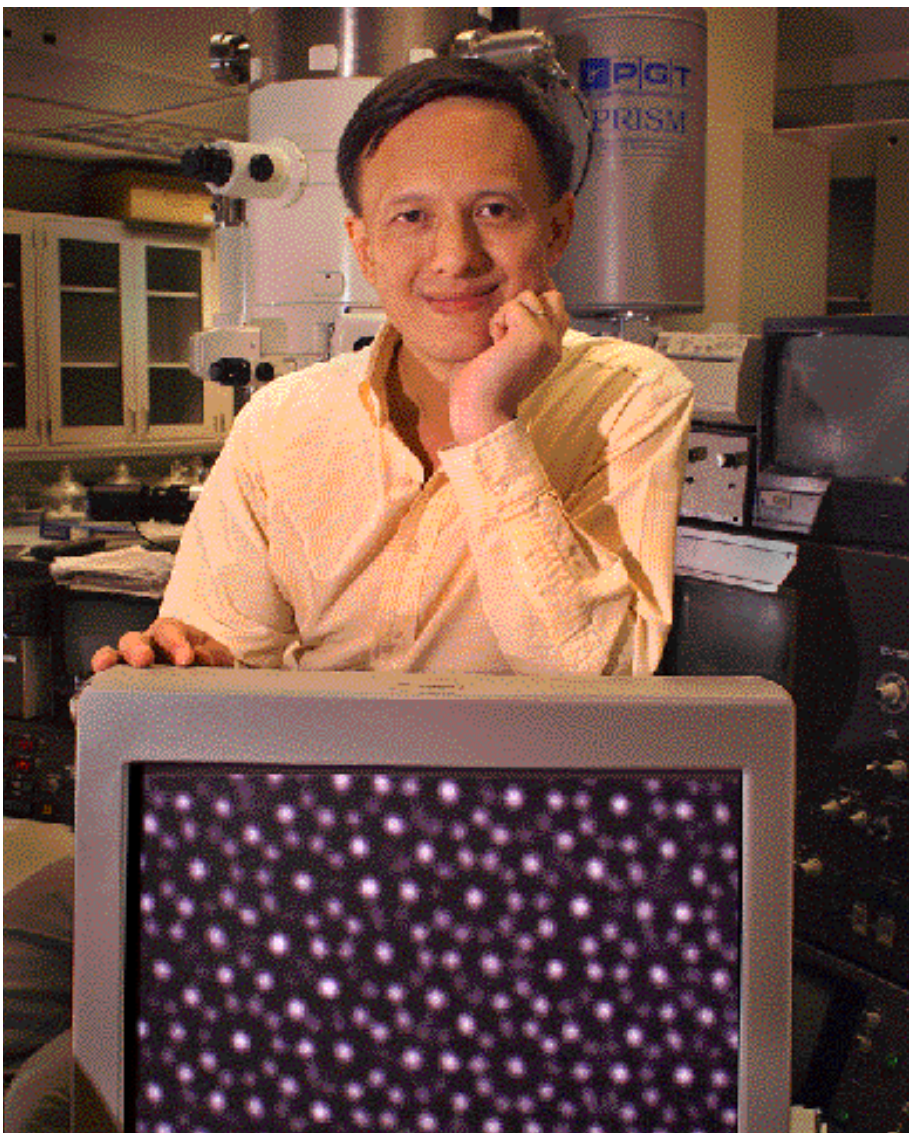
From the viewing screen, researchers can directly see atoms and the atomic arrangement of the samples being investigated, which the microscope can magnify up to 50 million times.

To put this in perspective, a ping-pong ball magnified 50 times would be the size of the moon, while an atom similarly magnified would be as large as a ping-pong ball.

To talk about this TEM's unique capabilities and the experimental results that it has already provided, TEM team leader Yimei Zhu, a DAS scientist, will give the 347th Brookhaven Lecture, on Wednesday, June 16, in Berkner Hall. His talk, entitled "Seeing Is Believing: Advanced Electron Microscopy in Materials Science," will start at 4 p.m., after Zhu is introduced by DAS Chair James Davenport.

In his talk, Zhu will give examples of how TEM has already been used to map the chemistry of a multilayer computer chip, to reveal the atomic arrangement of a quasicrystal, and to image electric charge strips in exotic oxides.

Zhu will talk about two case studies in which the team applied various TEM techniques: in one, to understand



Yimei Zhu

— photos on this page by Roger Stoutenburgh

the structure and certain properties of bismuth-based high-temperature superconductors; in the other, to reveal the magnetic behavior of neodymium-

iron-boron permanent magnets — to date, the most powerful known. Zhu will show a video of the latter case study, revealing the dynamic struc-

Coming Up

On Wednesday, June 23, Kenneth H. Nealson, a scientist at the Jet Propulsion Laboratory, will give the next BSA Distinguished Lecture, titled "Searching for Extraterrestrial Life: Lessons from the Earth," at 3 p.m. in Berkner Hall.

All are welcome. (Note that the time has been changed to 3 p.m. from 4 p.m., which was the time previously announced elsewhere.)

BSA and the BNL Art Society will sponsor "Summer Colorscape — A Celebration of the Summer Solstice With Fine Arts, Poetry, and Music," Friday-Sunday, June 25-27, at the Brookhaven Center.

On display will be paintings and drawings by the Suffolk County members of the National League of American Penwomen.

In addition, at the opening reception on Friday, June 25, 5-7:30 p.m., tenor Ray Rueger will sing Broadway show tunes, and German and Italian songs.

On Saturday, June 26, 2-4 p.m., the Long Island Harmonizers, a barbershop quartet, will entertain visitors. Then, on Sunday, June 27, 2-4 p.m., poetry will be read, and Mark and Lois Barton and Maurice Kemp will perform light classical music on the flute, oboe, and piano. Refreshments will be served.

tural behavior of the magnetic domains.

These and other experiments, as Zhu will discuss, are just the tip of the iceberg of this TEM's value in materials-science research.

Yimei Zhu earned his Ph.D. in materials physics in 1987 from the Cen-
(continued on page 2)

DAS's New Microscope: TEM

Manufactured under BNL's direction by the Japanese Electro-Optical Laboratory of Tokyo, the Department of Applied Sciences's new \$2-million, 300,000 electron-volt high-resolution Transmission Electron Microscope (TEM) was funded by DOE's Office of Basic Energy Science.

A structure-characterization facility that can be used on various materials, TEM produces information that complements both neutron and synchrotron x-ray studies.

The best of its kind in the U.S., DAS's TEM can magnify a sample up to 50 million times its size, with a spatial resolution of 0.1 nanometer (nm). It also has many state-of-the-art attachments that provide powerful tools for researchers to study crystal structure, electronic structure, and chemical composition of materials.

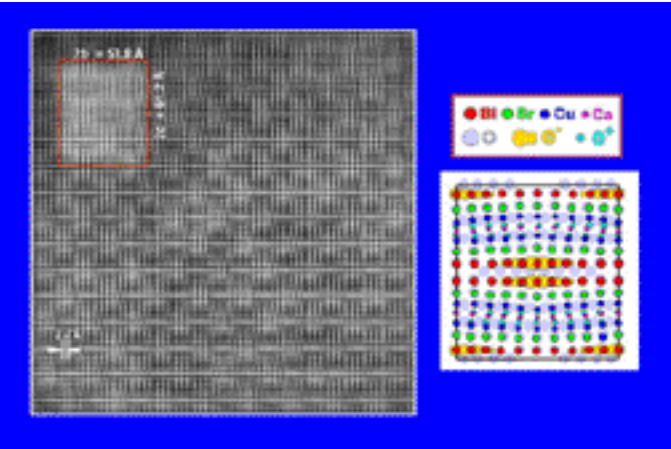
For example, TEM has an energy filter, an x-ray energy dispersive spectrometer, an electron energy-loss spectrometer, and several digital data-

recording systems. TEM is also equipped with a holography unit, a scanning attachment with chemical mapping resolution better than 1 nm, and cooling and heating in-situ stages that can heat or cool specimens to temperatures ranging from 15-1300 kelvins (-258 to +1027 degrees Celsius).

Another unique capability of this TEM is its minimum probe size — down to approximately 0.3 nm. This is extremely useful for nano-technology research, which can reveal remarkable amounts of structural information from a sub-nanometer volume.

TEM's real-space imaging, combined with the diffraction and chemical information obtained from the same local area, provide a complete picture of an area of interest.

Used now by BNL scientists, DAS's TEM is expected to become another Lab user facility, to be a center, in the long tradition of other Lab user facilities, for studies by researchers from all over the world. — Liz Seubert



Produced by the new Transmission Electron Microscope (TEM), the image on the left shows the atoms in a bismuth-strontium-calcium-copper oxide (Bi₂Sr₂CaCu₂O₈) superconductor. Because of TEM's extraordinarily powerful reso-

lution, the wavy lines of the atoms are clearly seen, showing their displacement and charge modulation. The boxed area (top left) in the image is a calculated image for four-unit cells based on the computer model which is shown at lower right. The excellent match between the experimental and the calculated images verifies the structure model.

BNL Lecture (cont'd)

ter for High Voltage Electron Microscopy, Nagoya University, Japan. He served as a research associate at the University of Virginia, 1986-87.

After joining DAS in 1988 as an assistant scientist, he became an associate scientist in 1990 and scientist

in 1993. He was granted tenure in 1997.

Coffee and cookies will be served in the lobby before the lecture, and refreshments will be offered afterwards.

Those who wish to join the lecturer for dinner at a restaurant off site may call Liz Seubert, Ext. 2346, by noon on Wednesday, June 16. — Liz Seubert

Volunteers Needed For Imaging Studies

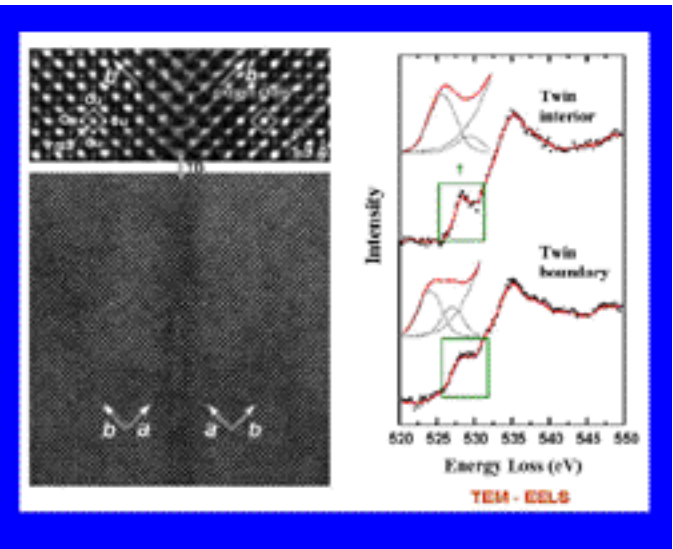
Normal, healthy volunteers who are at least 20 years old are needed to participate in medical-imaging studies conducted by BNL's brain-imaging program. The purpose of these studies is to understand the function of the normal human brain. Results from the imaging of normal individuals' brains will then be compared to results from studies of people with diseases such as alcoholism, drug addiction, obesity, and degenerative diseases. A fee will be paid, and participants' confidentiality will be maintained. For more information, call Naomi Pappas, Ext. 5015.

Softball

Reported Results as of June 4:

League E1		League E2	
Blue Jays	3-2	No Fuel'n Around	4-1
Cobras	3-2	CCD	3-2
Magnuts	3-2	Hammerheads	3-2
Clean Sweep	1-4	Mesocyclones	3-2
League E3			
Sure Fire	2-0	Phase Out	2-3
Bombers	1-1	Gas House Gorillas	1-4
Medical	1-1	Hy Tech	1-4
Ten Samurai	0-2		
League M1		League M2	
Gour-Mets	2-1	Ansky	2-0
Stingrays	2-1	Skeleton Crew	1-0
Happy Hour	2-2	Here 4 the Beer	1-1
Castaways	1-2	Odd Sox	0-1
OER Wellheads	1-2	NWO	0-2

In a study on defects in superconducting materials, DAS's TEM shows the atomic image (lower left) of a "twin boundary," where two crystals in an yttrium-barium-copper oxide superconductor meet with mirrorlike symmetry. At right, TEM shows the nanometer-probe electron energy-loss spectra of oxygen at what is called K-edge from both the twin interior — the inside of the crystals — and from the twin boundary areas. The intensity of the oxygen peak at the boundary (lower boxed area at right) is lower than the intensity of the oxygen in the interior (higher boxed area at right). Because the oxygen intensity is related to charge carrying, researchers can deduce that the boundary is non-superconducting.



In Memoriam

Paul D. Williams, a rigger in the Plant Engineering (PE) Division who had retired on February 3, 1998, after 25 years at the Lab, died on October 10, 1998, at age 55. He had joined PE as a custodian on September 18, 1972.

William Fleischer, who had been at BNL for 29 years when he retired on June 30, 1988, as a project engineer II in the Plant Engineering (PE) Division, died on June 12, 1998. He was 77. He had joined the Lab on December 19, 1958, as a facilities engineer.

James Alberti, who had joined BNL's General Shop on April 26, 1948, as a machinist, died on October 15, 1998, at the age of 88. He had left the Lab as a tool & instrument maker on March 9, 1959.

W. Alvord Finn, the Administrative Officer of the Medical Department who had retired on June 30, 1976, after 28 years at the Lab, died on October 18, 1998, 12 days before his 87th birthday. He had joined Medical on July 1, 1948, as an executive aide.

William Elasik, who had first come to the Lab on October 7, 1957, to work as a welder in the Central Shops Division, died on November 13, 1998. He was 81. After 22 years at BNL, he had retired as a master welder on October 31, 1979.

Clara Sells, who had joined the Lab as a laundry operator B in the Plant Engineering (PE) Division on May 28, 1980, died on November 19, 1998, at the age of 70. On March 23, 1990, she had retired from PE as a Lab custodian with ten years of service.

Beverley Glastney, who had joined the Plant Engineering (PE) Division as a custodian on September 13, 1965, died on December 1, 1998. He was 66. After becoming a security patrol officer, then Police Captain in the Safeguards & Security Division, he retired on August 11, 1993, after nearly 28 years at the Lab.

Eugene Hassell, who had retired from the Physics Department on June 15, 1994, as a technical associate I, died on January 24 at the age of 65. He had served 24 years at the Lab, having joined Physics as a technician IV on December 1, 1969.

Edward Zeidler was a guest technical collaborator with the Biology Department when he died on February 6 at the age of 79. He had joined the Lab as a machinist B in the then General Shop on September 12, 1947.

Taking military leave 1950-59, he returned to become a technical associate in the Instrumentation Division, retiring on July 31, 1984, after 36 years at the Lab.

Charles Wilson, a senior budget specialist who had joined the Alternating Gradient Synchrotron Department as a staff assistant on August 1, 1966, died on March 5, 17 days before his 74th birthday. He had retired from the then Accelerator Development Department on January 17, 1989, after 22 years at BNL.

Retirement Counseling

A TIAA-CREF representative will visit the Lab on Monday and Tuesday, July 12 & 13, to answer BNL employees' questions regarding the TIAA-CREF retirement plan in one-on-one counseling sessions. Questions employees might have include:

- What are the differences between TIAA and CREF?
- How should I allocate my money between TIAA and CREF?
- What options and flexibilities do I have for my existing dollars with TIAA-CREF?
- What are my retirement options?

A limited number of 45-minute appointments are available; to arrange one, call Valerie James, (800) 842-2011.

Summer Swim Lessons for Kids

Registration is now being taken for BERA-sponsored summer swim lessons for children of Lab employees, facility users, and other guests. Lessons will begin on Wednesday, July 7, and end Tuesday, August 31:

- **Lessons:** Each child will be scheduled for one lesson each week for a total of eight lessons. American Red Cross certificates will be awarded to children who qualify, upon completion of the lessons.
- **Time:** Monday through Friday, 2:15 to 3:15 p.m., but children must arrive by 2 p.m. to have time to prepare for class.
- **Fee:** \$50 per child upon registration; in addition, each child must pay the \$2 daily admission fee or present a season ticket for each lesson.
- **Height requirement:** For their safety, children each must be a minimum of 42 inches tall.
- **Registration:** Applications may be picked up at: the Human Resources Division. Bldg. 185, 8:30 a.m.- 5 p.m.; the BERA Sales Office, Berkner Hall, Tue.-Fri., 9 a.m.- 1:30 p.m.; or the swimming pool, Bldg. 478, during its open hours. Mail or deliver applications with checks covering the registration fees payable to BERA to the Recreation Office, Bldg. 185, no later than this Monday, June 14.

Blood Drive 6/17 & 18

Appointments to give blood can still be made for BNL's upcoming spring Blood Drive, which will be held next Thursday and Friday, June 17 & 18, from 9:30 a.m. to 3 p.m. in the Brookhaven Center.

The goal for this blood drive is the collection of 410 units of blood. Since some people who want to give blood will be deferred due to various medical reasons, that means that *more than* 410 BNL employees, retirees, facility users, and other on-site guests must roll up their sleeves during the drive. Those eligible to donate are people in good health between the ages of 17 and 76 who have not donated blood in the past 56 days.

To make an appointment, contact Blood Drive Chair Susan Foster, Human Resources Division, at foster2@bnl.gov or Ext. 2888. Include your name, extension, and preferred date and time.

Universal Donor Correction

In the story on the upcoming Blood Drive in the Bulletin of May 28, the universal-donor blood type was erroneously reported as O positive. In the past, persons with type O, Rhesus (Rh) factor negative blood were considered universal donors. Today, however, due to an increased understanding regarding additional blood factors, O-negative blood is only used as the universal-donor type under extreme emergency conditions so as to minimize transfusion reactions that would be caused by the incompatibility of other factors.

THE HUNGRY NEED HELP

CAN you spare a CAN?

BNL FOOD DRIVE
PICKUP ALL NEXT WEEK

To Your Health

For more information or to register, contact BNL's Health Promotion Specialist Mary Wood, Bldg. 490, Ext. 5923, or wood2@bnl.gov.

Spring Walk on Tuesday

In celebration of the completion of the site-wide March Into May physical-activity program, all participants and other willing walkers are invited to undertake a two-mile Spring Walk on Tuesday, June 15, starting at noon at the Science Education Center, Bldg. 438. Registration is not required.

CPR Course on June 14

A course on cardiopulmonary resuscitation (CPR) of adults will be given on site on Monday, June 14, from 6 to 9 p.m. The course is open to BNL employees, retirees, facility users and other guests, and it costs \$22.50 per person. Registration is required.

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Indian Kathak Dance Performance June 27



Shambhavi Vaze, a Kathak dancer from India who is part of the troupe that will perform in Berkner on June 27.

Classical Indian Kathak dance will be performed in Berkner Hall on Sunday, June 27, at 4 p.m. by a troupe of six dancers visiting from India. Sponsored by the BERA Indo-American Association, the event is open to the public.

Developed about 500 years ago in northern India, Kathak dance is an interpretive form of dance that portrays stories from Indian mythology and contemporary themes.

Tickets for the performance may be purchased in advance from: Druba Ghimiray, Ext. 3849; Geeta Joshi-Tope, Ext. 5702; or Kumi Pandya, Ext. 7734. The cost is \$10 for adults, \$5 for students, and \$3 for children 5 years old and under.

BSA Cultural Program

Hamptons Pianofest Comes to Brookhaven

This June and July, the Pianofest in the Hamptons comes to BNL.

In its eleventh season of concerts by young rising stars and master classes, this year's H a m p t o n s Pianofest runs from June 14 through July 26. Directed by Paul Schenly, the festival features an international cast of pianists.

In addition to its regular schedule of weekly concerts in Southampton and East Hampton, four concerts — one in the evening and three midday recitals — will be given in Berkner hall.

The evening concert will take place on Saturday, June 19, at 7:30 p.m., while noon recitals will be given on Wednesday, June 30 and July 7 & 21.

All Pianofest events at Brookhaven are free and open to the public. During the noon recitals, audience members may bring a box lunch into the hall to enjoy with the music and may come and go as they please. For more information about the other Pianofest concerts, call 329-9115.

Wanted: BNL Ambassadors

Paint 1872 Schoolhouse

BNL volunteers are needed to help the Ridge Civic Association paint the one-room schoolhouse which dates from 1872 and is located on the Longwood Estate off Smith Road in Ridge.

The work will take place on Saturday, June 26, from 9 a.m. to noon. Paint will be provided, but volunteers are asked to bring brushes, work gloves, ladders, and small hand and electric tools.

Employees, retirees, facility users, and their families and friends are invited. No experience is required. To register, call Elaine Lowenstein, Community Relations Office, Ext. 2400.



Paul Schenly of the Pianofest in the Hamptons

Pick a Student

BNL researchers are needed to sponsor Community Summer Science Program (CSSP) students as interns in their labs half-days this summer. CSSP students are juniors or seniors from Long Island high schools who have advanced standing in mathematics and science.

During the six-week program, which this year runs from June 28 through August 6, students attend morning lectures and, during the afternoons, intern in labs at no cost to the sponsors' departments.

To review students' applications, go to the Science Education Center, Bldg. 438, or contact Louise Hanson, Ext. 5849 or hanson2@bnl.gov.

Buy Savings Bonds

To discuss how BNL employees can purchase U.S. Savings Bonds regularly through payroll deduction and enroll new participants in this investment program, the National Bond & Trust Company will have representatives in Berkner Hall from 11 a.m. to 2 p.m. next Wednesday and Thursday, June 16 & 17. For more information, call Cheryl Burke, Ext. 2487.

Atlantic City Bus Trip

The next BERA-sponsored bus trip to Atlantic City will be on Saturday, July 17. The cost will be \$25; the hotel-casino and coin-return amount will be announced later.

The bus will leave the Brookhaven Center promptly at 8 a.m. and return by approximately 10 p.m. An extra pickup at the park and ride off exit 63 of the Long Island Expressway may be requested. Movies, games, and free rolls or donuts will be available on the bus; bring your own coffee and juice.

Paid reservations are taken at the BERA Sales Office, Berkner Hall, Tuesday-Friday, 9 a.m.-1:30 p.m. For more information, call Andrea Dehler, Ext. 3347, or M. Kay Dellimore, Ext. 2873.

Arrivals & Departures

Arrivals

Gloria de Boer Adv. Technology
Charles V. Karns AGS
Norman C. McIntosh Info. Serv.
Andrew J. Salamone Jr. .. Plant Eng.
Li Wang AGS

Departures

Naji N. Abumrad Medical
Gina A. Bianco Financial Serv.
Jerry J. Cadwell Adv. Technology
Louis Coppa Physics
Robert L. Ellis Plant Eng.
Patrick J. Glennon Plant Eng.
Nicholas A. Guglielmino NSLS
Francis La Barbera Plant Eng.
Tom T. Lee App. Science
Albert Liotta Plant Eng.
Lori A. Malachowsky Medical
Margaret J. Matkovich OMC
Bent Nielsen App. Science
Judith E. Otto Info. Serv.
Michael J. Rau Plant Eng.
Anthony J. Sette Plant Eng.
Carl B. Treiber Plant Eng.
Momchil S. Velkovsky Physics
Sharon S. Wang Financial Serv.
Alonzo P. Werner RHIC

**Classified
Advertisements**

LABORATORY RECRUITMENT - Opportunities for Laboratory employees.

DD8481. SPECIAL SERVICES ATTENDANT - Performs various service duties in connection with conferences, meetings and special events. Directs and coordinates work of other employees, as assigned. Works as Laboratory Custodian when not on special service assignment. Administrative Services Division.

DD8120. OFFICE SERVICES ASSISTANT POSITION - (term appointment) - Requires a working knowledge of basic office procedures and of Lab practices, policies and procedures. Proficiency in Microsoft Word and WordPerfect essential. Must be able to handle multiple assignments and prioritize work. Knowledge of PeopleSoft procurement a plus. Responsibilities include maintaining assembly procedures, updating material-requirements database (MINX), and routine reporting on ECNs, procedures and drawings using ISQL database. RHIC Project.

NS7741. BUSINESS ANALYST POSITION - (reposting) Requires a BS in business administration or equivalent; a good working knowledge of administrative procedures including business analysis and complex data analysis; and experience with presentations and report preparations. In addition, strong writing, organization, communication, and interpersonal skills are essential, as is thorough knowledge of Lab policies and procedures. Strong computer skills including Access, Excel, PowerPoint and PeopleSoft are necessary. Knowledge of budgeting processes desirable. Budget Office of the Applied Science & Technology Directorate.

NS8411. MULTI-TRADE SUPERVISOR - Requires knowledge of applicable construction and maintenance trades, and experience in job layout, supervision, coordination, and planning of multi-craft jobs. Responsible for first-line supervision of multi-trade work effort within the Operations & Maintenance Division. Plans, schedules, coordinates, and supervises work processes; directs employees on jobs, including assignments, training, scheduling, and grievance handling; and supplies technical direction as needed. Plant Engineering Division. (continued on page 4)

Classified Ads (cont'd)

OPEN RECRUITMENT - Opportunities for Laboratory employees and outside candidates.

MK7967. POSTDOCTORAL RESEARCH ASSOCIATE - Requires a Ph.D. in chemistry or related field, and experience in kinetics and mechanisms of reactions involving transition-metal complexes. Familiarity with pulse-radiolysis or flash-photolysis techniques is desirable, as is experience in the interpretation of complex-rate laws. Will conduct mechanistic studies of transient systems based on organic molecules or transition metal complexes using flash-pulse radiolysis or photolysis techniques. Under the direction of J. Miller, Chemistry Department.

MK7673. POSTDOCTORAL RESEARCH ASSOCIATE - Requires a Ph.D. in experimental elementary particle physic or related field. Will conceive, design, build, and operate experimental apparatus, and calibrate, operate and test apparatus and equipment. Will be involved in the D0 collaboration and a major upgrade of the detector. Under the direction of H. Gordon, Physics Department.

NS8433. POWER ELECTRONICS ENGINEER - Requires a BSEE degree or higher with five years of experience in the design and analysis of high-power, multiphase converters, preferably multikilowatt systems. Knowledge of power-transformer configurations, power-factor correction, and National Electrical Code requirements desirable. Will work in the power systems group of the NSLS, responsible for the maintenance and upgrade of highly regulated power supplies, as well as the building power-systems infrastructure. National Synchrotron Light Source Department.

NS8418. FIELD ENGINEER/HYDROGEOLOGIST POSITION - (term appointment) Requires BS (MS preferred) in civil, chemical or environmental engineering or hydrogeology, and at least 3-5 years of experience in planning, implementing, managing, and communicating groundwater-related programs. Skills necessary in: project planning, groundwater sampling and analysis protocols, interpretation and mapping of hydrogeologic and analytical data, contracting, and construction oversight. Strong oral, written and interpersonal skills are necessary. Computer hardware/software skills are desirable, particularly in computer graphics and data-management software, AutoCAD, ArcView, GIS/Key, and groundwater models. Environmental Restoration Division.

NS8419. FIELD ENGINEERING POSITION - (term appointment) Requires a BS (MS preferred) in civil, mechanical, chemical or environmental engineering, and four to six years of experience in remediation systems and waste management. Skills necessary in: preparation or review of engineering designs and specifications; hazardous and radioactive waste-management planning, coordination, and tracking from waste generation through disposal; environmental regulations (CERCLA/RCRA); and pollution prevention and waste minimization. Computer skills, specifically database-management systems, spreadsheets, graphics and modeling, are desirable. Environmental Restoration Division.

NS7398. PROGRAMMER/ANALYST POSITION - Requires a BSCS and at least two years of experience in applications development and programming. Proficiency in any of the following languages is required: VB, VB Script, C, C++, Java, PeopleCode. Conceptual knowledge of the following is a plus: object-oriented design concepts; 2-tier, n-tier architecture; relational databases; and Oracle, PeopleSoft, SQR, SQL. Business Information Systems Group, Financial Services Division

DD8434. LASER TECHNICIAN POSITION(Term Appointment) - To aid in the development and maintenance of the laser systems for the Deep Ultra-Violet Free Electron Laser. Requires at least a BS in optical science or equivalent experience, and a minimum of five years of relevant experience with short-pulsed, solid-state laser systems. Demonstrated capability in operating and troubleshooting of titanium:sapphire CPA systems is essential. Additional responsibilities will include supporting the development of advanced electron-beam and FEL diagnostics utilizing laser and optical technology. National Synchrotron Light Source Department.

DD7375. TECHNICAL POSITION - (reposting) Under general direction, provide support services to the Reactor Division. Responsibilities will include, but will not be limited to: receiving and distributing stock; maintaining, ordering and taking inventory of consumables; processing contaminated clothing and stocking dress-out stations; assisting with relocating and processing of all radioactive, hazardous, and mixed waste; providing chemical inventory technical support; standing fire watch; and providing escort service. Requires a high school diploma or equivalent capabilities, plus several years of relevant work experience. Good organization, verbal and written skills are also required, as are the abilities to obtain and maintain a security clearance and respirator qualification. Computer experience and a knowledge of BNL's RCRA, RADIGEN and CMS programs are desirable. Reactor Division.

DD8410. REFRIGERATION AND AIR-CONDITIONING ENGINEER - Under minimum supervision, constructs, installs, repairs, maintains, and operates refrigeration, air conditioning, ventilating, and auxiliary and related equipment. Will perform the same work on air compressors and vacuum pumps whether or not associated with the above equipment. Plant Engineering Division.

DD8147. PHOTOGRAPHY & GRAPHIC ARTS SPECIALIST C - (temporary opening, reposting) Under direct supervision and technical direction, carries out phases of the Lab's graphic arts work. Works from written or oral direction to execute tasks associated with copy/duplicating and related equipment. Will also work in related bindery functions. Performance of these duties requires knowledge of some phases of graphic arts. Must possess valid NYS driver's license. Information Services Division.

Motor Vehicles & Supplies

98 PLYMOUTH NEON - platinum, 4-cyl., a/c, p/w, p/l, power sunroof, CD, Benzi Box, 15k mi., 5 yr. warr., \$11,000 neg. Kathy, 286-1722 or Matt, Ext. 7388.

97CHEVY ASTRO -8pass., child seats, tint., class Z trailer hitch, 76k mi., \$10,400. Bob, Ext. 2351.

97MUSTANG - black w/gray int., a/t, p/s, p/w, p/l, am/fm/cass., alloy wheels, ask. \$13,500. Greg, 929-6125.

97NISSAN ALTIMA GXE - 4-dr., 5-spd., a/c, p/w, p/l, 27k mi., 32 mpg., \$13,000. Edwin, Ext. 7979 or 2269.

1998-99 BNL Bowling Champions



Roger Sloutenburgh

In the BNL Purple & White mixed league, Joe-Z & the Alley Kats (pictured above) bowled a “purr-fect” season, winning both halves and, with one point, breaking Murphy’s Law for the annual championship. Joe-Z is Joe Zebuda (right) and the Alley Kats are: (from left) Tracy Blydenburgh, Brian Mullany, and Debbie Keating.

In the BNL Red & Green men’s league, the Force was with: (pictured below, from left) Ron Mulderig, Ken Koebel, Joe Giuffre, Richard Deam, and Ron Mulderig Jr. So these five “forceful” guys won the annual championship, also by winning both halves of the Season and thus destroying the plans of the Designers.

After a break for the summer, the Bowling League resumes play in September. The mixed league bowls in Rocky Point on Thursdays, while the men's league meets in Port Jefferson on Tuesdays. For more information, call Debbie Keating, Ext. 3888.



Roger Sloutenburgh

96 CHEVY CAVALIER - 4-dr., a/t, a/c, 60k mi., mint cond., \$7,000. 878-3513.

95FORD CONTOUR -4-dr., a/t, a/c, 47k mi., \$6,500. 474-5813.

95 HARLEY FLHTC - full dresser, garaged, 5k mi., extras, \$15,800. Lloyd, 587-7876.

94 MITSUBISHI GALANT LS - black/gray, a/c, all power, sunroof, am/fm/cass., alarm, alloys, fog lights, 88k mi., moving, must sell, \$7,000 neg. Ext. 4136.

93 HYUNDAI ELANTRA GLS - 4-dr., 4wd, sedan, 4-cyl., a/c, new a/t, v.g. cond., ask. \$2,350. Mike, 744-9178.

93 SUBARU LEGACY - 5-spd., am/fm/CD/cass., a/c, 85k hwy. mi., \$5,000. Mike, Ext. 3755 or 754-6483.

92 HYUNDAI EXCEL - 4-spd., a/c, 93k mi., good cond., avail. 6/21, \$1,700 obo. Otto, Ext. 1062 or 3360.

92 HYUNDAI EXCEL - h/b, new trans., struts, & motor mounts, 100k mi., ask. \$1,800. Beth, 924-7423.

91 CHEVY SPORT VAN - 12 pass., 5.7L, V-8, a/t, p/w, p/b, a/c, class 3 hitch, 103k mi., ask. \$5,000. Bob, Ext. 4446 or 654-3989.

91 HYUNDAI EXCEL - m/t, 137k mi., good cond., best offer. Chris, Ext. 5692.

90 JEEP CHEROKEE - blue, 4.0L., \$2,500 neg. Bruce, Ext. 5711.

89 HONDA CIVIC - 5-spd., h/b, a/c, hwy. mi., minor dents, \$1,350. Elliot, Ext. 3947 or 5800.

89 LINCOLN TOWN CAR - signature series, garaged, 74k mi., excel. cond., \$5,800 neg. Joe, Ext. 4284 or 286-2946.

89 NISSAN SENTRA - sunroof, a/t, a/c, 110k mi., \$1,400. Mark, Ext. 4289.

89 OLDSMOBILE DELTA 88 - well maint., good cond., ask. \$2,000. Neil, Ext. 2860.

88 SUZUKI SAMURI - spare engine & parts, needs tune-up & muffler \$1,000 neg. Will, Ext. 5377.

87 DODGE PICKUP - 4wd, 4-spd., ¾ ton, 360 eng., great work truck, \$1,200. 473-8426.

87 FORD WAGON - new tires & shocks, runs well, ask. \$600. 472-1302.

87 TOYOTA CAMRY - a/t, am/fm/cass., 115k mi., \$2,000; 87 Mercury Sable, a/t, sunroof, loaded, \$700; Black & Decker car vacuum, \$7. Sergei, Ext. 4717 or 732-2024.

85 FORD STATION WAGON - \$900. Danby, Ext. 4684 or 929-4530.

85 OLDSMOBILE CUTLASS SUPREME - 2-dr., p/w, p/l, am/fm/cass., new tires, excel. running cond., needs body work, \$650. 475-8242.

84 BMW 318i - new clutch, master cyl., & shocks, running cond., \$850. Alex, Ext. 3680.

84 MONTE CARLO - p/s, p/w, tilt, am/fm, good tires & brakes, 140k mi., \$1,000 neg. Phil, Ext. 4030.

72 CORVETTE - white, T-tops, 4-spd., 350 h.p., all orig., \$5,000. Bill, 878-6016.

70 CHEVY MONTE CARLO - 350 cu. in., powerglide, matching numbers, dual exhaust, rally wheels, new paint, runs well, looks good, \$2,500. 924-8213.

CARGO CARRIER - 20" X 60", platform steel, 1.25 in. towing receiver, hauls 500 lbs., \$50. Joe, 281-2767.

RIMS - 4, chrome, 3 Star, 16", 2 B.F. Goodrich Low Profile tires, 225/40/16, ask. \$900/all. Fran, Ext. 3309.

RUNNING BOARD - 1 pc. combo fender flair, for 2-dr. Tahoe, fg, never used, \$200. Joe, 924-7476.

TIRES - 2, General, P205/R15, new cond., \$45. Joe, Ext. 3783 or 929-8321.

TIRES - 2, Pirelli P-400, 195-60-15, less than 3k mi., \$25/ea. Dennis, Ext. 5306.

VIKING CAMPER -slide-on, 7.5' excel. cond., ask. \$1,000. Tony, 727-3863 days or 727-4967 eves.

Boats & Marine Supplies

25' DONZI - 1989, i/o, white w/red trim, swim platform, stove, VHF, cuddy cabin, good cond., \$12,000 neg. Tom, Ext. 5899.

24' MORGAN - shoal draft, sleeps 5, excel. sails, v.g. cond., ask. \$5,000. Tom, Ext. 5275.

22' BARNEGAT - cuddy cabin, portapotty, sleeps 4, solid engine, outdrive, & hull, new navy & camper tops, fully equipped, showroom cond., \$4,000. 878-6016.

20' GLASTRON - 130 h.p. Merc., i/O, cuddy, am/fm, VHF, trailer, extras, ask. \$4,000. Joey, Ext. 2350 or 758-2938.

16' WISCONSIN -fg, 40 h.p. Evinrude, good cond., needs some work, new trailer, \$400 obo. Dan, 698-7322.

10' FUNBOAT - 1991 Waverunner, 30 h.p. Tohatsu outboard, trailer, \$1,700. Ext. 3288 or 281-0306.

10' ACHILLES RAFT - 3 chamber, \$50; steel gas tanks, 2, 6-gal., \$20/ea., 3-gal., \$15. George, Ext. 5288.

E-Z LOADER ROLLER TRAILER - galvanized, tongue, jack, excel. cond., \$500; Big-T teleflex helm, \$25; Super Hooker anchor, new cond., \$25. Brian, Ext. 2799.

Furnishings & Appliances

AIR CONDITIONER - Fedders, 10,000 Btu, 3-spd., \$125; antique dining room server, 48" wide, \$125; Chipendale open curio, 16" x 60", \$75. 878-2872.

BED - \$100; oak desk/table, \$150; oak stereo cabinet, \$60; computer cabinet, \$45; silverware, more. Ext. 3855.

BED - Craftmatic, twin, new mattress, new cond., \$150; Nordic Rower, \$250 obo. 584-3830.

BEDROOM SET - solid oak, triple dresser, 2 night tables, mirrors, headboard, excel. cond., \$1,000. Lloyd, 587-7876.

CRIB - Bassett, no mattress, dresser, changing table, white-washed, new cond., \$450. 924-8858.

DINING ROOM SET - table, 4 chairs, hutch, cherry wood, excel. cond., \$350. Chris, Ext. 2972.

DINING ROOM SET - table, 6 chairs, corner hutch, dry sink, med. pine, 2 leaves, excel. cond., \$500; humidifier, dehumidifier. 821-6821.

DINING ROOM SET - formal, 66" lighted glass breakfront, 43" buffet server, chairs, table opens to 130", pads, 2 leaves. 474-5022.

DISHWASHER - GE, \$75; chainsaw, 16", \$50; typewriter, Royal, manual, \$35; crib, Jenny Lind, \$75; portacrib, Fisher Price, \$35. John, Ext. 4482 or 821-4280.

DRYER - Roper, elec., new, \$150. 924-6210.

EXPRESSO/CAPPUCINO MAKER - Maxim, new cond., \$15; washer & gas dryer, Whirlpool, super cap., white, v.g. cond., \$175/both. 924-7476.

FUTON BED - mattress & wood frame, excel. cond., \$95; wedding dress, size 8, \$50; area rug, light blue, floral, 8' x 10', \$45. 878-8442.

HUTCH - 72", dark maple, 2-pc., \$300; Pfalzgraf Heritage, white, service for 12, extras, \$100. Muriel, Ext. 2877 or 289-8428.

HUTCH - glass drs., maple; desk, oak, antique; dresser, walnut, brass; coffee table, walnut, 48" round. Jim, Ext. 5537.

MEAT SLICER - Bosch EAS55, elec. excel. cond., \$35. 727-5915. **MICROWAVE** - w/instruction book, good cond., \$50. 878-2239.

REFRIGERATOR - 3.6 cu. ft., 3½ yrs. old, 5 yr. compressor warr., orig. \$225, ask. \$150. Paul, Ext. 4156.

RUG - Berber, 9' x 2', pale cream & yellow design, excel. cond., \$50. Janet, Ext. 4049 or 744-8087.

SOFA BED - Lazyboy, gray, \$75; 2 club swivel chairs, black/tan/gray tapestry, \$75/ea.; highboy dresser, American Drew, \$400. Ext. 4298.

TABLE - oval, pine, trestle, 8 chairs, 1 leaf, 3 yrs. old, excel. cond., \$800. Beth, Ext. 3499 nights or 369-4295 days.

Tools, House & Garden

EXTENSION LADDER - 32', Model D1132-2X, type III, household, 200 lb. duty rating, \$125. Bob, 281-8519.

LEAF VACUUM MULCHER - needs work, \$15. Corinne, 654-3697.

LAWN MOWER - Snapper, 4 h.p., 21" cut, rear bag, EZ load mower, reconditioned, \$150. Dan, 698-7322.

LAWN TRACTOR - Sears Craftsman, 36" cut, new transmission, belt, batt., headlights & steering gear, tuned up, \$500. Pete, Ext. 5551 or 399-2813 after 5 p.m.

POOL FILTER - 1 h.p., Hayward D.E., used 1 season, \$100. Pool steps w/handrail, new cond. Joe, 924-7476.

ROSE OF SHARON - 4-5/container, 1 yr. old, \$5/container. Mickey, Ext. 7908.

WRENCHES - pipe, adj., multi, double open-ended combo, offset double box-ended; pliers, qslip-joint, groove-joint, locking, best offer. Bill, 924-6940 after 5 p.m.

Sports, Hobbies & Pets

TREADMILL - elec., readout panel, good cond., \$75. Janet, Ext. 4049 or 744-8087.

TREADMILL - Weslo Aerobic Stride, digital readout, spd., time, dist., calories, 3-position incline, upper body workout, non-motorized, \$40. Donna, 924-9282.

WINDSURFER - Fanatic Viper, 11' 5", transition board, 2 booms, 3 sails, 7.0, 6.4, 5.6, Dakine speed seat, ask. \$650. Al, Ext. 2575.

BACKPACKS - 2, EMS, new cond., used once, many outside pockets, \$75/ea. Annamarie, 821-5247.

BICYCLE - Ross Eurosport, men's, 26", many extras, good cond., \$75. 878-2872.

BICYCLE - Schwinn, boy's, 20", \$20. Walter, Ext. 4972 or 567-9025.

BICYCLE - man's, 10-spd., 21" frame, 27" tires, Fiorelli, has flats, \$25. 727-5915.

BICYCLES - 20", good cond., \$30, 16", fair cond., \$15; Little Tykes sandbox, \$10; kiddie pool, rigid plastic, \$20. Ext. 5288.

EXERCISE BIKE - \$5. Sergei, Ext. 4717 or 732-2024.

EXERCISE MACHINE - Nordic Trac 505, excel. cond., \$295. Linda, Ext. 2733 or 395-6784.

EXERCISE MACHINE - Body By Jake, hip & thigh, \$30; treadmill, manual, portable, \$10. 878-2425.

FACETING MACHINE - Facetron, new cond., many accessories, \$650. Gary, Ext. 2214.

GOLF CLUBS - Callaway driver, 3-9 irons, sand & pitching wedges, bag, case of balls, \$250. George, Ext. 4453.

POWER WHEELS TRUCK - single seat, charger, \$65; bikes, 1, girl's, 24", 6-spd., new, \$125; 1, girl's, 20", \$30; 1, 16", w/trainers, \$15. Ext. 3884.

TENT - 9' x 9', nylon dome, flypoles, stakes, carrying case, 5 yrs. old, orig. \$150, sell \$75. Phil, Ext. 5669.

TREADMILL - motorized w/digital readout, \$50. Janet, Ext. 4049 or 744-8087.

TREADMILL - Weslo Aerobic Stride, digital readout, spd., time, dist., calories, 3-position incline, upper body workout, non-motorized, \$40. Donna, 924-9282.

WINDSURFER - Fanatic Viper, 11' 5", transition board, 2 booms, 3 sails, 7.0, 6.4, 5.6, Dakine speed seat, ask. \$650. Al, Ext. 2575.

Yard & Garage Sales

MIDDLE ISLAND - 11 Wellington Rd., multifamily, 6/12 & 6/13, 9 a.m. - 4 p.m., no early birds.

Lost & Found

BIKE - Cannondale, 12-spd., taken from first floor of Bldg. 510C, missing front wheel, please return. Jim, Ext. 5537.

Free

SAMOYED - 9 yrs. old, AKC, trained, healthy, lovable, blind left eye, moving, must give up. Donna, 924-9282.

Audio, Video & Computers

CAMCORDER - RCA, broken, free; new battery & charger, \$10. Kathy, Ext. 3285 or 474-3532.

