BROOKHAVEN BULLETIN
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BROOKHAVEN NATIONAL LABORATORY

BNL Lecture: The Chernobyl Accident

Almost five months have passed since the accident at the Chernobyl nuclear power plant in the Soviet Union. Since then, experts from around the world have sought to understand and explain the April 26 catastrophe. Late last month, nearly 600 representatives of 62 countries met in Vienna, Austria, for a conference sponsored by the International Atomic Energy Agency (IAEA). There, Soviet delegates described the accident and its consequences.

One of the experts present in Vienna was Herbert Kouts, Chairman of the Department of Nuclear Energy (DNE), who will discuss "The Chernobyl Accident" in the first Brookhaven Lecture of the 1986-87 season, on Wednesday, September 24.

Mort Rosen

Herbert Kouts

In his lecture, Kouts plans to describe, in non-technical terms wherever possible, the Chernobyl reactor and the sequence of events that resulted in the accident. He will also examine the long-term effects that this accident could have on other nuclear power plants worldwide.

In addition to information gathered at the conference and from published materials, Kouts will share data from analyses of fallout, beginning with the first detections in Finland and Sweden, then following the travels of the radioactive cloud. He will give a detailed account of all the events that led to the release of radioactivity and show photographs of the damaged reactor taken by helicopter.

The Chernobyl reactor is one of 14 RBMK-1000 reactors in the Soviet Union. About half of them are now shut down for modifications. Kouts will discuss the various aspects of reactor design, as well as the personnel failures, that allowed the accident to get out of hand.

When he received his Ph.D. in physics from Princeton University in 1952, Kouts had already been on the BNL staff for two years, as head of the Reactor Shielding Group. He later headed the Experimental Reactor Physics Group (1952), the Reactor Physics Division (1956), and the Technical Support Organization (1968).

From 1973 to 1975, Kouts left BNL to serve as director of the Atomic Energy Commission's (AEC) Division of Reactor Safety Research. In 1975, he became director of the Office of Nuclear Regulatory Research for the newly formed Nuclear Regulatory Commission (NRC).

Kouts returned to BNL in 1976 and headed the International Safeguards Project Office until 1978. In 1977, he also assumed his present position, as Chairman of DNE.

Throughout his career, Kouts has served on numerous review boards and committees, including the Atomic Industrial Forum Committee on TMI-2 Recovery, in 1980, and Governor Cuomo's Commission to Review the Shoreham Reactor, in 1983. He has also received several prestigious awards, including the AEC's E.O. Lawrence Award (1963), the AEC's Distinguished Service Award (1975), the NRC's Distinguished Service Award (1976), and the American Nuclear Society (ANS) Nuclear Reactor Safety Division's Tommy Thompson Award (1983). Kouts is a member of the ANS and the National Academy of Engineering.

All those interested in getting together after the lecture are invited to go with the lecturer to a restaurant off site. Anyone who would like to be part of this group should call Les Fishbone, Ext. 5180.

Mort Rosen

In the early 1970s, Kenneth Wilson of Cornell proposed the lattice gauge theory, a mathematical framework for use in high energy physics. The first numerical calculations of the theory were made at BNL, in 1979, by Michael Creutz, Laurence Jacobs and Claudio Rebbi. Their demonstrations of how lattice gauge theory can be applied to quantum chromodynamics widened the field. As the scale of calculations expanded, world interest has produced lattice gauge theorists who gather around ever more powerful computers. All this week, however, many of them left their computers to be among the more than 150 participants at the International Symposium on Lattice Gauge Theory held in Berkner Hall. Shown here, relaxing with Kenneth Wilson (seated, right), after his presentation on the future of lattice gauge computations and the round table talk which followed on Tuesday, are the BNL physicists who organized the symposium: (standing, from left) Michael Creutz; Sidney Kahana; Helmut Satz, who holds a joint appointment with the University of Bielefeld, West Germany; and (seated left) Claudio Rebbi, who has a joint appointment at Boston University. The Symposium was sponsored by NATO.

A Visitor's View

Klaus Schilling, Theoretical Physicist

According to Klaus Schilling of Wuppertal University in West Germany, supercomputers are to quantum chromodynamics as calculus was to quantum electrodynamics — a tool used to explore the interaction of particles.

Quantum electrodynamics was developed in the middle of this century to explain the interaction of atoms and their electrons. In the 1970's, the theory of quantum chromodynamics (QCD) was proposed to describe the interactions of the quarks that constitute protons, neutrons and other particles called hadrons.

Supercomputers are used by theoretical particle physicists like Schilling to test QCD by computing hadron properties. Aspects of quark behavior, such as their confinement, or being permanently bound within hadrons, is simulated by looking at quarks and their fields over a four-dimensional cubic lattice. To formulate and solve the problem, the theory is described on such a lattice. This approach is called lattice gauge theory.

This afternoon, the final session of the 1986 International Symposium on Lattice Gauge Theory, which has been meeting at Berkner Hall since Monday, is being chaired by Klaus Schilling. Schilling will be mediating discussions ranging from the use of the most advanced supercomputers to perform lattice calculations, to the building of specialized computers that would be used exclusively by lattice gauge theorists. "We are working on a complex system that cannot be solved analytically using just calculus," explains Schilling, "but it can be simulated and studied using the computer.

"Fortunately, the idea of simulating quark behavior using lattice formulations and the advent of vector computers to do these simulations came together in time," adds Schilling, whose own area of interest in this field is calculating the masses of hadrons. He spent last August at BNL as a Physics Department guest scientist, joining BNL's Gauge Theory Group headed by Michael Creutz. During his summer visit, Schilling presented a lecture on the impact of supercomputers on theroretical physics and their use to tackle elementary particle and nuclear physics problems.

The original proposal to work out QCD on a lattice came in 1974 from Nobel laureate Kenneth Wilson, of Cornell University, who also attended this symposium. In 1979, BNL's Creutz, Laurence Jacobs and Claudio Rebbi used computer simulations to show that Wilson's idea was workable.

This meeting is the second symposium in the field with large attendance from Europe, Japan and the United States. It is being sponsored by the North American Treaty Organization (NATO) to encourage scientific collaboration on this advanced topic among NATO-member countries.

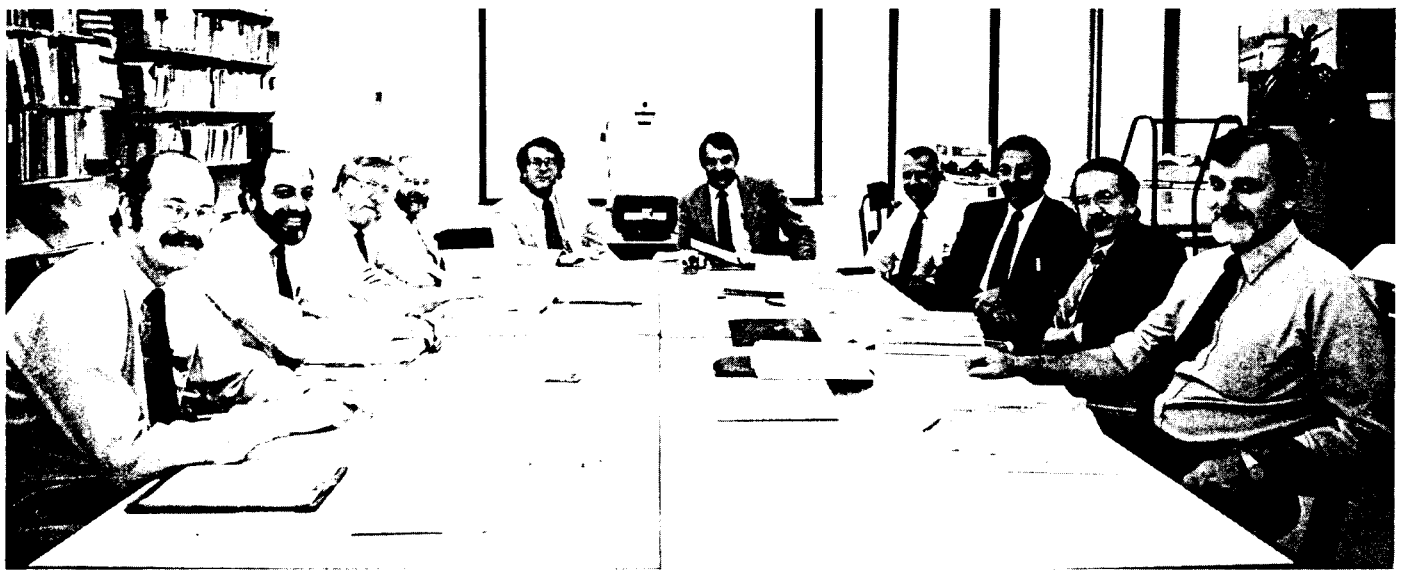
NATO provided the funds for European postdocs, among others, to attend this meeting. "It is important to enable the younger physicists in this field to get to such meetings," insists Schilling. "This field especially depends upon their ingenuity and

Mort Rosen

Klaus Schilling

enthusiasm to exploit and develop the power of supercomputers as tools in their basic science research.

(Continued on page 2)



At the National Synchrotron Light Source (NSLS), the Program Advisory Committee is one source of guidance on such topics as estabishing user policies and developing guidelines for the experimental program. The Committee, which meets several times a year, draws its membership from universities, laboratories and industry, and includes non-users, as well as users of the NSLS. This photo was taken during the Committee's most recent meeting, on Wednesday, September 10: (from left) Robert Siemann, Cornell; Paul Horn, IBM Research Center; Kenneth Kliewer, Argonne National Laboratory; Janos Kirz, State University of New York at Stony Brook, who heads the NSLS Users' Executive Committee; NSLS Deputy Chairman Sam Krinsky; NSLS Chairman Michael Knotek; David Nagel, Naval Research Laboratory; BNL Deputy Director Martin Blume; Richard Messmer, General Electric; and Albert Narath, AT&T Bell Labs.

—photo by Rosen

Visitor (Cont'd)

"Realistic computations are still too difficult for present-day computers," continues Schilling. Computer memory size and computing speed are limiting lattice gauge calculations. On Tuesday, the main topic of a panel discussion with Kenneth Wilson was the future development of computing tools for lattice gauge theory. Wilson holds the view that QCD poses problems that cannot find definite answers for a while.

Schilling, however, holds the view that, despite the limitations of the computer lattice simulations, theorists in the field have proven that their calculations are relevant to the real world. "We are convinced that the limitations are not constraining us in interpreting and applying our results," says Schilling. He and other particle physics theorists are looking forward to their QCD calculations being proven analytically and confirmed experimentally within accelerators that free quarks from their confinement, such as BNL's proposed Relativistic Heavy Ion Collider.

— Marsha Belford

Inside Info

Donna Riendeau, Contracts & Procurement Division (DC&P), has just become a Certified Professional Contracts Manager. This is a certificate awarded by the National Contracts Management Association in recognition of a high level of professionalism in the field. Requirements are to earn a bachelor's degree, have at least two years' experience in contracts, complete eight contract-related courses and pass a six-hour exam. Riendeau has been in D&CP for three years and is currently a Contracts Specialist.

English Course Offered on Site

A course entitled "English as a Second Language" is being offered at the Laboratory to employees, guests and their immediate families. This program is designed for adults who would like instruction in conversational English, as well as in reading and writing the language. There is no charge for the course.

The program will begin on Tuesday, October 7, with an individual consultation with the instructor. Classes will be held on Tuesday evenings, in Bldg. 459. Those interested in attending should call Pat Knisely, Personnel, Ext. 7631, to set up a personal appointment with the instructor for the October 7 evaluation of their training needs.

To Park or Not to Park . . .

There are lots of reasons why some people park their cars in "No Parking" zones at BNL: The parking lot is too far away. It's raining out. It's too hot. It's too cold. Everybody else does it. There's no "No Parking" sign.

Yes, there are lots of reasons, but a look at BNL's traffic regulations shows that none of them are valid. As stated in the Lab's Occupational Health and Safety Guide, parking at the Lab is "permitted in designated parking areas only, and in accordance with all posted instructions."

While the vast majority of employees respect this policy, the few that disregard it can cause a major problem. Explains Roy McWilliams, Safety & Environmental Protection Division (S&EP), " 'No Parking' areas exist to maintain traffic flow in an orderly and safe manner and to permit access for fire and rescue vehicles."

McWilliams is familiar with all the areas that permit or prohibit parking at the Lab because he heads a Traffic Safety Committee appointed in June by S&EP Division Head Charles Meinhold to deal with traffic problems at the Laboratory. In addition to McWilliams, the committee includes Bernard Brennan, Safeguards & Security Division (S&SD); Warren Hulse, Plant Engineering; and Fred Strier, chief of the Fire & Rescue Group in S&EP.

One area that particularly concerned the Committee is the curb directly in front of Berkner Hall, which is clearly marked as a "No Parking" area. Says Harold Justice, chief of the Police Group, "Even though parking at the cafeteria is more than adequate, there's been a lot of illegal parking there. That's a major problem because, in an emergency situation, it could be hard to get emergency vehicles near the building. On a rainy day, they couldn't even go over the grass — the ground would be too soft and they'd just sink."

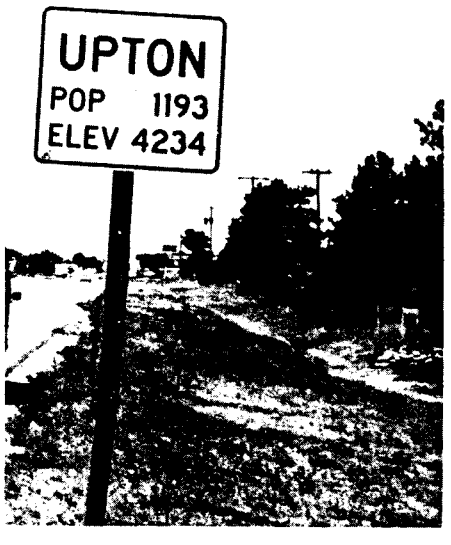
To see that such scenarios never come to pass, BNL patrol officers have stepped up enforcement of the parking regulations in front of Berkner. For about a month now, BNL patrol officers have sought to discourage illegal parking by blocking off the area with red traffic cones. Combined with verbal reminders, and even a few tickets, this effort has been quite successful. And, says S&SD Division Head Edmund Wojcicki, "There's been a fringe benefit. The spots designated for handicapped parking in front of the cafeteria will be more available to people who really need them."

Wojcicki and Justice are hopeful that another fringe benefit will be a carryover of awareness of BNL parking regulations into other traffic safety areas, and that no stricter measures will be needed.

Mort Rosen

Helping to keep the road in front of Berkner Hall free of illegally parked cars are (foreground) Sergeant Larry Musso and (rear) Patrol Officer Christopher DeRubio of the BNL Police Group.

Once Upon an Upton



In July, Peter Soo of the Department of Nuclear Energy thought he had encountered a space-time warp. Two weeks out of Long Island, on a cross-country trip to Yellowstone with his family, he found himself approaching the town of Upton.

"I wondered if I had proven that space curves back on itself," said Soo, "that by driving 2,000 miles due west from Long Island, one could get back to the starting point. But a quick check of the map showed that no scientific breakthrough had occurred. This Upton turned out to be in Wyoming."

With a population of 1,193, Upton, Wyoming is located just west of the Black Hills, at a point where the High Plains meet the Rocky Mountains. Most people in the area are involved in ranching, and in oil and gas exploration.

In addition to Upton, Wyoming, the *Rand McNally Premier World Atlas* (1971) lists six other Uptons — one in Quebec and the others in the U.S., in Kentucky, Maine, Massachusetts, Missouri and Texas. This cannot be considered a definitive listing, however, since it does not include Upton, Long Island, the site of BNL.

Peter Soo snapped this photo as he entered Upton, Wyoming. It's obviously not Upton, Long Island, which has no permanent population, though around 3,500 people can be found here on any given work day. There's also a slight difference in elevation. The average point at Upton, Long Island, is about 80 feet above sea level.

Lab Tests To Be Resumed

Effective Monday, September 22, the Occupational Medicine Clinic will again offer laboratory testing services to full-time and eligible part-time employees. Employees may obtain this service by bringing requests in writing from their personal physician, along with their employee identification card, to Jean Matkovich at the main desk of the Clinical Research Center in Building 490.

To avoid conflict with research activities and to prevent traffic problems at the employee clinic, requests will be processed and results will be available to employees Monday through Friday, from 1 to 4 p.m. at the main desk of the Clinical Research Center.

Employees with questions may contact Jean Matkovich, Ext. 3672, or Dr. Laura Sbarra, Ext. 3665.

—photos by Rosen

At the Exhibit Center, elementary school students (left) shake hands with a skeleton, which is part of an exhibit on osteoporosis, and (right) they start their own chain reaction — with ping pong balls!

Tour Talk

In terms of the number of people who come and go there, one of the Lab's busiest areas has got to be the Exhibit Center in Bldg. 701.

According to Janet Tempel, who heads the Tour Program in Public Relations, some 15,500 people visited the Exhibit Center last year. About 4,500 of those came during the seven Sundays the Lab was open for tours this summer. Another 11,000 visitors came to BNL for group tours, held during the week. These included student groups of all kinds — elementary, junior and senior high schools and college — as well as senior citizens, scouts and special interest groups.

Group tours are offered throughout the year, by appointment only. Each group must provide its own buses or vans for transportation around the site. For more information, call the Tour Office, Ext. 4495.

IBEW Meeting

Local 2230, IBEW will hold its regular monthly meeting on Monday, September 22, at 6 p.m., in the Knights of Columbus Hall, Railroad Avenue, Patchogue. On the agenda will be regular business, committee reports and the president's report.

Equipment Demos

MICROSource CAD/CAM Inc. will be on site next week to demonstrate Computervision Personal Designer and CADKEY, two- and three-dimensional mechanical and drafting systems using personal computers. This will take place in the AMD Seminar Room, Bldg. 515, on Tuesday, September 23, between 9:30 a.m. and 12:30 p.m.

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Equipment from a variety of manufacturers will be demonstrated by Neal Systems Incorporated in the lobby of Berkner Hall on Wednesday, September 24, from 10 a.m. to 3 p.m. Manufacturers represented will include Bell Microsensors, Chessell Corporation, Eurotherm Corporation, Kipp & Zonen, K-Tek, MTL, Robo-Systems, Inc., Ultrakust, Vega and Weamco.

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An image analyzer and microscopes by Riechert, Bausch & Lomb and Unitron will be displayed by August Waeldin, Inc., on Thursday, September 25, from 10 a.m. to 3 p.m. in the Berkner Hall lobby.

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Arrivals & Departures

Arrivals

Theodore C. Carpluk Jr. . . . Plant Eng.
Samuel Mason . . . . . Nuc. Energy

Departures

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

Robert J. LeRoy . . . . . Accel.

CREF Values

August	75.94	September	73.77
October	77.12	November	82.20
December	85.78	January	86.50
February	92.83	March	98.20
April	98.28	May	101.66
June	103.22	July	98.16

August $105.20

Cafeteria Menu

Week of September 22

Monday, September 22

Boston clam chowder	(cup)	.65
	(bowl)	.85
Sautéed beef tips w/noodles		2.45
Shrimp stir-fry over rice		2.65
Hot vegetable plate (lite-weight)		2.20
Hot Delis: Sloppy Joe		2.35
Fishwich		2.35

Tuesday, September 23

Seafood gumbo	(cup)	.65
	(bowl)	.85
Swiss steak jardiniere w/1 veg.		2.45
Seafood croquettes w/1 veg.		2.75
Seafood quiche w/1 veg. (lite-weight)		2.50
Hot Deli: Roast beef	(bread)	2.40
	(roll)	2.55

Wednesday, September 24

Manhattan clam chowder	(cup)	.65
	(bowl)	.85
Spaghetti & clam sauce w/French bread		2.75
Cantonese pineapple pork over rice		2.55
Tortellini salad plate (lite-weight)		2.25
Hot Deli: Italian meatball sandwich		2.45

Thursday, September 25

Shrimp bisque	(cup)	.85
	(bowl)	1.00
Chicken livers and gravy w/1 veg. (lite-weight)		2.55
Baked fish w/ fresh dill and 1 veg.		2.75
Vegetable omelet w/1 veg.		2.45
Hot Deli: BBQ pork	(bread)	2.40
	(roll)	2.55

Friday, September 26

New England clam chowder	(cup)	.65
	(bowl)	.85
Cajun shrimp over rice		2.75
Steamed mussels w/sauce and 1 veg.		2.75
Beef stew over rice		2.55
Hot Deli: Fried clam boat		2.45

BERA News

NY Islanders Pre-Season Tickets

Tickets for the NY Islanders preseason home games are now being sold at the BERA Sales Office in Berkner Hall. Eight tickets for each of four games (schedule below) are being offered to employees at a special reduced cost of two for $32, a savings of $12.

Schedule

Tuesday, September 23	Philadelphia
Thursday, September 25	Rangers
Saturday, September 27	Buffalo
Wednesday, October 1	Boston

Watch the Bulletin for announcement of opening sale date for regular season tickets.

Bowling

Red/Green League

High games were bowled by J. Morris 232, T. Holmquist 226/222/634 scratch, J. Carroll 226, J. Medaris 224/205, E. Sperry IV 221, L. Jacobson 212, R. Jansson 210, R. Adams 208, T. Prach 203, R. Eggert 203, H. Marshall 202, R. Sick 200, M. Kelly 210, K. Riker 209, N. Combatti 202, R. Larsen 201.

Pink League

Karen Vogel rolled a 182, Renie Rosati 180, Maria Apelskog 178, Sandy Asselta 174. Ann Parrinello converted the 2/7/10 and Ellie Adams the 2/10.

Purple League

Lee Barberich bowled a 213, Paul Callegari 211, Al Borrelli 204, Bob Barberich 201, Marge Stoeckel 189/177, Jeannette Thiede 185, Betty Jellett 178, Denise Monteleone 175.

White League

Ed Sperry IV rolled a 209, Bob Jones 207, Rick Murgatroyd 199, Donna Riendeau 179, Sharon Moore 174.

Nursery School

There are still openings for this year's classes at the Upton Nursery School, a cooperative pre-school held on site in the Recreation Building. The non-academic program provides an excellent opportunity for three-and four-year-old children to experience learning in a creative atmosphere under the supervision of certified teachers and helping parents. Children participate in many exciting activities, including art, music and outdoor activities.

Enrollment is open to children who are related to BNL employees. The three-year-old class meets on Monday and Friday mornings. The four-year-old class meets on Monday, Tuesday and Thursday mornings.

For more information and enrollment forms, call Enrollment Chairperson Marietta Veligdan, 924-4704, or President Dottie Alessi, 924-5984.

Swim Club

The Swim Club will begin meeting regularly for the indoor season every Thursday at 5:15 p.m. at the BNL pool. The first meeting is on Thursday, September 25, at which time we will discuss our fall program of coaching, workouts and U.S. Masters swim meets. This year, we will offer the American Red Cross Swim & Stay Fit program for interested swimmers. A short, light workout will be held after the discussion.

The Swim Club is open to all adult BERA members who can complete at least two laps of the pool without stopping using the crawl stroke. Both recreational and competitive swimmers are invited to join the club to improve their strokes and skills — speed is not essential. We offer free, informal coaching and company with whom to workout.

Those who wish to compete can join U.S. Masters Swimming through the BNL Swim Club. Members competing on the BNL swim team practice together Thursday evenings and travel together to the weekend meets in the metro area. The first swim meet of the season is in November at the Flushing, Queens, YMCA.

For more information, contact Marsha Belford, Ext. 5053, or Peter Heotis, Ext. 2304.

Mountain Club

There will be a canoe trip on the Carmans River on Sunday, September 28. The Mountain Club will meet at the bottom of the upper lake at 10 a.m. Bring your lunch. There will be a noontime meeting at Berkner Hall, Room D, on Tuesday, September 23, to discuss this trip and wilderness camping on Fire Island, Saturday and Sunday, October 4 and 5. If you can't make the meeting and want further information, call Don David, Ext. 3042 or 286-2267.

Coming Up

The Dorian Wind Quintet will give the first performance of the 1986-87 BERA Concert Series, at Berkner Hall, on Tuesday, September 30, at 8:30 p.m. The program will consist of works by J.S. Bach, Daruis Milhaud, Gyorgy Ligeti and Anton Dvorak. General admission is $9; students and those over 65, $6; and those under 18, $5. Tickets will be available at the door.

Tennis Champs

Peter Horton

Center court was the setting for this photo of some of the champs of the 1986 BNL Tennis Tournament. The women's singles title was taken by Chris Saitta (left), while Sei Iwai (second from right) was the men's singles champ. Andy Kevey (second from left) was part of two winning efforts, teaming up with Om Singh (not shown) for the men's doubles title and with Mary Lou Abata (not shown) for the mixed doubles championship. Eena-Mai Franz (right) and Saitta formed the top women's doubles team.

Classified Advertisements

Autos & Auto Supplies

83 PLYMOUTH TURISMO - 29k mi., 2.2L/5 spd., sunroof, Shelby GT-Sport, red, stereo/cass., louvers, showroom cond. $4,700 neg. Ralph, Ext. 2368 or 928-6654.

81 PLYMOUTH HORIZON - hatchback, good cond., 70k mi. $1,000. Kathy, 477-2817.

76 CAMARO - 83k mi., V8, 305, am/fm, p/s, p/b, a/t, new cam and lifters, very clean. $1,700. 744-1367.

86 KX80 - excel. cond., Bell Moto-3 helmet, Fox chest protector. $900. for all. Lois, Ext. 4904.

TIRES - (1) 10x15 AT tracker, new, $65; (2) 205/75-R14, all season radials, excel. $25 ea.; (2) snow V.G. $20. each. Tony, Ext. 2462 or 269-9510.

84 HONDA - XR 350R, dirtbike. $1,700; 84 Suzuki RM250 dirtbike. $1,200; 69 Mustang Fastback, good running cond. 878-6074.

TENT TRAILER - Cox, sleeps 6, many extras. $1,650. 325-0582 after 6 p.m.

AUTO PARTS - for Duster & Demon, engine, fenders, drs., hood, glass, etc., low prices. 727-3608 after 5 p.m.

80 CITATION - excel cond., p/b, p/s, a/c, am/fm. $1,100. Lee, Ext. 3702 or 751-1042 after 6 p.m.

TIRE - 14", w/rim, good for spare. $20. Janet, Ext. 2345 or 929-8152.

73 CHEVY SUBURBAN - C-10, 350-4, p/s, p/b, c/c, runs well. $650. Dick, Ext. 3910 or 732-7564.

79 CHEVETTE - 4 dr., hatch, stand., am/fm, excel. running cond., orig. owner. $950 Ext. 2901 or 473-9527.

76 MERCURY BOBCAT - low maintenance cost, 82k mi., great deal, right person. $775. 581-8119.

72 MGB - overdrive, rag and hard top, wire wheels, ripe for restoration, $1,000. 924-6681, evenings.

76 MONZA - fair cond., $500 or best offer. 924-5533, Ext. 202 before 4:00 p.m.

74 CUTLASS SALONE - running excel., new brakes, master cylinder, tires, distributor and alternator, $450. Kim, Ext. 4973 or 3181.

83 OLDS FIRENZA - 4 cyl., front WD, 4 dr., beige, stereo, 4 spkrs., auto antenna, tilt wheel, dig. clock, $4,000 neg. Ext. 2050 or 473-6432.

RIMS - 13", 4 lugs; 14", 5 lugs; 16", 5 lugs. Ext. 2950.

78 YAMAHA - XS400, 14k mi., best offer. 473-9223 after 5 p.m.

71 DODGE DART - 2 dr., 160k mi., $300. Al, Ext. 4623 or 751-2733, eves.

79 CADILLAC COUPE - dark blue, all power, spoke wheels, excel. cond., asking $4,000. Frank, 732-7625.

84 COUGAR - V6, p/s, p/b, a/c, am/fm cass., excel. cond., must sell, $7,500. Chris, 737-6697 after 6 p.m.

74 CADILLAC - Fleetwood Brougham, fully loaded, 4 dr., sedan, 79k mi., elegant, solid, $2,195. Herb, Ext. 2011 or 929-4446.

84 FORD BRONCO II - am/fm cass., 5 spd., overdrive, a/c, 33k mi., excel. cond., $9,000. Tony, Ext. 3194.

AUTO PARTS - for Duster & Demon, engine, fenders, drs., hood, glass, etc., low prices. 727-3608 after 5 p.m.

83 BMW 528E - 50k mi., loaded, excel. cond., 6 cyl., 25 mpg. Al, Ext. 4397.

78 DODGE MONACO - 2 dr., 8 cyl., 95k mi., good cond., $1,000 or best offer. 924-8722.

66 FORD MUSTANG - not running, $500. 399-0942.

85 FORD ESCORT - 4 spd., 2 dr., am/fm cass., 36k mi., excel. cond., $4,600. Jeff, 575-5554 or 584-7970.

76 MUSTANG - 2 dr. sedan, still runs, needs work, (718) 847-1079 after 6 p.m.

54 PONTIAC - 4 dr., sedan, flat head, 8 cyl., runs well, $1,954. Ext. 5294.

83 SKYHAWK - p/s, p/b, p/w, a/c, cruise., sunroof, 63k mi., $4,000 firm. 732-5537.

78 TOYOTA COROLLA - good cond., new exhaust and tires, $1,250. Donna, Ext. 2754.

80 DATSUN 210SL - 5 spd., a/c, 69k mi., 40 mpg, excel. cond., $2,500 neg. 589-7496.

73 CHEVY SUBURBAN - C-10, 350-4, a/t, p/s, p/b, cruise, runs well, $650. Dick, Ext. 3910 or 732-7564.

80 CAMARO - 305, 4 bbl., auto., new B.F. Goodrich TA's, 68k mi., mint int., must sell, $4,700 neg. Charlie, 929-4046 after 6 p.m.

79 JEEP CHEROKEE - good cond., a/c, auto., p/s, p/b, trailer package, $3,700. 475-4792 after 5 p.m.

69 MUSTANG FASTBACK - good running cond.; 84 Honda XR350R dirtbike, excel. cond., $1,700; 84 Suzuki, RM250 dirtbike, excel. cond. 878-6074.

79 MONZA - wagon, 44k mi., excel. cond., 6 cyl., new tires, brakes, muffler, good mileage, $1,500. 289-0034.

75 OLDS CUTLASS SUPREME - mech. excel., body needs minor repairs, $1,500. Bud, Ext. 3083 or 878-1915, eves.

78 FAIRMONT - 2 dr., 4 cyl., 4 spd., p/s, am/fm cass., mag wheels, 38k mi., recond. eng., excel. cond., $1,200. John, Ext. 2380 or 929-8142.

72 CORVETTE - 4 spd., 350 eng., completely restored, emerald green, excel. cond., $6,800. Ext. 7686 or 878-0897.

76 DODGE COLT - station wagon, for parts, auto., five reasonable tires, towable, $75. 929-4446.

76 DATSUN 710 - $385, Chong-Sa, Ext. 3748 or 3030, eves.

74 CAMARO - 350, p/s, p/b, auto., G60's, am/fm cass., headers, new carb., distributor, heads, and timing chain, rust, hi mi., runs, $550. 736-1706.

78 PLYMOUTH HORIZON - 4 dr., 4 spd., rebuilt eng., good tires, $1,100. Ext. 4597 or 924-8213 after 5 p.m.

71 CHEVY NOVA - 6 cyl., 3 spd., manual trans., new battery and tune-up, reliable, asking $325. Glenn, 281-7873.

80 CITATION - 2 dr., hatchback, well maintained, stereo cass., new tires, low mi., very good cond., $1,500. 698-7040.

79 CHEVY C-10 - black, pickup, roll bar, short bed, $3,800. 298-5515 after 6 p.m.

80 OLDS TORONADO - red, V8, diesel, all power, orig. owner, clean, $4,000. Ext. 3794.

69 FORD MUSTANG - good running cond. Cesar, 281-9150 after 6 p.m.

85 MITSUBISHI MIRAGE - turbo, 5 spd., am/fm cass., red, extended warranty, extras, like new. $6,500. 286-3679.

82 PLYMOUTH CHAMP - 48k mi., excel. in & out, $2,950 or 363-7032.

78 FORD E-150 - van, many extras, $2,400 neg., Bill Sanchez, Ext. 3848 or 281-6498.

73 VEGA - steel sleeve eng., good tires, parts for sale. 472-0760.

56 FORD - Crown Victoria, blk/wht, estate settlement, must sell, $4,000. Don, Ext. 3077.

77 PINTO - wagon, 4 cyl., 4 spd., am/fm, $300. Dave, Ext. 4428.

78 CHEVY MONZA - excel. cond., 4 spd., p/b, p/s, am/fm cass., $1,200 neg. Kevin, Ext. 4409 or 361-7821.

84 GMC - 4 WD, 29k mi., all options, auto., p/s, p/b, p/w, tilt, cruise, 2 tanks, more, $11,000. Ext. 5318.

70 MUSTANG - V8, 302, a/t, p/s, p/b, excel. cond. Ext. 3421 or 727-8631.

83 PLYMOUTH RELIANT - clean, very good cond., 2.2 eng., 33 mpg; 65 Jeep pickup, 350 ci Chevy eng. Bob Kiss, Ext. 4428 or 467-4222.

83 TOYOTA TERCEL - 2 dr., 4 spd., 55k mi., new tires, brakes, $3,200. Jay, Ext. 4994 or 751-0538.

82 HONDA CIVIC - 4 dr., orig. owner, like new, new tires, exhaust, stereo, Ext. 2384 or 878-0074.

84 MONTE CARLO CL - loaded, full power, extras, $5,500. Paul, 698-6895, days.

81 PONTIAC PHOENIX - hatchback, am/fm, new tires, very good value, $1,650. Christoph, Ext. 4360.

81 BUICK SKYLARK - blue, 4 dr., fully equipped, 56k mi., excel. cond. throughout. Paul, Ext. 2476.

MOTORCYCLE FAIRING - black/clear, square hdlmp, signals, mounting hdwre., excel. cond., $125. Ext. 5110.

76 CHEVETTE - 40k orig. miles, must sell grandma's car, well maintained. $600. 924-3547.

75 FORD FAIRMONT - station wagon, 6 cyl., p/s, p/b, a/c, am/fm stereo cass., roof rack, $1,600. 924-7035.

82 OLD CUTLASS SIERRA - Brougham, 60k mi., mint., $6,700. 744-2275 after 6 p.m.

Boats & Marine Supplies

14' STARCRAFT - alum. boat, $700. Ext. 4312.

14' BLUEJAY - sailboat, 3 sails, newly refinished wood, and trailer, $750. Ext. 4329 or 751-6820.

17' TRI-HULL - fiberglass, 1983, Dilly trailer, excel. running cond., 331-4427 after 5 p.m.

22' SEARAY - '77, cuddy, 198 Merc I/O, VHF, dual batteries, depth finder, many other options, excel. cond., $7,500. 286-1358.

18' RENKEN BOWRIDER - 1983, 120 h.p.; I/O, full cover, excel. cond., $6,500. Ady, Ext. 4531 or 331-3785.

14' ALUM. BOAT - w/trailer and 10 h.p. Johnson, excel., $800. Bud, Ext. 3083 or 878-1915.

28'10" MAST - alum., sailboat, $65.; 250# Scheel type keel, $55.; 8' glass digny, $85. 758-9818.

19' RENKEN BOWRIDER - 120 h.p. Volvo I/O, (150 hours), full canvas, trailer. Ron, Ext. 7533 or 286-0353.

AMF DEVILFISH - no sail, $125. 722-4644.

16' TELEFLEX CABLE - used 1 season, $50; Back to back seats, $40. Ext. 5235 or 654-3989 after 6.

Miscellaneous

MOVING SALE - 13" color TV, like new, $120; phone, $20; center table, corner tables, lamp. Ext. 5161 or 736-1864.

STOVE - new 30" white, $200. Cris, 475-8456 after 6 p.m.

GATE LEG TABLE - 46"x72", 2 10" leafs; Farberware convection turbo; coal stove, Surdiac Southport; wood door, weatherstrip w/weatherstrip jams, 1¾"x36x6'8". 475-0509.

TURNTABLE - MCS6400, direct drive, quartz, locked, semi-auto w/cartridge, new in box, $100. Ext. 3499.

VICTORIAN DESK - small, w/Rosewood carving, $295; Small pine secretary, $60; old area rugs, $25/ea. 475-4199.

MOVING SALE - sofa bed, dining table w/6 chairs, desk, coffee table, stereo cabinet, Tiffany crystal lamps. 938-3051.

WINDOW - double hung, fits 37½x40½ opening, w/storm and screen, good cond., $10. Dick, Ext. 2911.

CRIB MATTRESS - innerspring, used twice, $25. Doris, Ext. 3427.

AUDIO POWER AMP - QSC, 125 watts per channel, rack mount, black, quiet fan, excel. $225; exercise bike, like new, 40 miles on odometer, $50 or best offer. Ext. 5110.

ELECTRIC GUITAR - Aria Pro II, new cond., w/strap, hard case, whammy, fine tune, $160. Dave, 821-0250.

MOVING SALE - grey velour sleeper couch, dressers, car seats, dehumidifier, large freezer, beds & more. Ext. 3525 or 491-0753.

SPEAKER CABINET REFLEX - w/new 15" JBL 300 watt speaker. $250; microwave oven, Panasonic. $100; GE elec. stove, 22", gold, used. $75. Cris, 475-8456 after 6 p.m.

VIDEO CAMERA - Panasonic, power supply, new. $1,500 or best offer; baby seat, car/indoor. $10. Ext. 3067.

COUCH - love seat, earth-tone tweed, $250; oriental design wool rug 9'x12', $75; antique china cabinet w/glass front, $350. 751-8240.

TYPEWRITER - Royal, manual, heavy duty, good cond., $10. Jag, Ext. 5080.

SCREEN HOUSE - 12'x12', Sears, used 2 seasons, $40. Ext. 4312.

WEDDING BAND - gold filigree, woman's size 6, $75. Ext. 2837 or 369-2922.

CAR SEAT COVER - grey stretch, for buckets 2/$20; Oster juicer, $15. Ext. 3701 or 751-8128, eves.

WEIGHT BENCH - Gympac 2500, complete, brand new, $175. 331-4427 after 5 p.m.

RUGS - (1) gold, approx. 10'x12', $40; other blue shag, approx. 10'x10', $20. Eric, Ext. 3856.

BIKE - 20" girl's Columbia, garaged, great condition, $40. 286-0259.

COMMODORE COMPUTER - monitor, drive, Okidata 93 printer, desk, numerous programs, like new, $1,750. Ext. 3392 or 475-8330.

SIAMESE KITTENS - CFA show quality, good temperament. Ramona, 928-3088.

REFRIGERATOR - Hot Point, good cond., price neg. Ext. 5097.

FREEZER - Whirlpool, up-right, 19 cu. ft., moving, orig. price $600, now $495. 728-6353.

BREAKFRONT - 5', walnut contemporary, 4 glass panels, 2 moveable, 2 doors, 3 drawers, etc., $200. Ext. 2529.

BABY DISH/WARMER - 3 sections, baby tub, car seat, walker, play pen, all good. 744-9677.

VACUUM CLEANER - Hoover, almost new. Ext. 3136.

TOASTER OVEN/BROILER - Proctor Silex, $15; laundry box, $3. Dov, Ext. 4552, Ext. 3105, home.

SANSUI STEREO - rack system w/extras, excel. $350. Mark, Ext. 5350.

QUARTZ HEATERS - 2 Boekamp, twin quartz elements w/safeguards, heats people not air, thermostat controls, $25/ea or 2/$45. Al, 273-5574.

VACUUM - Sears Powermate, works fine, all attachments included, needs new hose, $20. Linda, 744-0722.

BABY CARRIAGE - plaid, good cond., $20. 281-0360 after 6 p.m.

RADIAL ARM SAW - Sears, 10", roll-around stand, 5-saw blades, accessories. 363-6037.

LABRADOR PUPPY - field champion background, $300. 878-2577.

DISNEY WORLD TICKETS - 1 day, 2 children, 2 adults, club price, $80, asking $50. Jim, Ext. 4758.

RADIAL ARM SAW - Sears, 10" w/cabinet. $200. 722-4489, eves.

HIGH CHAIR - Bilt-rite, $15; girl's clothes, 2-3 years, very cheap. 924-0582.

METRONOME - elec., Seth-Thom, $35; wicker etagere, white, $60; 90" sofa, floral pattern, $55; table w/2 leaves, $25. Sal, Ext. 2460.

CURTAINS - floor to ceiling length, very good cond., $20. Morris, Ext. 4192.

JAWA MOPED - class C, 50cc, no helmet, license or ins. required, $325. 924-7658.

MATTRESS - queen size, new, never used, $60. 928-5684, eves.

SANYO KEROSENE HEATER - used one season; home water distiller, new, $175; matching sleep sofa and love seat, excel. cond., $175. 363-7032.

RIDER MOWER - Mustang 8 h.p., very good cond., tuned up, $250 firm. Sanchez, Ext. 3848 or 281-6498.

RECORD PLAYER, $10; car speakers, $15; metal bed frame, $7. Joe, Ext. 2898.

CAR STEREO - radio/cass., Nippon, new, warranty, list price $100, only $15. Ext. 2676.

CAMERA LENS - Kiron, 28-210 zoom lens, Pentax mount, like new condition, $125. Ext. 4153 or 732-5829.

BIRD - Lutino Indian Ringneck, hand tame, 5 mos. old, must see, includes cage and accessories, $450. Paul, 698-6985, days.

3M DISKETTES - ds/dd, 5¼", new, $10/10; portable typewriter, $25. Jim, Ext. 3372.

DINING ROOM TABLE - round, 2 leaves, 6 chairs, Drexel Italian Provincial, pecan, $400. 286-1213 after 6 p.m.

GOLD CLUBS - 9 irons, 1 wood, bag and cart, $40; girl's dressing table, skirt, $10. 9' garage door, new, $50. 878-6637.

TABLE - 4 chairs, $10; Sofabed, $10; picnic table, benches, $40; dining room table, 4 chairs, 3 leaves, $50; twin mattress, $5. Ext. 4420.

HEDGE TRIMMER - Sears, long cord, $40; baby coach carriage and mattress, $25. Ext. 2529.

GE REFRIGERATOR - 25 cu. ft., auto dispensor ice cube & water, excel. cond., 2 side doors, $650. Ext. 2683 or 751-2469, eves.

TWO MEN'S SUITS - never worn, Italian and French made, beautiful tan and gray, 42 long. 286-8185, after 5:30 p.m.

Yard Sales

MULTI-FAMILY - Sat., Sept. 20., 10-4 p.m., Shannon Blvd., Yaphank. For more information, call Ext. 4597.

CENTER MORICHES - corner Main St. & Railroad Ave., Sept. 20, 10 a.m.-4 p.m., raindate, Sept. 27.

PATCHOGUE - 57 Lakeland Ave., Sat. 20, windows, furniture, many goodies, 8-4:30. Call for directions 475-6622.

Free

KITTEN - gray and white, 5 mos. old, relocating, litterbox trained, this cutie needs new home. 286-4145.

HORSE MANURE - for garden, bring your own container. 727-5194.

CONVERTIBLE LOVE SEAT - converts to single bed. Roger, Ext. 4677 or 878-8847.

Car Pool

BRIDGEHAMPTON - Southampton, Sag Harbor area, looking to join or form car pool. Ext. 2642.

Real Estate

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

For Rent

HILTON HEAD, SC - 2 bdrm. condo, sleeps 6, many extras, beach, pool, tennis, golf, fall special, Lab employees & families only. $300/wk. 585-9149.

SOUTHAMPTON - 3 rm. new apt., off Noyac Rd., furn. or unfurn., avail. Oct. 1, $550 incl. util. 744-3315 after 6 p.m.

CATSKILLS - 3 bdrm. chalet w/sleeping loft, fully furn., rent for fall foliage or deer hunting. Judy or Kay, Ext. 3595, or Bea, Ext. 3642.

PORT JEFFERSON - spacious 1 bdrm. apt. in quiet refined area, furn or unfurn., $550. 473-8470.

SHIRLEY - 1 mi. from Smith Point, 8 mi. to BNL, immaculate, 3 bdrm. ranch, l/t, d/r, eik, util. rm., w/w appl., fenced in yard, quiet st., $750 + util. 744-5448 after 5 p.m.

MORICHES - room in home by water, $315/mo + util. 1 mo. security, available Oct. 1, non-smoker prefered, not essential. 874-3729, eves.

NORTHPORT AREA - 3 room apt., b/r, l/r, kit., avail. Oct. 1. 261-2454.

HOLBROOK - newly decorated, spacious 4 bdrm. home, dining area, country kit. and dishwasher, new stove, gas hot water heater & windows, 1½ baths, enclosed sun room, closets galore. $900 + util., by Oct. 1. Ext. 2529.

MASTIC BEACH - 1 bdrm. apt, l/r-kit. combo, refrig., gas stove; priv. ent., 1 working person, near shopping & bay, 1 mo. security. $465 mo. util. inc. 281-4940 after 5 p.m.

WADING RIVER - fully equipped house, share, & cat sit, off season, non-smoker, $250/mo. + ½ utilities, security. 929-8443.

MEDFORD - Blue Ridge Condo, 1-2 bdrm. Adam's Ranch, a/c, carpeting, washer/dryer, golf, pool, tennis, $700 mo. + util. 589-3545 or 588-2389.

STONY BROOK - 4 bdrm., 2 bath house in nice neighborhood, 2 car garage, all appliances, $1,050 mo. + util. Ext. 4719 or 751-8240 eves.

For Sale

SHOREHAM NORTH - 4 bdrm., Colonial, 2½ baths, den, f/p, bsmt., fenced, patio, formal dining rm. 744-1750.

ROCKY POINT - 3 bdrm. ranch, l/r w/fp, fam. rm., full bsmt., deck, town water, treed, parklike, lg. play area, $144,000 neg. 282-2017 or 744-7708.

PORT JEFF. STATION - Sagamore Hills condo, 2 bdrm. townhouse, 1½ bath, mint cond., prime loc., for sale by owner, $120,000. 331-1638.

MASTIC - 3 bdrm., eik, d/r, l/r, w/w, appli., city water, furn. bsmt., fenced yd., extras. 281-1294 eves.

COOPERSTOWN, VIC. - 190 acres, half wooded, halp in crops, adjoins state forest, $425 per, terms. 363-7032.

RIDGE - 1.12 acre parcel, 103' frontage x 487' depth, ideally located, 60% cleared level, 40% wooded, $49,900. 924-3236.

SELDEN - 8 rm L-shape ranch, ¼ acre, c/a/c, prof. landscaped, low taxes, $121,990. Ext. 5061 or 698-0691, eves.

SOUTHAMPTON - executive area, 1 acre plots, heavily wooded, belgian block curbing. 929-8662 or 473-7460 after 7 p.m.

MILLER PLACE - no. of 25A, 4-5 bdrm., l/r w/fp, cn. kit., full bsmt, hard wood floors, gar., treed ½ acre, poss. m/d, $145,000. Ext. 2529 or 473-7902, eves.

STONY BROOK - 3 bdrm. ranch, l/r, d/r, 2 full bath, cul-de-sac, just painted, ½ acre, c/a/c, family rm., laundry rm., more, $161,000. Ext. 2683 or 751-2469, eves/wknd.

Wanted

TRAINS - Lionel, American Flyer, accessories, any cond., brings good price. Carole, Ext. 3362 or 924-4097 eves.

LAWNMOWER - utility trailer, in good cond., reasonable. Walt, Ext. 2907 or 698-0576 after 6 p.m.

14" RIM - for GM car, must be usable on disc or drum, person who called, please call again. Morris, Ext. 4192.

RENTAL - bright, airy, clean room or apartment, near lab, prefer unfurnished. Ext. 7657.

CRIB - wooden, excel. cond., certified. Doris, Ext. 3427.

8-TRACK CASSETTE - prerecorded, cheap for old car stereo. Ext. 2341 or 821-2716.

ELECTRIC TRAIN - equipment, O-guage. Ted Ginsberg, Ext. 2620 or 751-6765.

HAND TRUCK - carry down stairs. John, Ext. 4243 or 924-3492.

PEOPLE - who would like to go shopping in Reading, PA, Nov. 8, $22/person. Clem Auguste, Ext. 7527 for details.

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