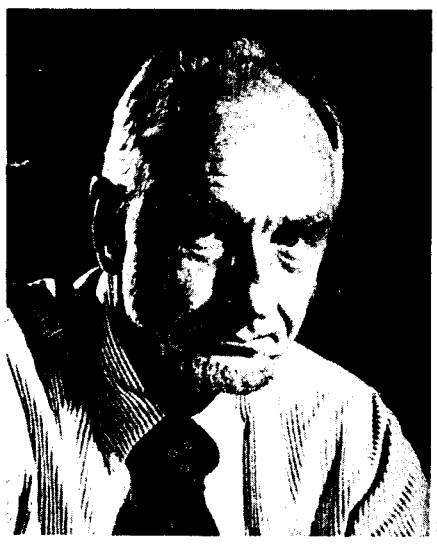
BROOKHAVEN BULLETIN
Vol. 35 - No. 38 October 2, 1981
BROOKHAVEN NATIONAL LABORATORY

Anderson Named Sr. Advisor; Hudis Appointed Asst. Director

After 25 years of administering the scientific staff policy of the Laboratory, R. Christian Anderson will turn over that role on October 19 to Jerome Hudis, chairman of the Chemistry Department. As announced by Lab Director George Vineyard earlier this week, Anderson will become Senior Advisor to the Director, and Hudis has been named Assistant Director for Scientific Staff Policy.

In a letter to Anderson, Dr. Vineyard said that "I want to express my personal gratitude for your service to the Laboratory over so many years in an essential and difficult job which you have handled with wisdom and grace."



Mort Rosen

R. Christian Anderson

A chemist first, Anderson joined the scientific staff of the Chemistry Department in 1948 and spent eight years there in research before entering administration. Reflecting on these years in OSP, Anderson said that "Especially in the formative years of Brookhaven, the Office of Scientific Personnel helped put a collegial stamp on the Laboratory. Appointing staff members as if on a faculty gave form and stability to what was clearly a creative and innovative enterprise. Equally, such a setting proved congenial to the host of academic visitors and students drawn by our special facilities and high quality of research. It has been rewarding to see those visitors grow in number, coming from a larger variety of institutions and from every country in the world."

Anderson's scientific background, coupled with strong artistic and philosophical inclinations, have resulted in a long-standing interest in the public understanding of science, and in the relationship of technology and culture. He now plans to extend his activities in these areas, both in lectures and in articles.

At the request of the Director, Anderson will pursue special projects in public affairs and in ties with the academic community. His interest in education is keen and he has been closely involved in the affairs of the State University of New York at Stony Brook. A member of SUNY's Council since 1974, he was appointed its chairman by Governor Carey in 1976.

Jerome Hudis' new appointment is for a term of three years and he will oversee not only the Office of Scientific Personnel and the Office of University Programs, but will establish a new Office of Research and Technology Assessment.

Under the Stevenson-Wydler Act of 1980, any Federal laboratory with an annual budget of more than $20 million is required to establish such an office. In brief, the office is responsible for assessing the laboratory's programs to identify possible technology that could be used by industry or state or local government; disseminating information about laboratory research programs; and providing technical assistance to state and local government.

Of his predecessor, Hudis says, "I have the highest respect and regard for Andy. In addition to playing a major role in formulating much of the present scientific staff policy, he set a style and tone for the Laboratory which was also very important in its ability to attract the finest staff. I hope that we can continue to build upon this base so ably constructed by him."

In the matter of scientific personnel, he notes that the faculty-like structure is unique. For instance, Brookhaven is the only laboratory which has a policy of tenure for the scientific staff. "This has many advantages," he says, "and it also means that we have to make tough decisions early in a person's career.

Mort Rosen

Jerome Hudis

But, in the long run, I believe we have a stronger staff."

Last year, Hudis was appointed chairman of a committee to examine the salary structure for the scientific staff. He said this committee explored many aspects of scientific personnel policy and intensified his interest in the whole area.

Hudis came to Brookhaven in 1952 and his research was in the fields of high energy nuclear reactions and X-ray photoelectron spectroscopy. He was CERN Visiting Fellow in 1967-68 and spent a year in Washington with ERDA's Division of Physics Research in the mid-70s. He was appointed assistant chairman of the Chemistry Department in 1968, deputy chairman in 1972, and chairman in 1977.

In this week's announcement, Dr. Vineyard also said that Ralph E. Weston, Jr. would be acting chairman of the Chemistry Department until a chairman is selected.

Search Begins For New Director

An Advisory Committee to assist in the search for a new Director of BNL has been appointed by Dr. Robert E. Hughes, President of A.U.I. The BNL Advisory Committee will be chaired by Arthur Schwarzschild. Other members are Ralph Cerbone, Ling Lie Chau, Victor Emery, Gerald Kinne, Derek Lowenstein, Marilyn Miller, Richard Setlow, Michael Tannenbaum, John Walsh, Otto White, Jr., and Alfred Wolf.

The advisory Committee has been asked to recommend qualified candidates and delineate its criteria for selection for further consideration by the president and a Special Committee of the Trustees consisting of Robert E. Hughes (Chairman), W. Donald Cooke, Herman Feshbach, Robert Jahn, Marvin Kuschner, Alfred Mann and Richard Zdanis.

At its organization meeting last Thursday, the BNL Committee decided that it wishes to obtain a broad view of the ideas of the BNL staff on the issues. To this end, it is organizing meetings with members of the scientific and professional staffs of the Laboratory to take place over the next month. In addition, input will be solicited from friends and users of BNL facilities.

Committee members individually will be available for discussion to any BNL employee. Employees wishing to communicate with the Committee more formally are encouraged to do so in writing (to A. Schwarzschild, Building 510A). In unusual circumstances a request for a private discussion with the Committee may be arranged. The Committee requests that in addition to names, a short biographical summary and other supporting material be included with each nomination.

A Fast Fix For Runways

Polymer concrete, a BNL original, has found a place in the national defense program. Under a contract with the U.S. Air Force, researchers in DEE's Process Sciences Division have developed polymer concrete materials for rapid repair of runways.

Larry Kukacka, head of the group, explained that the Air Force has long been looking for materials to patch bomb damaged concrete runways. While airplanes can be kept safe in bomb-proof shelters, runways are tougher to protect, After a bomb attack, crater-scarred runways can put a squadron of planes out of commission for quick retaliatory flights.

Traditional methods of coping with runway damage have been to cover holes with steel plates, which can vibrate and migrate, or fill them in with ordinary concrete, which takes too long to set up and won't even set up under the wrong weather conditions. What was needed was a material that could cap bomb craters up to 75 feet in diameter and strong enough to support heavy aircraft. The runway repair job also had to take less than a few hours from start to finish. And since battles are fought anywhere, anytime, material used for the job had to be workable in all weather conditions, especially wet .

Kukacka's group, originally Toshifumi Sugama, principal investigator, and William Horn, and now including Neal Carciello and Barry Galen, started work on the project in April, 1980. Drawing from their experience with polymer concrete applications for geothermal well cements, the group tested a number of concoctions and developed two new formulations of polymer concrete that pretty much satisfy all the Air Force requirements. One uses furfuryl alcohol, and the other uses polyester-styrene. In all weather conditions, both formulations

(Continued on page 2)

Doug Humphrey

Making a test patch of polymer concrete, Barry Galen pours a bucket of furfuryl alcohol monomer over crushed rock as Neal Carciello mixes a second batch of monomer. Toshifumi Sugama is checking how long it takes for the aggregate to become fully saturated — usually about 30 seconds in 76° F weather. The patch will harden in 30 minutes, and after another 30 minutes, a core sample will be taken out for compression tests.

Charles Dunbar 1904-1981

Charles F. Dunbar died at his home in Bellport on September 29 at the age of 77.

He came to Brookhaven as Resident Legal Counsel in April of 1947, became Secretary of Associated Universities, Inc. in January 1949 and served with distinction during the formative years of the Laboratory. As Resident Legal Counsel, Mr. Dunbar was one of the signers of the first contract between AUI and the U.S. Atomic Energy Commission for the operation of Brookhaven. He retired on December 31, 1969, but remained a Consultant to AUI.

Mr. Dunbar was born in Beverly, Massachusetts, attended Harvard and received his law degree there in 1928. He practiced law in Boston from 1928 to 1947 and was on leave during WW II to work in Washington in the Office of Price Administration.

A gentle, courteous man, he had a quick and ready wit, was scholarly in his approach to the law and, reflective of his background and education, was devoted to public service, service which he performed with dignity, skill and absolute integrity.

Charles Dunbar

He is survived by a son, Charles F. Dunbar, Jr. of Kabul, Afghanistan, three grandchildren, and a brother, William Dunbar, Washington, D.C.

The family requests that in lieu of flowers, contributions can be made to Buckingham, Brown and Nichols School, Gerry's Landing Rd., Cambridge, Mass. 02139.

—R.C. Anderson

Runways (Cont'd)

harden within 30 minutes, with enough strength to support a cargo plane at well over 300 thousand pounds. Kukacka emphasized that both mixtures are compatible with water.

Ordinary polymer concrete is a mixture of dry aggregate in various degrees of coarseness, a liquid chemical called a monomer, and a catalyst-like polymerizer that binds everything together and hardens the mixture. With furfuryl alcohol or polyester-styrene

Doug Humphrey

William Horn doing compression stress tests of a sample of furfuryl alcohol polymer concrete.

as monomers, wet aggregate can be used. For troops in the field doing a repair job, this means they can work in the rain, filling holes that are puddled with water, and even use aggregate that's been stored under a leaky tarpaulin.

Kukacka said the patching process is also very simple — just fill in the hole with aggregate and pour over a mixture of monomer and polymerizer until the aggregate is totally saturated. Although most of their tests were done in a laboratory, the BNL researchers did fill in a couple of four by four-foot square holes out in a parking lot. They even simulated rain with a sprinkler over one test patch.

This winter, the group will go down to Tyndall Air Force Base in Florida, where, assisted by Air Force personnel, they will fill a 20 by 20-foot crater and put loads on it which simulate several hundred passes of first a fighter jet and then a cargo plane. Eventually, the final test will be a timed simulation of the real thing: blow a hole in a runway, patch it and take aircraft over it.

Right now, comparing the two formulations of polymer concrete that can be used for rapid runway repair, Kukacka said the polyester-styrene mixture gives the higher strength and is easier to work with, except below freezing, 32° F, when it gets as thick as molasses. Ideally, the material should work in temperatures ranging from sub-zero arctic cold to scorching desert heat.

The furfuryl alcohol mix works in that wide range. It also has a very long shelf life and is non-flammable. An added bonus is that furfuryl alcohol is not petroleum based; it's made from agricultural waste, mostly corn stalks.

Kukacka said the Air Force will decide between the two formulations after another year of testing. In the meanwhile, the BNL group has another material waiting in the wings — modified magnesium phosphate cement. Kukacka said the material needs more research, but it looks even more promising for this particular application. And oddly enough, it isn't yet another formulation of polymer concrete. It's just a new kind of cementing material for ordinary concrete.

—Mona S. Rowe

Review Course For Engineers

A course designed to prepare engineers to take part A of the Professional Engineering licensing exam will be held on site if sufficient interest is shown. The course is also useful as a review of the fundamentals of a broad range of engineering topics for those not interested in taking the exam. Topics include: math, mathematical modeling, engineering economics, computer programming, statics, dynamics, mechanics of materials, materials science, chemistry, fluid mechanics, thermodynamics and nucleonics.

It will be offered by Suffolk County Community College on Wednesdays, from 5:15 p.m. to 9:15 p.m., starting December 2, for fifteen classes. For more information, contact Renee Flack, Ext. 3316.

BERA Concert Series

The 1981-82 BERA Concert Series is an interesting offering of internationally acclaimed ensembles and soloists. Subsequent issues of the Bulletin will carry program details of each concert. All performances begin at 8:30 p.m. in Berkner Hall.

The Galimir String Quartet
Friday, October 30

The original Galimir String Quartet was founded more than fifty years ago when Felix Galimir and his sisters were students at the Vienna Conservatory. Present members of the quartet in addition to Mr. Galimir include violinist Hiroko Yajima, who appeared at BNL last year with "Music from Marlboro;" violist John Graham, who has appeared as guest artist with the Guarneri and Juilliard Quartets; and cellist Timothy Eddy, winner of the Gaspar Cassado International Violoncello Competition in Florence.

Calliope, A Renaissance Band With Lucy Shelton, Soprano
Tuesday, December 8

Named for the Mother of Orpheus and the Chief of the Muses, Calliope is now in its fifth season. Four members of the group are Lucy Bardo, Lawrence Benz, Allan Dean and Ben Harms. They are adroit performers on viols, recorders, crummhorns, the sackbut and fellow period instruments.

Soprano Lucy Shelton has the distinction of being the only artist to have twice received the prestigious Naumburg Award -as a winner of the 1980 Solo Voice Competition, and as a member of the 1977 award-winning Jubal Trio.

Music From Marlboro
Tuesday, February 16

Music from Marlboro tours are an outgrowth of the Marlboro Music Festival featuring ensembles composed of world famous artists and outstanding younger musicians. This year's program at BNL is particularly attractive in that it presents three exciting pieces which are seldom performed because of the unusual combination of instruments required: Debussy's "En Blanc et Noir" for two pianos, Bartok's Sonata for Two Pianos and Percussion, and Schumann's Andante and Variations in B Flat Major for Two Pianos, Two Cellos and Horn.

American Brass Quintet
Thursday, March 11

America's leading brass virtuosi, the American Brass Quintet is known for the impeccable quality of their ensemble playing in a vast repertoire of works spanning five centuries. In their work, Raymond Mase, John Aley, Ronald Borror, Robert Biddlecome and David Wakefield have achieved a formidable ability to move from style to style with ease and brilliance.

Boris Bloch, Pianist
Thursday, April 1

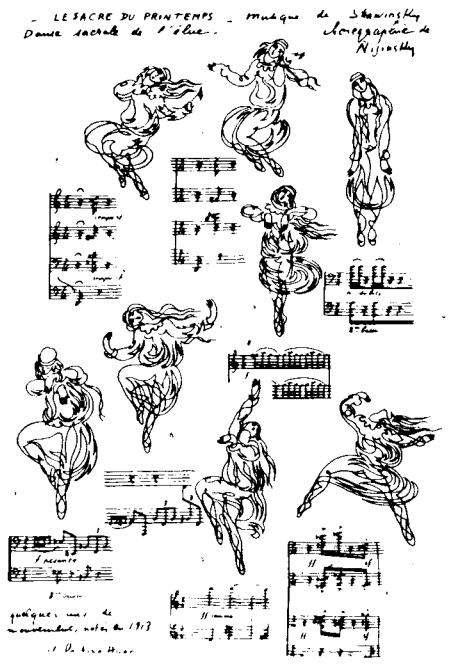
By winning the prestigious Young Concert Artists International Auditions in 1976 in New York and the Grand Prize in the Busoni Competition in Bolzano, Italy, in 1978, Boris Bloch was launched into an international career which has earned him the accolades rarely attained by one so young. He was born in Odessa, U.S.S.R. and completed his studies at the Moscow Tchaikowsky Conservatory with Dmitri Bashkirov. A musician of the highest caliber, Bloch has amazed critics from coast to coast with his performances.

Ticket Prices

Single Admission
Adults - $7
Students & Senior Citizens - $4
Under 18 - $3

Series Subscription

A series subscription to all five concerts is priced at $25, a considerable savings on the price of single admission tickets. Subscription tickets may



be purchased at the door on the night of the first concert, or in advance from the persons listed below.

	Ext.	Bldg.
Arnie Aronson, DNE	2606	130
Clemens Auerbach, DNE	2914	197
Howard Gordon, Physics	3740	510
Geoffrey Hind, Biology	3400	463
Richard Holroyd, Chem.	4329	555
Don Lazarus, Accel.	4643	911
Maria Pavlova, Medical	3634	490
Ed Popenoe, Medical	3622	490
Steve Schwartz, DEE	3100	426
Larry Trueman, Physics	3767	510

Arrivals & Departures

Arrivals

James C. Megna ..... Central Shops
Gary L. McFelia ..... Applied Math.
Jose A. Sanchez ..... Energy & Env.
Thomas Savage ..... Accelerator
Janet Woodward ..... Nuclear Energy

Departures

This list includes all employees who have terminated from the Laboratory, including retirees:

Joseph A. Allinger ..... Accelerator
Patricia J. Anderson .. Energy & Env.
George W. Baer, Jr. ..... S. & E.P.
John G. Bennett ..... Plant Engrg.
Gyandev Bhanot ..... Physics
Robert P. Brown ..... Director's Ofc.
Charles E. Calef ..... Energy & Env.
Vincent J. Costanzo, Jr. .... S. Services
Kenneth Czyscinski .. Nuclear Energy
Jagdish R. Dalal ..... Director's Ofc.
Michael J. Dagg ..... Energy and Env.
George R. Eleazer ..... Staff Services
John Ferrero ..... Central Shops
Laurence D. Fogel .... Nuclear Energy
Pauline M. Gagnon ..... Staff Services
David H. Gurinsky ..... Energy & Env.
Sonja B. Haber ..... Medical
Timothy Haley ..... Accelerator
William H. Horn ..... Energy & Env.
Thomas L. Iarocci ..... Plant Eng.
Itaru Ishii ..... Accelerator
Gary W. Jackson ..... Staff Services
Harold E. Knudsen ..... Accelerator
Lesley C. Lippman ..... Energy & Env.
Linda Matyevich ..... Energy & Env.
George W. Radlhammer .. Accelerator
Matthew J. Rosso ..... Energy & Env.
Masatoshi Sato ..... Physics
Felix Schauer ..... Accelerator
Peter Sherman ..... Energy & Env.
Kent Snyder ..... Personnel
Kathleen A. Tuohy ..... Physics
Harold R. Udseth ..... Chemistry
Robert E. Wirtenson ..... Plant Engrg.
Gail Wyant ..... Nuclear Energy

Lecture Reminder

Dr. Isabella Karle of the Naval Research Laboratory in Washington, D.C., will discuss "Toxins, Ion Carriers and Crystallography" at a seminar sponsored by Women-In-Science, Monday, October 5, at 3:30 p.m. in the Hamilton Seminar Room, Chemistry Department.

The buffet dinner previously announced will be held in Room B, Berkner Hall.

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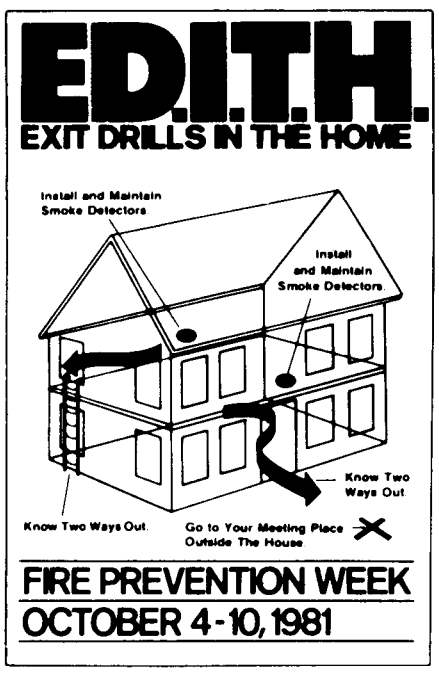
In Case of Fire

There's more to Fire Prevention Week — October 4-10 — than just preventing fires. It's also about preventing fire-related tragedies, and that's where EDITH comes in.

EDITH is an acronym for a family fire escape project, Exit Drills In The Home. If fires cannot be prevented, the best defenses are early warning devices, such as smoke detectors, and knowing how to get everyone out of the house or apartment quickly and safely.

Planning and rehearsing are the key elements. Sit down with the whole family and plan, step-by-step, what everyone should do. Then hold a rehearsal, using the plan basics: household alert signal, alternate exits from bedrooms and house, and assembly point outside, well away from the building.

EDITH can keep travelers company with a simple change to Exit Drills In The Hotel. An unfamiliar place can

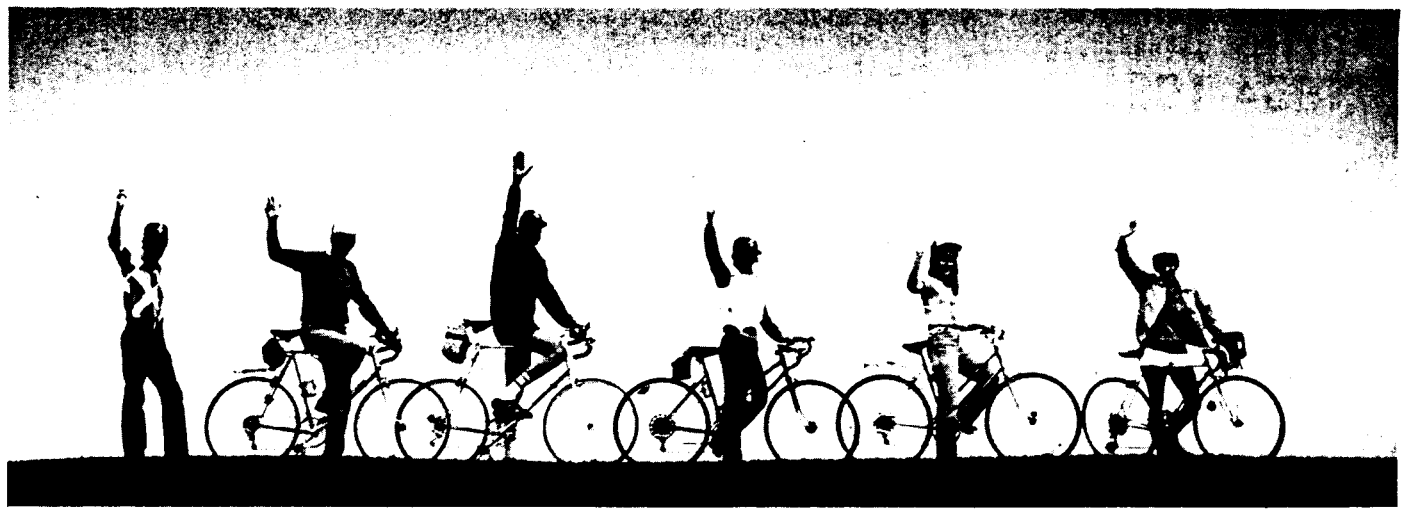


also become a trap if people don't know where to go or what to do when a fire breaks out. A few suggestions are provided here. For more detailed information, the National Safety Council pamphlet, "How to Survive a Hotel Fire," is available in the Travel Office, Bldg. 179.

The brochure suggests that planning an escape route is the first thing to do after getting to the hotel room. First, check the exits. Know how to get off the floor without using an elevator, and make sure the exits are usable. Then, check the room. Keep the key handy and try the windows. There might be an escape route if the ground, a roof, or a deck is within safe dropping distance (usually two floors or less).

If a fire breaks out in another part of the building, first take your key and go to the door. Crawl if there's *any* smoke in the room. Check the door. If it's hot, leave it shut; if not, go into the hall, leave by the nearest safe exit, and *walk* to ground level, or crawl if necessary.

If the door is hot, stay in the room and try to let someone know you're there. To combat smoke, open the window, turn on the bathroom fan, wet towels and sheets to put around cracks. Above all, don't panic.



Doug Humphrey

BNL bicyclist who made the 100-mile trip for the American Heart Association are, from left, Richard Rothe, Frank Fridrich, Al Deneuve, Robin Gianopoulos, Michele Rabitin and Joanne DeLise.

BNL Cyclists Put Their Hearts In It

This past Sunday, Michele Rabitin bicycled 100 miles from Babylon to Montauk.

Rabitin, a secretary in the Accelerator Department, made the trip for a worthy cause. On Sunday, the Suffolk County Heart Association held the American Heart Cyclethon, and most of the 300 bicyclists participating had sponsors who had pledged so much for every mile pedaled. Including Rabitin, seven of the intrepid cyclists (last count by the Bulletin at press time) were BNL employees.

Joanne DeLise, a firefighter in Safety and Environmental Protection, was more than a participant in the ride. DeLise was chairman of the event, a volunteer job she has held since the first Cyclethon two years ago. She attributes the increased turnout this year to pre-race publicity, mostly in the form of notices she posted in bike shops, sporting goods stores and on site.

It was one of those posters that caught the eye of Michele Rabitin, who bicycles 15 miles a night regularly. She had just gotten a new 10-speed bicycle, so the Cyclethon had double appeal for her — a good cause and a chance to stretch out on her new bike.

Don David, a technical associate in the Accelerator Department, rode his trusty old 3-speed $10 yard sale special. He's the only one in the group to go part way, but not because it was tough going on his bike. He pulled out to go to a christening.

Robin Gianopoulos, a technician in the Reactor Division, said there were times she was tempted to cut the ride short. But she was backed by a lot of pledges, so she was determined to make it all the way. Her strategy was to go at a steady pace, which she maintained from 6 a.m. at Babylon to 2 p.m. at Montauk.

Gianopoulos, Don David and Richard Rothe all van pooled to the starting point with Frank Fridrich, a plumber in Plant Engineering. Fridrich paired with Rothe, a technical associate in Physics. Playing hare to Robin Gianopoulos' tortoise, they kept up a fast pace, stopping frequently to eat and sightsee along Montauk Highway. Michele Rabitin caught up with them at one of their stops out east, and the trio completed the ride to Montauk together.

The seventh BNL employee to make the trip was Al Deneuve, a technical associate in Applied Math. A casual biker who sometimes pedals the seven miles from his house to work, Deneuve decided to do the Cyclethon when the weather forecast the night before promised a good day. Like most of the BNL riders, he caught the train back to Babylon, a shuttle pre-arranged for all the cyclists.

Everyone agreed they had a great time, it was a worthy cause, and they would do it again. Fridrich, a hearty soul, said next year he's going to pass up the train ride back and bicycle home.

Islanders Tickets

Tickets for the 1981-82 Islanders regular hockey season will go on sale at the Film Service Office on Wednesday, October 7, at 8 a.m. BERA's 8 seats for 40 home games are located in Sections 319J and 321A. Tickets are priced at $15.00 each.

During the initial sale only, the following buying limitation will be enforced: An employee may buy a maximum of 8 tickets (either 2 tickets each for 4 games or 4 each for 2 games). After the first purchase is completed, the employee may, if he or she so desires, go to the end of the line and await another turn to buy an additional set of tickets as stated above.

As in past years, only those employees who support the BERA Ticket Service Program by purchasing Islanders tickets during the season will be eligible for the Stanley Cup ticket buying drawing, which will take place (hopefully) next spring.

Schedule

October		
Thursday	15	Vancouver
Saturday	17	Rangers
Tuesday	20	Los Angeles
Saturday	24	Washington
Tuesday	27	Edmonton
November		
Tuesday	3	Calgary
Saturday	7	Buffalo
Saturday	14	Edmonton
Saturday	21	Rangers
Tuesday	24	Boston
Thursday	26	St. Louis
December		
Tuesday	15	Quebec
Thursday	17	Washington
Saturday	19	Detroit
Tuesday	22	Winnipeg
Saturday	26	Philadelphia
Tuesday	29	Montreal
January		
Saturday	2	Chicago
Monday	4	Vancouver
Saturday	9	Philadelphia
Thursday	21	Pittsburgh
Saturday	23	Rangers
Tuesday	26	Pittsburgh
Saturday	30	Minnesota
February		
Tuesday	2	Washington
Saturday	6	Detroit
Saturday*	13	Philadelphia
Tuesday	16	Pittsburgh
Saturday	20	Colorado
Tuesday	23	Chicago
Thursday	25	Pittsburgh
Saturday	27	Quebec
March		
Tuesday	2	Calgary
Thursday	4	Toronto
Saturday	6	Rangers
Saturday	20	St. Louis
Tuesday	23	Washington
Thursday	25	Montreal
Saturday	27	Hartford
April		
Saturday*	3	Philadelphia

*Begin at 5:05 p.m.
All other games begin at 8:05 p.m.

Hospitality News

Judith Katsin, BNL's Clinical Psychologist, will be the guest speaker at the Hospitality Committee's morning coffee get-together on Tuesday, October 6, at 9:30 a.m., in the Brookhaven Center. Dr. Katsin will discuss "New Perspectives on Mental Health." A question and answer period will follow.

All wives of Laboratory employees are welcome to join us. Coffee, tea and danish will be served. Babysitting will be provided free of charge. We suggest you bring along a toy or two for your child to play with.

Cafeteria Menu

Week Ending October 9th, 1981

Monday, October 5		
Cream of tomato soup	(cup)	.55
	(bowl)	.65
Beef hash & 1 veg.		1.55
Sauteed chicken breast on rice		1.65
Hot Deli: Grilled Reuben		1.70
Tuesday, October 6		
Split pea soup	(cup)	.55
	(bowl)	.65
Sauerbraten & potato pancake		1.65
Shrimp sukiyaki on rice		1.65
Hot Deli: Veal pattie & pepper hero		1.60
Wednesday, October 7		
Cream of cauliflower	(cup)	.55
	(bowl)	.65
Meatloaf & 1 veg.		1.60
Spaghetti & sausages		1.60
Hot Deli: Sliced turkey breast	(on bread)	1.65
	(on roll)	1.75
Thursday, October 8		
Beef barley soup	(cup)	.55
	(bowl)	.65
Meatcakes & onions w/1 veg.		1.60
Barbecued chicken		1.60
Hot Deli: Roast beef	(on bread)	1.65
	(on roll)	1.75
Friday, October 9		
Clam & celery bisque	(cup)	.60
	(bowl)	.70
Tuna noodle casserole		1.60
Beef chili over rice		1.55
Hot Deli: breaded fish fillet hero		1.65

Bowling

Red & Green League

This Isa Team (3094 pins) won 11-0 over the 76'ers. M. Iarocci with games of 223-220-226 had a 669 scratch 714 gross series. J. Morris (214) grossed 631, R. Barberich 640, M. McKenna 615, D. Schiappa 604, R. Larsen 603. The Sandbaggers took the Freon Loaders 11-0 with 3076 pins. R. Meier (212) grossed 671, C. Bohnenblusch (230) 645, E. Meier 628 and F. Griswold 613. The Phoubars won 8-3 over the Light Source. N. Tyler had a 200 and A. Lorentsen a 601 gross. The Designers (3013 pins) downed the Blue Jays 8-3. J. Ferrante rolled a 228. A. Pinelli (222) grossed 653, L. Jacobson (203) 668, R. Occhiuzzo 623 and H. Arnesen 607. The Sparks split 6-5 with the Pinball Wizards. P. Ouvrard grossed 605 and J. Cochrane 600.

Volleyball

There will be a captains' meeting for all teams at noon in Berkner Hall, Room C, on October 7. Anyone interested in the Players Pool should contact Dennis Weygand, Ext. 3737, for the Open League, or Don Litcher, Ext. 7587, for the Mixed League.

Classified Advertisements

Autos & Auto Supplies

MEYER 7½' - complete for 4x4 Chevy, $375; 4 hp snowmobile, excel, $125. Dick, Ext. 3498 or 589-9103.

74 HONDA - CB360, 3K on rebuilt engine, many extras, excel cond, garaged. $850. Pete, Ext. 4612.

70½ FORD FALCON - std trans, excel mpg, clean int, some body rust, good tires, dependable. Ext. 4475.

71 FORD VAN - low mi. $750. 369-2607 after 6 p.m.

79 VW RABBIT DIESEL - 4 dr, 46 mpg local, rustproof, polyglycoat, am/fm, leaving country. Dave, Ext. 3403 or 3232.

77 DATSUN B210 - hatchback, am/fm stereo cassette, good mpg, excel. $2,850. Jim, Ext. 2957 or 281-4541.

73 CHEVY WAGON - 8 trk, am/fm, good cond. $500. 475-8684.

TIRES - (2) Goodyear steel belted radials 235/75R15 (L78-15) pair value, $150. Sell for $100. Bill, Ext. 4774.

71 CHRYSLER - New Yorker, dark green, vinyl roof, p/s, p/b, p/w, p/seats, good cond, chassis and engine service manual. Jim, Ext. 4040 or 289-0876.

79 EL CAMINO CHEVY - mint cond, extras, orig owner. $4,000. Pat, Ext. 2939.

80 - 750 LTD KAWASAKI MOTORCYCLE - pin striped, mint, 3,300 mi, must sell, $2,350; 78 DODGE VAN - Tradesman Zoo automatic, 6 cyl, roof vent, side custom window, very good cond. $2,900. Joan, Ext. 3304 or 265-4811 after 5 p.m.

CAP - for 8' pickup bed, blue alum. 929-4840.

75 PACER - many new parts, 52,000 mi, best over $1,500. Liz, Ext. 2082.

TIRE - (1) 590/600-15, excel cond. $15. Whitey, Ext. 2913.

80 CHEVY LUV - 4 w/d w/cap, rollbars and many extras, excel cond. $6,500. 698-3030 after 7 p.m.

68 VW BUG - parts car. Ext. 2023.

BATTERIES - auto, industrial, for all makes. Joe Medina, Ext. 7636 or 929-6971.

68 CHEVY PICK UP - ¾ ton, 292 spoke rims, custom bed, front end damage, good for parts. $350. 732-8384.

69 PONTIAC TEMPEST - 4 dr, a/t, p/s, p/b, am/radio, good tires, excel engine and trans, runs well. $350. Ext. 7699 or 821-1435.

77 HONDA - 400 cc, good cond, good mpg. $1,000. 281-2257 after 5 p.m.

79 PONTIAC SUNBIRD - a/c, am/fm, 30,000 mi, 6 cyl, p/s, 2 dr. $4,300. Ext. 7264 or 475-2328.

73 VW BUS - std 5 spd, good mi, good cond in and out. $1,795. 732-3350.

68 FORD MUSTANG - 2 dr, 289 V8, new tires, 2 snow tires, on rims. $1,500. 727-5252.

MG PARTS - 2 cars, 1964 and 1972, drive trains, interior and windscreen. Ext. 7684 or 929-3061.

RIMS - 14" fits Dodges, Plymouths and possibly Fords. Morris, Ext. 4192.

72 DODGE COLT PARTS - wheels, glass, rear end and trans 4 speed. 732-3338.

79 CAMARO - many extras, incl T-bar, roof, low mi, like new. $5,900. 744-7470 eves.

75 VEGA - new battery, brakes, timing belt, am/fm radios, no rot. $1,200. Artie, Ext. 2697 or 325-0743.

HONDA DIRT BIKE - XR80, clean, excel cond, $450; Honda motorcycle CB125, excel cond, 11,000 mi, 85+ mpg, windshield, luggage rack. $450. Jack, Ext. 4411 or 929-8287.

80 CHEVY MONZA - sport coupe, a/t, p/x, p/b, 9,000 mi, showroom cond, warranty. Asking $5,195. Ext. 2926 eves or 744-8063 days.

70 FLH POLICE SPECIAL - '73 eng, new everything, stock and custom seat, saddlebags, lights. $3,000 Dennis, Ext. 3533 or 654-2076.

TIRES - (2) F78x15 w/w tires. $5 ea. Ext. 2351.

78 MOTORCYCLE - GL1000 Gold Wing Honda, 4,000 mi, like new. $2,600. 473-8783.

66 BRONCO ENGINE TRANSFER CASE - and 1973 Vega GT trans, rear, front end, tires. 744-9892 after 6 p.m.

80 KAWASAKI KX125 - dirt bike, excel cond. $850. 477-0264 or 477-2269 after 5:30.

1947 HARLEY DAVIDSON - complete, needs assembly. $4,000. Lee, Ext. 4447.

73 INTERNATIONAL SCOUT - 4 d/w, locking hubs, rod carrier, roof rack, am/fm radio, separate CB. $4,500. 654-0231.

MOTORCYCLE - Honda Hawk, 400cc, almost new, low mi. Asking $1,200. 588-0805 eves.

CUSTOM PARTS - accessories, performance for your vehicle, low prices, name brands. Hans, Ext. 4581 or 281-5563.

1975 VOLVO - 244DL, a/c, p/b, p/s, am/fm, orig owner, new exhaust system. $3,100. Days 348-2748, eves 289-7933.

Boats & Marine Supplies

SURFING BOARDS - fiberglass, length 12'6" $695 complete. Ext. 4666 or 477-1783.

KAYAK FIBERGLASS SLALOM - wood paddle, spray skirt. Dave, Ext. 3403 or 3232.

77 SKI BOAT - 19' Avenger, 150 hp Mercury eng, plus Highlander boat trailer, many extras, excel cond. $5,500. Joan, Ext. 3304 or 265-4811 after 5.

MARINE BATTERIES - screw terminals, carrying handles, 60 amp, $44; 70 amp, $48. J. Medina, Ext. 7636 or 924-6971.

30' COLONIAL - twin 6 cyl Chryslers Sport Fisherman, open cockpit, sleeps 4. Best offer over $2,400. Good buy for the man who likes wood. 475-4728.

18' GARVEY - w/1973 40 hp Johnson w/equipment, good cond, in water. Must sell. Jeff, 286-1348 or John, Ext. 3292.

16' ALUMINUM BOAT - open Fisherman's Special, 40 hp Evinrude, elec start, trailed mfg to fit. $1,100. 924-6751.

Yard Sales

MOVING SALE - Oct. 3, 4 & 5th. Apt. 42 F/K, bikes, household goods, camping equip., etc. Ext. 3232.

HUGE YARD SALE - Oct. 3rd. Raindate Oct. 10. 5 families. Something for everyone. Many new items. 199 Jayne Blvd., Pt. Jeff. Sta. 473-5063.

GARAGE SALE - Oct. 3rd. 20 Harbor Hills Dr., (H.H.) Pt. Jeff. Misc. items, ping pong table, records, odd pieces. 473-2588.

YARD SALE - Sat. Oct. 3rd, 10 a.m. to 5 p.m. Whitespruce Homes, Wading River. Follow signs from Long Pond Rd.

MULTI FAMILY YARD SALE - Oct. 3 & 4th, 10 to 4 p.m., rain or shine, Dead End of Shannon Blvd. in Yaphank.

Free

PUPPIES - 8 male & female, ready to love in 2 weeks. Black w/white spots. John, Ext. 4959 or 732-4068.

Miscellaneous

CAMERA - Nikon FE w/Nikon "F" series 43-86mm lens. Perfect cond. $325. Phil, Ext. 7934 or 728-0273.

DEHUMIDIFIER — Sears 28 pt. excel cond, $60; Gerry Infant backpack, like new. $20. Ralph, Ext. 4171.

RECLINING CHAIR - $25; l/r chair, $10; night table, $10; 3/4 HP pool pump, $50; motorized edger,$50. Ext. 7101 or 289-1003.

HANDCRAFTED IN MEXICO - gifts for every occasion; also clothes; luggage carrier fits any car, $5; tarp, large $7.50; ass'td. fishing suppl, $5. Maria, Ext. 3077 eves.

FURNITURE - dining rm set; recliner; single bed; dinette set; Wurlitzer Electronic piano. 475-8162.

BLANK CASSETTE TAPES - Quality C-90 feO, CrO2 & feCr. $2.75 ea. Ext. 2521 or 928-8379 eves.

INSULATION BLOWER - Clark Model #76, never used, cost new $350. Selling for $100. Ext. 4444.

DINING TABLE - Fruitwood, 5'x40", incl. pads, $50; drapes, beige, beautiful, 3 prs. varying sizes. Cheap. Call for size info. Ext. 4622.

BICYCLES - 20", (2) $20; crib w/mattress, $10; shop vac, $5; leather ball set, $5. Ext. 3790.

FISH TANK - 5 gal. air pump, filter, heater, decorative plants. $45. 286-9389.

BEARCAT - 210 Programmable Scanner, listen to police, fire, weather, ambulance, R.R. Ham radio and more. 924-6348.

CAPTAINS BED - dark pine w/2 drawers & bookcase underneath, good con.d $225; dark pine bedroom set, double bed, double dresser & chest, good cond. $500. Annamarie, 473-9016.

MAGNUS CHORD ORGAN - like new w/10 music books, $35. Perfect for Christmas. 286-1522 eves.

FIREPLACE - beautiful free-standing, white enamel by Preway w/grate, heat shields, 27" pipe w/damper. $120. Doris, Ext. 3488 or 924-7832 after 5 p.m.

ROUND WOOD TABLE - 2 chairs, $50. 878-4259 after 5 p.m.

COLOR TV - 19" Sylvania portable, needs work. $25. Jessie, Ext. 3431 or 744-9677.

UPRIGHT PIANO - 1904, $200. or best offer. 473-8717 after 5 p.m.

FREEZER - $200; file cabinet, $6; tape recorder, $10; baby changing table, $10; highchair, $5. Paul, Ext. 4156.

ANTIQUE BATH TUB - ball & claw, also sink 1920 ERA, tub 4 ft. white; canning jars Mason, $2./doz; antique grind stone, $50. Firm. 732-3338.

CHAIR - stuffed, Mediterranean style, $25; cat carrier, $10; Xmas tree, make offer. Fred, Ext. 3521 or 286-1688.

KEROSENE HEATER - 1 yr. old, small, efficient, good also for cooking. $25. Ext. 7699 or 821-1435.

VANITY - 30" top, sink; sm. med. cab., excel cond; white/gold trim, $100. 736-3573 after 5 p.m.

DACHSHUNDS - adorable smooth hair pups, standard size, red-cocoa color. Ext. 3599 or 941-4011 eves.

SKI EQUIPMENT - Rosemont boots, men's size 12, $15; Kastle 195cm skis, $25; Head 720 skis, 203cm, $20; Solomon 202 bindings, $25; orange carpet w/pads, 12x14, $50. 929-4886 after 5:30 p.m.

BABY FURNITURE - Biltrite carriage, $40; Walnut crib, $60; feeding table, $10; musical lamp, $20. Don, Ext. 7611

A5 CLIPPER - w/blades, $50; boy's snowsuit, 18 mos., never used, was $50., now $25. Maria, 924-3756.

TWIN SIZE - mattress, box spring, bed frame, excel. $80; Sears children's bicycle seat, $7; tricycle, $20; assorted 8 trk tapes, $2. George, Ext. 4460.

STEREO CONSOLE - Sears 8 track tape player & recorder, am/fm radio record changer, excel cond. $200. 981-4419.

TYPEWRITER - Remington Manual/desk type, recently completely overhauled, $35. Ext. 2882/2883 or 472-1636 all day.

WASHING MACHINE - GE, good operation, needs transmission seal. $20. Morris, Ext. 2040.

CASSETTE DECK - Sanyo RD 5372, 3 heads, dual dolby, Sendust heads, metal ready microprocessor control. Used 15 hrs. max. New $500. Sale $250. Azzara, Ext. 4758.

WINDOWS - (5) 24"x37" wood storm & screen windows, complete. $5. ea. Ext. 2351.

STERO - am/fm radio/phono, short wave, Grundig Blond wood. 475-5052.

ODYSSEY II - tapes by Magnavox, used once; Dynasty & pocket Billiards, $10. ea. Lee, Ext. 4447.

WASHER - clothes, GE heavy duty, variable water levels & temp., 2 yr. old, mint cond. $170. Leonard, Ext. 4457.

TYPEWRITER — Olympia std. off. man. SG3-15" car, A-1 cond, $100; Bicycles, 20" boys Itoh MX & std. girls Oxford-MX, A-1 cond. $40. ea. 581-6432 eves.

BIKES - men's & womens, $35. ea; camping equipment, garden chairs, canning jars, more. Ext. 3232.

HIGHCHAIR - adjusts to 3 heights, pedestal base, excel cond. $20. or best offer. S. Spark, Ext. 4111.

MOTORCYCLE HELMETS - (2) McHal N.Y.P.D., visors & ear muffs, like new. Orig. $70. a. Asking $40. ea. 281-6325 after 5 p.m.

TV SERVICE BUSINESS - over $25,000 of inventory & equipment, established customers. 732-6647.

Real Estate

Real Estate advertised for sale or rent is available without regard for the race, color, creed or national origin of the applicant.

For Sale

MILLER PLACE - spacious tri-level ranch w/income apt. House: 2 bdrm, dinette-kitchen, l/r & full bath. Apt: lg. kit., lg. l/r w/picture window, 1 bdrm, full bath, 2 car & storage shed, ¾ acre, scenic view, patios, etc. 744-2536 after 6 p.m.

RIVERHEAD AREA - mobile home 10x50, 1 bdrm, stove, refrig, washer/dryer, tool shed, covered patio. Air cond. Ext. 3138.

RIDGE/LEISURE VILLAGE - Carlton Model, 2 bdrm, 2 bath, garage w/electric opener, luxury carpet, venetian blinds, end unit, 1 yr. old, immed. occupancy. Asking price $62,000. Call 282-7761.

MANORVILLE - 13-¾% adj. mortgage available, 3 bdrm ranch, 1 acre, country kit, 1½ baths, full bsmt, garage, all appliances, w/w, s/s. Pete, Ext. 3868/4574. 878-1225.

ROCKY POINT - 2 bdrm corner house, 1 car det. garage, alum. siding, thermal awning windows, fenced. Middle 30's. Ext. 2460 or 744-9822 after 5:30 p.m.

SHOREHAM - 2 story, 4 bdrm Clarendon Colonial, 2 baths, l/r with f/p, d/r, dinette, kit. & laundry w/2 stall attached garage on .45 acre corner lot. Deeded beach rights. 744-2766.

For Rent

MILLER PLACE - 3 rm apt. w/priv. entr., use of garage & storage, walk to stores & beach, very priv. $325/mo. incl. heat & elec. 744-2536 after 6 p.m.

POCONO'S - Chalet, sleeps 5, tennis, golf nearby, fall special $75/wkend. Bob, Ext. 4551 or 289-2159 eves.

RIDGE - furn. house, 5 min. from Lab, 2 bdrm, l/r, kit., dinette, substantial bsmt & attic. Dishwasher, washer/dryer. $500/mo. incl. all util. Mark, Ext. 2504 or 924-7944.

EAST MORICHES - 4 bdrm Cape Cod, quiet street, near school & lake, full bsmt, priv., secluded yard 0.8 acre. $375/mo. Days, 878-2522 or eves. 878-4983.

NO. PATCHOGUE - share a store 300 wq. ft.,priv. entr. Ideal for service business. $200/mo. +. 475-8456.

BERKSHIRES CHALET - 3 hrs. from NYC: 3 bdrm, 2 baths, fully equipped kit, elect. heat, deck w/spectacular view, near lake, hiking trails, near ski areas, cross-country skiing on property. 929-6946 after 6 p.m.

SHIRLEY - garage avail. Nov. 5 min. from Lab., ideal for storage. $360/yr. short lease negotiable. Ext. 7699 or 821-1435.

Wanted

FREEZER - in working cond. Reasonable. Call Mano, Ext. 4660 or 924-4054.

CLARINET - wooden, for student. Jim, Ext. 3372.

FILE CABINET - 3 or 4 drawer, used. Ext. 2050.

AMBITIOUS PERSON — 4 to 6 hrs./wk. $200-$300/mo. 698-5861 after 7:30 p.m.

BABYSITTER - on site, speaking/understanding French for 2 & 4 yr. old kids. Alice, Ext. 3105.

TIRES - pair H78-14 snow or regular. Paul, Ext. 2447.

HAMSTER CAGE - and/or accessories. Liz, Ext. 2082.

CLEAN FILL - reasonable. AnnMarie, Ext. 3139 or 585-5256 after 6 p.m.

HOMES - for adorable kittens, male/female, any color. 325-1298.

HOUSECLEANING - weekly/biweekly in Bellport. Karen, Ext. 3626 or 286-0428 eves.

MOTORCYCLES - bent or broken, any age or cond. Kevin, 281-8031.

COUPON CLIPPERS/REFUNDERS - 2 experienced refunders want to swap coupons; Bellport area. Cookie, 286-1688.

KING OF HEARTS - of Burger King "21" Game. Negotiable. 689-8605.

TRAVEL AGENT - to work in Bellport, must be knowledgeable. 286-3742 eves.

CORNER CABINET - reasonable. Ray, Ext. 4444 or 732-4885.

HOME - to share, graduate student is seeking quiet home to share with other quiet industrious people. 3 Village area, 286-8350

Car Pools

WADING RIVER - looking for new members or will join other car pool. Near Lilco Power Plant. Al, Ext. 2072.

MEDFORD - Student needs ride to Medford on Friday eves only from BNL. 9/25 to 12/11/81. Ext. 3336.

STONY BROOK - Paying rider needs on-time car pool. Brian, Ext. 3284.

FROM PATCHOGUE VIA BELLPORT - 9 yr. old car pool, on-time, has vacancy for paying rider. Alyce, Ext. 2901.

Lost & Found

LOST - Motorcycle rain suit; bright orange in pouch near Bldg. 911 on 9/23/81. Call Dave, Ext. 2638.

Services

Services are listed as a courtesy to BNL employees. They are neither screened nor recommended by the ***Bulletin.***

CHILD MINDING - responsible mother will care for children in my home, 5 min. from Lab. Weekdays. Nancy, 924-4290.

EXPERIENCED CLEANING LADY - hrs. flexible, Sayville area. Chris, 589-5126 call after 9 a.m.

HOUSE PAINTING - interior/exterior, professional, quality materials, insured. Bob, 289-7657 after 6 p.m.

SMALL APPLIANCE REPAIRS - elec. heaters & motors, typewriters, sew-mach., vacuums. North Patchogue, 654-3900.

CARPETS INSTALLED - repaired. Quick dependable service. Free estimates. Jim, 821-0187 after 5 p.m.

SEWING INSTRUCTION - Beginner, intermediate, advanced. JU 5-8461.

ASPHALT PAVING - and sealing. Bob, 475-4382.

RUBBER STAMPS - plastic laminating, pressure sensitive tapes & labels, desk, nameplate badge engraving. 286-3377 after 6 p.m.

B&B BOAT REPAIRS - all types, 30 yrs. experience. 698-1176 or 289-1516 eves.

LIMO SERVICE - Luxury chauffer driven for Weddings or all occasions. Roy, Ext. 4664 or 744-8779.

FIRESIDE CHIMNEY SWEEPS - all types of flues. Meet us Oct. 11, 1981 Riverhead Country Fair. Specials & prizes. Bill, 584-6425.

RESUME PREPARATION - low cost, professional service. Bill Polvent, 744-8999.

BABYSITTING - responsible mother will sit at my home weekdays Centereach area. 981-4626.

CARPENTRY REPAIRS - and modifications. No job too small. Ext. 4660.

BABYSITTING - male H.S. student, in Bellport area. 286-3742.

AUTOMOTIVE REPAIRS - all makes, body work, welding, tire repair, reasonable rates. 744-9892.

SANDBLASTING - trailers, chassis, boxes, tanks, any kind metal equipment. Reasonable rates. 744-3968.

Classified Ad Policy Deadline is 4:30 p.m. Friday for publication Friday of the next week.