the Bulletin

BROOKHAVEN NATIONAL LABORATORY

Vol. 57 - No. 17 May 16, 2003

BNL Scientists Win 2003 Arthur H. Compton Award

Roger Stoutenburgh D2530403

Seen outside the National Synchrotron Light Source are Arthur H. Compton Award winners Doon Gibbs (left) and Martin Blume. Not present is Denis McWhan.

Three scientists associated with BNL — Martin Blume, Doon Gibbs, and Denis McWhan — with Kazumichi Namikawa of Gakugei University in Tokyo, Japan, have won the 2003 Advanced Photon Source Arthur H. Compton Award. The award recognizes important technical or scientific accomplishments that are beneficial to the Advanced Photon Source, a synchrotron light source at Argonne National Laboratory where researchers use high-brilliance x-ray beams to probe materials.

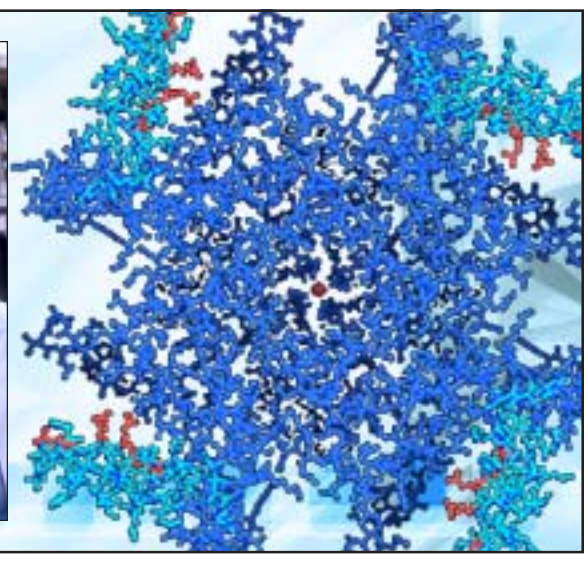
The researchers received the award, which consists of a plaque and a monetary prize, at the twelfth annual users meeting for the Advanced Photon Source, on April 30. Blume delivered the Compton Lecture on the cited work on behalf of all the recipients.

The award citation recognizes the recipients "for pioneering theoretical and experimental work in resonant magnetic x-ray scattering, which has led to important application in condensed matter physics."

Every major synchrotron in the world, including BNL's National Synchrotron Light Source (NSLS), currently uses resonant magnetic x-ray scattering. Said Gibbs, "The technique has proven to be a viable alternative to neutrons for the study of magnetic structure in certain materials, such as rare earths and actinides. More broadly, the strengths of x-ray magnetic scattering complement those of neutron magnetic scattering, and open new possibilities for research." *(continued on page 2)*

Mystery of Nerve, Muscle Activity Revealed

Roderick MacKinnon



Based on research carried out at The Rockefeller University, the National Synchrotron Light Source (NSLS) at BNL, and the Cornell High Energy Synchrotron Source at Cornell University, scientists have produced the first picture of a voltage-dependent potassium ion channel, a component of all nerve and muscle cells. Featured on the cover of the May 1, 2003 issue of *Nature*, the structure answers the question of how this kind of channel functions as a voltage-dependent switch, driving muscle and nerve activity in all living organisms.

Scientists have been trying to analyze these channels for 50 years. But until now, all descriptions have been partial and indirect, failing to convey the channels' true character.

Now, Roderick MacKinnon and lead author of the *Nature* article Youxing Jiang, both of The Rockefeller University and of the Howard Hughes Medical Institute (HHMI), and their colleagues have revealed a masterpiece of nature's engineering — a potassium channel with charge-triggered "paddles" responsible for opening and closing a passage for potassium ions to move through freely. The May 1 findings not only portray an elusive ion channel structurally and mechanistically — the fifth such portrayal by MacKinnon's group in as many years — but also demonstrate the natural molecular mechanism by which electrical signals propagate along nerve cells. *(continued on page 2)*

Trapping Hydrogen Molecules in Ice

Authors Ho-kwang Mao (holding the diamond anvil cell), Carnegie Institution of Washington, and Wendy Mao, University of Chicago, standing beside the cryostat used in the experiments conducted at NSLS beam line X17-B.

Until recently, scientists thought that molecular hydrogen was too small to be contained in clathrate hydrates — solids made of a crystalline lattice of water molecules enclosing molecules of another substance, usually a noble gas.

Using x-rays produced at beam line X17-B of the National Synchrotron Light Source, scientists from the University of Chicago and the Carnegie Institution of Washington and their colleagues reported in *Science,* 27 September, 2002, the formation of hydrogen clathrate hydrates — in which hydrogen molecules are completely enclosed in a lattice of water molecules. The scientists have shown that, unlike most clathrate hydrates, where only one molecule of a gas can be trapped inside the clathrate cage, many hydrogen molecules can be trapped in two types of cages within the clathrate compound. Two hydrogen molecules are enclosed in the small cages and four in the large cages, as shown in the figures (see page 2).

This material may have implications for research in hydrogen fuel storage. Confining hydrogen molecular clusters in cages also provides a new means for studying novel interactions and quantum effects, such as the superfluidity of hydrogen molecular clusters, in which the hydrogen atoms flow without viscosity.

The work was funded by the National Science Foundation's Earth Science Division; the National Aeronautics & Space Administration's *(continued on page 2)*

RapiData Crystallography Course

Roger Stoutenburgh D0660503

A group of RapiData students seen with instructors Annie Héroux (standing, left), a BNL Biology Department structural biology scientist who works at National Synchrotron Light Source beam line X26-C, and Frank von Delft (foreground), Scripps Research Institute.

Once again this spring, budding crystallographers from around the world gathered at BNL. They were attending RapiData 2003, a week-long course run by BNL's Biology and National Synchrotron Light Source (NSLS) Departments. This course introduces students to the best people, newest equipment, and latest techniques in the field of macromolecular x-ray crystallography.

Emphasizing "Rapid Data Collection and Structure Solving at the NSLS," this "Practical Course in Macromolecular X-Ray Diffraction Measurement" ran this year from April 6 to 11. It consisted of two days of lectures and tutorials taught by scientists from BNL, industry, academia, and other national labs, followed by data collection and analysis at the NSLS. The same instructors and others act as hands-on advisors for a marathon sixty-hour data-collection session to close out the week. Half of this year's 48 students came as observers, while the other half arrived with specimens to analyze. Seven of the students left with solved structures, which will likely result in publications.

The course, which helps to train the next generation of NSLS users, is mostly organized by Bob Sweet and Denise Kranz of Biology, but they emphasize that its success absolutely depends on enthusiastic help from most of the twenty members of the PXRR (the Biology and NSLS Macromolecular *(continued on page 2)*

383rd Brookhaven Lecture, Wednesday, 5/21, 4 p.m., Berkner Hall

Physicist David Morrison presents 'Jet Physics at RHIC: Focusing High-Energy Tools on Nuclear Collisions' *— see story inside —*

Calendar

of Laboratory Events

- *The BERA Sales Office is located in Berkner Hall and is open weekdays from 9 a.m. to 3 p.m. For more information on BERA events, contact Andrea Dehler, Ext. 3347; or Chris Carter, Ext. 2873.*
- *Additional information for Hospitality Committee events can be found at the Lollipop House and the laundry in the apartment area.*
- *The Recreation Building (Rec. Hall) is located in the apartment area.*
- *Contact names are provided for most events for more information.*
- *Calendar events flagged with an asterisk (*) have an accompanying story in this week's Bulletin.*

— EACH WEEK —

Weekdays: Free English for Speakers of Other Languages Classes
Beginner, Intermediate, and Advanced classes. Various times. All are welcome. Learn English, make friends. See www.bnl.gov/esol/schedule.html for schedule. Jen Lynch, Ext. 4894.

Mondays: BNL Gospel Choir
5:15-7 p.m. Berkner Hall. All faiths are welcome. www.bnl.gov/bera/activities/choir/.

Mon., Tues., & Thurs.: Kickboxing
$5 per class. Mon. & Thurs. noon-1 p.m. in the gym; Tues., 5:15-6:15 p.m. in the gym; Thurs., 5:15-6:15 p.m. in Brookhaven Ctr. Registration is required. Christine Carter, Ext. 2873.

Mon., Thurs., & Fri.: Tai Chi
Noon- 12:45 p.m., Brookhaven Center North Room. Adam Rusek, Ext. 5830 or rusek@bnl.gov.

Mondays: BNL Dance Club Ballroom, Latin & Swing Practice
5:30-7 p.m. North Ballroom, Brookhaven Center, except Lab holidays. Jean Logan, jlogan@bnl.gov or Ext. 4391.

Tuesdays: Welcome Coffee
10-11:30 a.m. Rec. Hall. Hospitality event. Come and meet friends. The first Tuesday of every month is special for Lab newcomers and leaving guests. Hospitality Chair Monique de la Beij, 399-7656.

Tuesdays: BNL Music Club
Noon, North Room, Brookhaven Center. Come hear live music. Joe Vignola, Ext. 3846.

Tuesdays: Singles Club
5:15 p.m., Brookhaven Center. Contact: Jean Logan, Ext. 4391.

Tuesdays: BNL Dance Club Individual & Couples instruction
5-11 p.m. North Ballroom, Brookhaven Center. Ron Ondrovic, ondrovic@bnl.gov or Ext. 4553.

Tuesdays: Toastmasters
1st and 3rd Tuesday of each month , 5:30 p.m., Bldg. 463, room 160. Guests, visitors always welcome. www.bnl.gov/bera/activities/toastmstrs/default.htm.

Tuesdays & Thursdays: Aerobics
5:15-6:30 p.m., $4 per class. Rec. Hall. Pat Flood, Ext 7886.

Tuesdays & Thursdays: Aqua Aerobics
5:15-6:15 p.m. Christine Carter, Ext 2873.

Wednesdays: On-Site Play Group
10 a.m.-noon. Rec. Hall. An infant/toddler drop-in event. Parents meet while children play. Svetlana Agafonova, 205-5065.

Wednesdays: Science Education Forum
Every other Wednesday, Noon-1 p.m., Bldg. 438. Join a discussion on interesting issues in science education. Refreshments will be provided. Bring your own lunch. Brian Murfin, Ext. 7171.

Wednesdays: Farmer's Market
11:30 a.m.-1:30 p.m., Berkner Hall parking lot

Wednesdays: Weight Watchers
Noon-1 p.m. Michael Thorn, Ext. 8612.

Wednesdays: Yoga Practice
Noon-1 p.m., Brookhaven Center. Free. Ila Campbell, Ext. 2206.

Wednesdays: Open Chess Night
5-8 p.m., Rec. Hall. Christine Carter, Ext. 5090.

Wednesdays: Exercise 101
5:15-6 p.m., Rec. Hall. $4 per class or $35 for 10 classes. Stretching, low-impact aerobics, and other exercises. Pat Flood, Ext 7886.

Wednesdays: Dance Club Group Lessons
6-9 p.m. North Ballroom, Brookhaven Center. Series 4 lessons start 4/9. Marsha Belford, belford@bnl.gov or Ext. 5053.

Fridays: Family Swim Night
5-8 p.m. at the BNL Pool. $5 per family.

Fridays: BNL Social & Cultural Club
6-9 p.m, North Ballroom, Brookhaven Ctr., dance lessons, 9-11:30 p.m. general dancing. Rudy Alforque, Ext. 4733, rudy@bnl.gov.

Fridays: Jiu Jitsu Club
6-7 p.m. in the gym. All levels, ages 6 and above. $10 per class. Tom, Ext. 4556.

— TODAY —

Friday, 5/16

RHIC & AGS Users' Meeting
Workshops. For more information, see https://www.bnl.gov/rhic_ags/users_meeting/.

Agilent Technologies Demo
11 a.m.-2 p.m., Berkner Hall. A representative will demonstrate Agilent's latest RF/UW test solutions for R&D and manufacturing.

Asian Pacific American Heritage Lecture
Noon-1 p.m. Postponed to June 11.

***Employee Lunchtime Tour: Birding Walk**
Noon. Wear anti-tick clothes. Meet in Berkner Hall lobby to be transported by Lab bus to a bird-spotting location on site. Tim Green, Environmental Services Division will lead the walk. See also notice on page 3. Elaine Lowenstein, Ext. 2400.

Lindy Dance Workshop, Dancing
6-9 p.m. Lindy dance lessons, Brookhaven Center. $6 in advance, $8 at door. General DJ dancing follows, 9-midnight. Rudy Alforque, Ext. 4733.

383rd Brookhaven Lecture

'Jet Physics at RHIC: Focusing High-Energy Tools on Nuclear Collisions'

Roadway collisions between two automobiles often leave behind clues — tire tracks, skid marks, twisted metal, and broken glass — that are visible to the unaided eye. Even so, using these clues to work back to the moment of impact can be a difficult task.

Imagine how difficult it would be to understand the characteristics of the collision if the evidence left behind were on the subatomic scale and if the evidence only lasted for a brief moment before decaying into something else.

This is the challenge that scientists at BNL's Relativistic Heavy Ion Collider (RHIC) are faced with each time two particles collide at the interaction regions of RHIC's two counter-rotating accelerator rings.

While RHIC researchers cannot observe particle bumpers and hub caps flying away from a collision *per se*, the experimental detectors capture signatures, such as particle jets, that give insight into the exact nature and characteristics of a collision.

To learn how scientists have furthered their understanding of nuclear collisions by studying the characteristics of the resulting jets, join David Morrison, a physicist in the Physics Department, as he presents the 383rd Brookhaven Lecture, "Jet Physics at RHIC: Focusing High-Energy Tools on Nuclear Collisions," on Wednesday, May 21, at 4 p.m., in Berkner Hall.

Morrison will be introduced by Senior Physicist Michael Tannenbaum of Physics.

After receiving his A.B. in physics from the University of California at Berkeley in 1988, and his Ph.D. in physics from the Massachusetts Institute of Technology in 1994, Morrison first came to BNL's Physics Department in 1989. During that year, he conducted his thesis work at experiment E859 at BNL's Alternating Gradient Synchrotron. Morrison returned to the Lab in 1997 as a physicist working on RHIC's PHENIX experiment.

Refreshments will be offered before and after the lecture. To dine with the speaker at a restaurant after the lecture, call Pat Valli, Ext. 3717.

— John Galvin

David Morrison

Roger Stoutenburgh D0130503

BNL Scientists Win Compton Award *(cont'd.)*

In the technique, x-rays hit a sample and scatter. To determine the sample's magnetic properties, the researchers analyze the scattered x-rays' intensity and polarization. When the x-ray energy is tuned so that electrons can be excited from one atomic level to another, the magnetic scattering signal becomes much larger than normal. The effect is called resonant magnetic scattering.

Blume predicted resonant magnetic scattering in 1983, and it was first observed experimentally by Namikawa, at the Photon Factory in Tsukuba, Japan. Large scattering patterns were observed by Gibbs, McWhan, and others at the Cornell High Energy Synchrotron Source in 1988, and then even larger effects were observed in actinide compounds at the NSLS.

"I am honored to share this award with my three colleagues," said Blume. "I would also like to recognize two outstanding physicists and valued coworkers, Jim Hannon and George Trammell, both of Rice University, who contributed significantly to the theory of resonant scattering. They clearly deserve to be recognized as well."

While echoing those sentiments, McWhan also noted the important experimental contributions made by coworkers Christian Vettier of the Institute Laue Langevin and Eric Isaacs of Lucent Technologies.

Gibbs also emphasized "the important role of the U.S. Department of Energy in supporting much of the original work and in promoting these techniques at synchrotron sources ever since."

Blume, who joined BNL in 1962, chaired the NSLS 1983-85, and was Deputy Director 1984-96, is now editor-in-chief of the American Physical Society and a BNL senior physicist on leave. Gibbs joined the Lab in 1983 and is now Interim Associate Laboratory Director for Basic Energy Sciences. McWhan, who retired in 2000 as BNL's Associate Laboratory Director for Basic Energy Sciences, is an NSLS guest scientist. — Diane Greenberg

For more details, go to http:// www.bnl.gov/bnlweb/pubaf/pr/2003/bnlpr042903.htm.

RapiData Crystallography Course *(cont'd.)*

Crystallography Research Resource), plus a dozen or so outside teachers.

Major funding for the course was from the National Institutes of Health through the National Center for Research Resources, and DOE's Office of Biological & Environmental Research, with support from the NSLS, and some interested equipment vendors and drug companies.

— Karen McNulty Walsh

For more information, go to: www.px.nsls.bnl.gov/RapiData2003/.

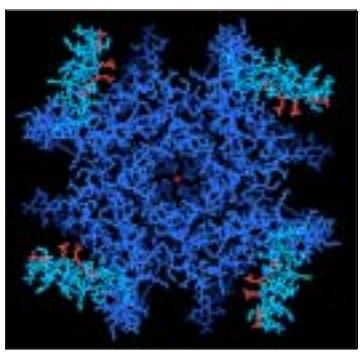
Nerve, Muscle Activity Revealed *(cont'd.)*

The research was funded by the National Institutes of Health (NIH) through the National Institute of General Medical Sciences and the National Center for Research Resources (NCRR), HHMI, and the National Science Foundation. The work was done, in part, at NSLS beam line X25, one of about nine beam lines at the NSLS designed to facilitate x-ray crystallography experiments on biological macromolecules.

Funded by DOE's Office of Basic Sciences and NIH's NCRR, X25 is among the brightest beam lines in the Eastern U.S. It helps to facilitate experiments for researchers from around the world, including those from roughly 100 Northeastern U.S. academic, government, industrial, and private foundation institutions where cutting-edge structural biology research and biotechnology development are pursued, all within driving distance of BNL.

— Karen McNulty Walsh

For a detailed description of this research, go to: http://www. bnl.gov/bnlweb/pubaf/pr/2003/bnlpr043003.htm.



An overhead view of a voltage-dependent potassium ion channel shows four "paddles' that open an close in response to positive and negative charges. This structure, discovered at the National Synchrotron Light Source, shows for the first time the molecular mechanism by which potassium ions are allowed in and out of living cells during a nerve or muscle impulse.

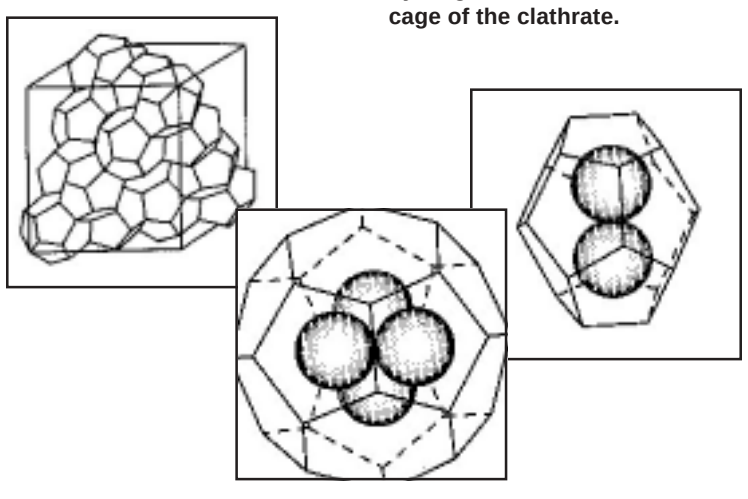
Trapping Hydrogen in Ice *(cont'd.)*

Planetary Geology and Geophysics Division; DOE's Office of Basic Energy Research; and the W.M. Keck Foundation.

— Patrice Pages

For more details, go to http:// nslsweb.nsls.bnl.gov/nsls/sci&tech/science/2003/02-Mao.htm.

Figures. (Left) Crystal structure of the clathrate hydrate synthesized by Wendy and Ho-kwang Mao, consisting of large and small cages. (Center) A tetrahedral cluster of four hydrogen molecules in a large cage of the clathrate. (Right) A cluster of two hydrogen molecules in a small cage of the clathrate.



New ASAP Lounge Opened May 9

The new ASAP (Association for Students & Post-docs) lounge is setting a precedent, as Lab Director Praveen Chaudhari pointed out at the opening ribbon-cutting ceremony held on May 9 at Bldg. 750. For the first time at BNL, students and post-docs will have a common ground where they can get together and relax as other BNL staff can relax at home after work.

Roger Stoutenburgh D3190503

Gathered with the many well-wishers at the opening of the Association of Students and Post-docs' (ASAP) lounge are: (from left) BNL Director Praveen Chaudhari, Quality of Life & Recreation Supervisor Christine Carter, Assistant Laboratory Director for Finance & Administration Brian Sack, RHIC/AGS User Administrator Susan White DePace, and Physics Department Physicist Jeff Mitchell.

Among the users of the new lounge will be ASAP President Chris Kunz, a student from Carnegie Mellon University who works at STAR, one of the detectors at the Relativistic Heavy Ion Collider (RHIC). At the May 9 event, Kunz named other elected ASAP officers, including vice-president Rainer Soika, a post-doc in the Magnet Division, secretary Diyar Talbayev, a Stony Brook University (SBU) graduate who is doing thesis research at the National Synchrotron Light Source (NSLS); treasurer Lin Yang, a post-doc from Rice University, who is also working at the NSLS, and ASAP Webmaster Anuj Purwar, SBU.

Roger Stoutenburgh D3210503

One of the first users of the pool table is Anna Kulesza, Physics Department, who was on the original organizing committee for ASAP.

The people who had worked most tirelessly for the past year to help BNL's students and post-docs to organize into the ASAP and obtain a meeting center for the group, Kunz said, were the two who were honored with wielding the scissors to cut the inaugural ribbon: Susan White DePace, RHIC/AGS User Administrator, and Jeff Mitchell, a BNL physicist on the PHENIX experiment at RHIC. Other essential contributions to the ASAP's goals had been made by an organizing committee of students and post-docs, as well as BNL employees.

Quality of Life & Recreation Supervisor Christine Carter, who now oversees running the lounge, also thanked the many guests from the Plant Engineering Division, including those from the carpentry, electricians', paint, plumbing, and sign shops, together with grounds and janitorial help; the Instrumentation Division; and others, who had all provided valuable support in turning the old High Flux Beam Reactor lobby into the new ASAP lounge.

All present then entered the lounge to celebrate with coffee and cake.

— Liz Seubert

Roger Stoutenburgh D3200503

In the game room at the ASAP lounge are (from left) ASAP Webmaster Anuj Purwar, Stony Brook University (SBU); and ASAP officers: Vice-president Rainer Soika, BNL; President Chris Kunz, Carnegie Mellon University; and Secretary Diyar Talbayev, SBU. Treasurer Lin Yang, Rice University, is not present.

Roger Stoutenburgh D3180503

Skin Cancer Screening

A board-certified dermatologist will screen employees for skin cancer on Thursday, June 12, 9 a.m.-noon in the Occupational Medicine Clinic. To obtain one of the 40 available appointments, send a note with your name, phone extension, and building number to Patricia Snyder, Bldg. 490.

Arrivals & Departures

Arrivals

Mercy Baez ..... Physics
Mary Lynn Baniecki ..... Biology
Adele Billups ..... Medical

Departures

Brenda Thomas ..... FSD

No Bulletin, 5/30

The Lab will be closed on Monday, May 26 for the Memorial Day Holiday, so no Bulletin will appear on Friday, May 30.

Service Anniversaries

The following employees celebrated BNL service anniversaries during March 2003.

40 YEARS

William Kollmer Jr. ..... C-A
Robert Scheetz ..... Physics
Hugh McNeill ..... C-A

35 YEARS

Satoshi Ozaki ..... Director's Office

30 YEARS

Thomas Clifford ..... C-A
Rippie Bowman ..... C-A

25 YEARS

Curtis Bergh ..... ITD
Frank Terrano ..... NSLS
Robert Sabatini ..... Mat. Sci.

20 YEARS

Robert Eich ..... C-A
Louis Cannizzo ..... C-A
Henry Hauptman ..... Staff Svcs.
George Elias ..... Plant Eng.
Thomas Boucher ..... Plant Eng.

10 YEARS

Dennis Danseglio ..... Plant Eng.
Michael Cowell ..... Budget
Christopher Stelmach ..... NSLS
David Boeje ..... C-A
Mary Campbell ..... C-A
Craig Rhein ..... C-A
Steven Ficner ..... Plant Eng.
Peter Gross ..... NSLS
John Escallier ..... Magnet Division
Brian Hobson ..... Plant Eng.
Alan Levine ..... NSLS
Harold Dorr ..... C-A
Robert Michnoff ..... C-A

Bus to NYC This Sunday

Join the BNL Hospitality Committee bus trip to New York City on Sunday, May 18, $10 per adult, $5 per child of age 2 to 12, departing from the Recreation Hall at 9 a.m., leaving the city at 6 p.m. Contact Joe O'Conor, oconor@bnl.gov, or Monique de la Beij, 399-7656.

Retirement Counseling

A TIAA-CREF representative will visit BNL on Friday, May 30, and Friday, June 6, to answer employees' questions regarding the TIAA-CREF retirement plan, such as TIAA and CREF differences, allocating funds between TIAA and CREF, options, flexibilities with TIAA/CREF, and retirement options. For a 45-minute appointment, call Wanda Exekiel, (800) 842-2733, Ext. 2235 (*not* the on-site Ext. 2235).

Correction

The Bulletin regrets that in the May 9 issue, the first name of BNL's Ichiro Fujita, the late father of cellist Tomoko Fujita, was incorrectly given as Masaki. Tomoko Fujita will give a recital at the Lab on May 21.

Benefit Notes

Qualifying Events

Changes to medical and/or dental coverage may be made only during the annual open enrollment; but also, certain changes may be made within 31 days of when what is called a qualifying event occurs. Qualifying events include: birth or adoption of a child, marriage, divorce or legal separation, loss of dependent status (for instance, graduation, attainment of age limit, or no longer a full-time student), or a spouse's gain or loss of employment.

For more information, contact the Benefits Office, Human Resources Division, Bldg. 185, Ext. 2877, Ext. 5126, or by calling (800) 353-5321.

Roger Stoutenburgh D0930503

Get to Know Your Lab! Birding Walk Today

Bring binoculars, if you have them, wear appropriate anti-tick clothing, and join the Employee Lunchtime Tour, which is a birding walk to be held today, Friday, May 16. All are welcome. Meet at noon in Berkner Hall upper lobby, for transport by Lab bus from Berkner to a location on site. There, Tim Green, Environmental Services Division, will lead the way, describing and helping to identify some of the birds that can be heard and seen at BNL, such as the hawk above. The group will return to Berkner by 1 p.m. For more information, call Community Involvement's Elaine Lowenstein, Ext. 2400.

Farmers' Market

The Farmers' Market at BNL will reopen on Wednesday, May 21, 11:30 a.m. to 1:30 p.m., on the lawn in front of Berkner Hall. Buy homemade pies, cakes, cookies, and breads; potted vegetables and herbs; crafts; and more as the season progresses.

The Farmers' Market is looking to expand this year. If you can suggest ways to improve the market, or know of someone who would like to participate, call Erin Rogers, Ext. 8481.

Atlantic City Trip

Join BERA for a trip to the Hilton Hotel and Casino in Atlantic City on Saturday, June 7. The bus will leave the Brookhaven Center at 8 a.m. and depart Atlantic City for BNL at 7 p.m. Buy tickets, $25 per person — which includes a $9 coin return — at the BERA Store, Berkner Hall, 9 a.m.-3 p.m. Participants must be at least 18 years of age.

Defensive Driving, 6/7

A Defensive Driving course will be held on Saturday, June 7, from 9 a.m. to 3:30 p.m. This course, usually given at the Lab, has a changed location. It will be at the Mount Sinai High School, on Route 25A, in Mount Sinai. The High School entrance is on the north side of 25A, about 1 mile west of Route 83.

To register, send a check made out to Empire Safety Council for $35 per person, in care of Scott Zambelli, P.O. Box 670, Mount Sinai, NY 11766. Include your telephone number on your check. Reach Zambelli at 331-6599, Ext. 13.

U.S. Open Bus Trip

The BERA Tennis Committee will sponsor a bus trip to the U.S. Open Tennis Championships at the National Tennis Center in Queens, on Tuesday, September 2. The bus will leave BNL at 8:30 a.m., with a pick up at the LIE exit 63 park & ride, and depart the National Tennis Center at 7:30 p.m. The per-person cost of $62 includes the day-session ticket, which is $44, the bus fare and a tip for the driver. Buy your place at the BERA Sales Office, Berkner Hall, 9 a.m. to 3 p.m.; checks are accepted.

Calendar

(continued)

— WEEK OF 5/19

Monday, 5/19

IBEW Meeting

6 p.m. Knights of Columbus Hall. Railroad Ave., Patchogue. A meeting for shift workers will be held in the union office. The agenda includes regular business, committee reports, and the president's report.

Mon. 5/19, - Wed. 5/21

NSLS Users' Meeting & Workshops

For information on specific talks, workshops, times, locations, and registration information, see http://nslsweb.nsls.bnl.gov/nsls/users/meeting/.

Wednesday, 5/21

***BSA Noon Recital**

Noon, Berkner Hall. Tomoko Fujita, cellist, and Kimball Gallagher, pianist, will perform works by Bach, Chopin, and Debussy. All are welcome. See page 4.

Thursday, 5/22

L.I. Geographic Information Systems Users Group Spring Meeting

9 a.m.-4 p.m., Berkner Hall. Presentations include an emergence response GIS application and vendor software demos. For more information, see www.ligis.org.

BERA Bridge Club

7 p.m., Brookhaven Center, South Room. Morris Strongson, Ext. 4192, mms@bnl.gov.

Friday, 5/23

Potluck Dinner, Karaoke, Dancing

Celebrate Asian Pacific American Heritage Month with the BNL Social & Cultural Club, Swing Dance Long Island, and BNL's Asian Pacific American Association.

5 p.m.-8p.m.: Pot Luck Dinner and Karaoke at the Recreation Hall.

8 p.m.-midnight: U.S.O. dance party at the Brookhaven Ctr. North Ballroom. Cash bar, coffee, tea, desserts and live music by the "Memories of Swing" Big Band. Tickets, $10 for members, $15 for non-members, at the BERA Store.

— WEEK OF 6/2 —

Wednesday, 6/4

BSA Distinguished Lecture

4 p.m., Berkner Hall. Neurologist and best-selling author Oliver Sacks will talk on "Creativity and the Brain." All are welcome.

Thursday, 6/5

BERA Bridge Club

7 p.m., Brookhaven Center, South Room. Morris Strongson, Ext. 4192, mms@bnl.gov.

Saturday, 6/7

***BERA's Atlantic City Bus Trip**

Hilton Hotel and Casino in Atlantic City. Bus leaves BNL 8 a.m. and departs Atlantic City 7 p.m. $25 per person (18 and over only) includes a $9 coin return. Purchase tickets at the BERA Store. See also notice on this page.

— WEEK OF 6/9

Wednesday, June 11

Noon-1 p.m. Berkner Hall. Gary Okihiro, Columbia University, will give a talk, title to be announced.

Thursday, 6/12

Community Advisory Council Meeting

6:30 p.m., Berkner Hall, Room B. Open to the public. For more information, see http://www.bnl.gov/community/CAC.htm.

— WEEK OF 6/16 —

Thursday, 6/19

BERA Bridge Club

7 p.m., Brookhaven Center, South Room. Morris Strongson, Ext. 4192, mms@bnl.gov.

Note: This calendar is updated continuously and will appear in the Bulletin whenever space permits. Submissions must be received by the preceding Friday at noon to appear in the following week's Bulletin. Enter information for each event in the order listed above (date, event name, description, and cost) and send it to bulletin@bnl.gov. Write "Bulletin Calendar" in the subject line.

Recital

Fujita, Gallagher, on Cello, Piano, 5/21

All are welcome to attend the next BSA noon recital, on Wednesday, May 21, when Tomoko Fujita, cellist, and Kimball Gallagher, pianist, will perform in Berkner Hall. The program will include a Bach suite for unaccompanied cello, a Chopin Polonaise-Fantasy, and a Debussy sonata for cello and piano.

BSA Scholarship recipient Fujita graduated *summa cum laude* from Rice University with a double degree: Bachelor of Music in cello performance, and Bachelor of Arts in psychology. She has appeared as soloist with numerous symphony orchestras, and presented recitals at the Aspen Music Festival, the Juilliard School and Rice University. Tomoko, who is currently enrolled in the Master of Music program at The Juilliard School, was recently awarded The Edgar Feder Award for the Advancement of the Art of the Cello by the Violoncello Society of New York.

Pianist Gallagher has given annual recitals in Houston and Boston for many years, and was recently the soloist in Bartok's 3rd Piano Concerto, performed at Rice University. He received top prize at the Corpus Christi International Piano Competition. Gallagher has participated in the Music Academy of the West, Yellow Barn, Bowdoin Summer Music, and Tuckamore Festivals, and the Prague Master classes. Now enrolled in the Masters program at the Juilliard School, he teaches piano and guitar and writes music in popular and classical genres.

BSA noon recitals are free and open to the public. Visitors of 16 and over must carry a picture ID.

Classified Advertisements

Placement Notices

The Lab's placement policy is to select the best-qualified candidate for an available position. Candidates are considered in the following order: (1) present employees within the department/division and/or appropriate bargaining unit, with preference for those within the immediate work group; (2) present employees within the Laboratory; and (3) outside applicants. In keeping with the Affirmative Action Plan, selections are made without regard to age, race, color, religion, national origin, sex, disability or veteran status. Each week, the Human Resources Division lists new placement notices, first, so employees may request consideration for themselves, and, second, for open recruitment. Because of the priority policy stated above, each listing does not necessarily represent an opportunity for all people. Except when operational needs require otherwise, positions will be open for one week after publication. For more information, contact the Employment Manager, Ext. 2882; call the JOBLINE, Ext. 7744 (344-7744), for a list of all job openings; use a TDD system to access job information by calling (631) 344-6018; or access current job openings on the World Wide Web at www.bnl.gov/HR/jobs/default.htm.

LABORATORY RECRUITMENT - Opportunities for Laboratory Employees

TB2476. ADMINISTRATIVE SERVICES ASSISTANT (A-2) - Requires specialized training or equivalent experience plus six years' relevant experience of which at least two years should be as a Sr. Office Services Assistant. Must possess extensive knowledge of one or more specific areas of the Laboratory operations, policies and procedures and demonstrate skills in one or more specialized administrative functions. Must have excellent interpersonal and communication skills both oral and written and proficiency in MSOffice 2000 (i.e., Outlook, Excel, Powerpoint). Works independently within established procedures and may be required to handle non-routine office matters. May have frequent contacts within and outside the Laboratory to exchange information essential to assigned office functions. Duties will include scheduling meetings, filing and maintaining files, setup and maintain Internet pages, ordering supplies and providing assistance to Chair's Office for administrative functions. Will also schedule seminars and colloquia, assisting with speakers and enter Corrective Action into Physics ATS system. Physics Department.

NS8888. TELEPHONE OPERATOR / SUBSTITUTES (2) – Under general supervision, places incoming and outgoing local, toll, and long distance commercials and FTS calls in the operation of multiple position switchboard. Must be familiar with Laboratory organization, personnel, methods of locating individuals not listed and of contacting emergency personnel at all times. Maintains necessary records of toll charges and performs related telephone clerical duties. Information Technology Division.

OPEN RECRUITMENT – Opportunities for Laboratory employees and outside candidates.

NS2649. DIRECTOR, INFORMATION TECHNOLOGY DIVISION (Manager III, I-12) – Requires an advanced degree in a scientific discipline, preferably computer science, applied mathematics or physics, extensive technical knowledge, preferably with a UNIX and Windows background, and experience directing a staff in support of scientific research at a large technical facility. The director is responsible for planning, coordination, direction, and safety; and the development of policies, procedures and practices. The IT Division is responsible for the entire BNL network and telecommunications system; support of both Windows-based and UNIX computing servers and clients; scientific applications including visualization, advanced computing environments, collaborative access tools; operation of a large computing center; cyber-security; and IT strategic planning for the Laboratory. May be required to obtain and maintain a security clearance. Information Technology Division.

MK2505. POSTDOCTORAL RESEARCH ASSOCIATE – Requires a Ph.D., general background in nuclear engineering with some experience in working with large neutronic computer codes. Will work with reactor analysis codes such as those based on lattice physics, Monte Carlo, and/or neutron kinetics. The application of these codes is to design new nuclear energy systems or fuel management schemes or to assess the safety of existing or proposed advanced reactors. In addition, work will involve one or more of the following programs: the calculation of neutronic properties of the NITS (National Institute for Standards & Technology) research reactor in support of reactor operations and the development of a Safety Analysis Report; the analysis of light water reactor properties in support of safety issues being pursued by the U.S. Nuclear Regulatory Commission; and the analysis of pressure tube reactors in order to validate calculation methods and assess safety parameters. Under the direction of D. Diamond. Energy Science & Technology Department.

Motor Vehicles & Supplies

00 DODGE GRAND CARAVAN - quad seating, a/c, p/s, p/b, p/w, 29K mi., 7 pass., left & right sliding doors, excel. cond., $15,000. Joann, Ext. 8594.

00 MAZDA MILLENIA - all power, 59K mi., loaded, mint cond., 5 year, 40K mi. bumper to bumper warranty, $14,000 neg. Gregg, Ext. 4548 or 874-8631.

99 FORD TAURUS WINDSTAR LX - all power, 40K mi., Ford extended service 11/04 or 60K mi., $9,700. Louis, 588-7260.

99 YAMAHA V STAR CLASSIC - 1,100 mi., excel. cond., many extras, $4,800. Scott, 331-1349.

98 JEEP WRANGLER - Sahara, white, 5-spd., a/c, 6-cyl., two tops, clean, 56K mi., $14,900. Chris, Ext. 5032 or 929-7225.

96 JEEP GRAND CHEROKEE LARADO - all power, 92K hwy. mi., am/fm/CD player, mint cond., $7,550. Henry, 727-7227.

96 SATURN SC2 - a/c, p/s, p/b, 90K mi., runs & looks like new, $3,850. Bill, 924-3641.

95 FORD T-BIRD - all power, 8-cyl., 121K mi., sunroof, good cond. Jamal, Ext. 5805 or 804-2959.

94 VOLKSWAGON JETTA - silver, 5-spd., a/c, power sunroof, 70K mi., $3,950. Lou, Ext. 4312 or 732-1028.

93 FORD TAURUS - V6, 3.8L, 4-dr., 75K mi., a/t, airbags, excel. eng., new water pump, sparks, runs well, $2,200. Edward, Ext. 4331 or 516-297-3904.

93 SUBARU IMPREZA - a/t, p/s, p/b, p/w, 163K mi., good cond., brand new tires, ABS, airbag, $2,200. 751-8351.

92 MERCURY GRAND MARQUIS - maroon, 140K mi., full power accessories, good fuel economy, clean, $3,200. Robert, Ext. 3401 or 744-6229.

92 TOYOTA CAMRY LE - all power, 92K mi., excel. cond., orig. own., service record avail., $3,750. Carol, 744-8632.

91 GMC SONOMA SLT - pickup w/club cab, 4x4, black, 160K mi., 31K mi. on new tires, bedliner, tilt/cruise, sliding rear window, $3,000. Thomas, Ext. 5741 or 473-3760.

90 HONDA ACCORD LX - 5-spd., a/c, p/s, p/b, p/w, 152K mi., runs well, $1,500. Michael, Ext. 4723 or 744-3068.

86 FORD ESCORT - 5-spd., a/c, p/s, p/b, 106K mi., excel. cond., original own., am/fm/CD player, very clean, $500 obo. Nick, 484-3874.

84 LINCOLN TOWN CAR - silver, 4-dr., all power, leather int., 117K mi., good cond., digital dashboard, $1,399. Tom, Ext. 3479 or 645-6110.

80 KAWASAKI - motorcycle, 440 LTD needs TLC, $350. Don, 345-6279.

76 LANCIA SCORPION - 5-spd., 107K mi., drive & restore this two seat, mid-engine sports car. John, Ext. 2788.

75 MERCEDES BENZ - silver, blue convertible top, 132K mi., a/t, 2nd steel roof, $4,400. Robert, Ext. 2516 or 821-0807.

Boat & Marine Supplies

23' PEARSON P23K- '79, no trailer, well maintained & equipped cruiser/racer, $5,200. John, Ext. 2788.

17.6' PRO SPORT CENTER CONSOLE - '02, 100 h.p. 4-stroke eng. w/ext. warr., trailer, VHF, FF, Bimi top, cust. cover, coastguard pkg. $16,500. Frank, Ext. 7802 or 734-7635.

SUNFISH - $800. Meyer, Ext. 2169 or 286-8350.

Furnishings & Appliances

BED HEADBOARD - footboard & sideboard frame, full/queen, $10/ea.; 43"w, 3 drawer dresser & mirror: fruitwood, $50. 472-4559.

BEDROOM FURNITURE - white, Formica, full/queen hdbd., hi-boy, triple dresser, mirror, 2 nightstands, $350 neg.; entertainment ctr., oak/glass, $100 neg. Mike, 395-0804.

BEDROOM SET - Celadon, green/white, bamboo trim double dresser w/mirror; desk w/hutch, chair, $325. 473-0963.

BEDROOM FURNITURE - boys', solid oak, desk w/hutch w/light, dresser, night table, headboard, fish tank, v.g. cond., $650. Kathleen, Ext. 2882 or 298-5345.

DINING ROOM SET - black lacquer w/gold trim table, 40x72 w/4 chairs, 3-pc. wall unit, $575. Diana, Ext. 3681.

DINING ROOM SET - by Bennington, 6 ladder, back chairs, tressle table w/2 leafs, table pads, 2-pc. hutch, $350. Walter, Ext. 3499.

FREEZER - Amana upright, 13 cu. ft., excel. cond., $200 neg. Michael, 929-4716.

FURNITURE - desks, $15; couch, $15; a/c, $60; table w/4 chairs, $20; dressers, $10; IKEA book shelves, $25; shoe rack, $20; stereo, $20; vacuum, $5. Juana, Ext. 4325.

FUTON - queen, mattress & frame, excel. cond., $85. 929-8287.

PIANO - Kawai console upright, recently tuned, excel. cond., $3,500. Henry, 727-7227.

SOFA BED - wooden frame, clean, ask. $30. Ext. 4346.

WATERBEDS - 2, queen, tube type, individual bladders, boxsprings, pillow top, new, $300/ea. or $500/both, obo. Keith, 827-2275.

Tools, House & Garden

BBQ - by Ducane, gas, used a few times, $120. Ext. 3828.

CHIPPER/SHREDDER - Troy Built, hardly used, $550. Henry, 727-7227.

DRAFTING TABLE - converts & folds, sturdy, $35. Sue, Ext. 7235.

HOSTA PLANTS - variegated hostas, $4/bunch. Vicki, 689-9234.

LAWNMOWER - Craftsman, small, riding, elec. start, 1 yr.old under warr., all lawn cutting attach., $700. Hank, 744-9812.

LAWNMOWER - 4 h.p., push lawnmower, $25. Rob, 289-9533.

LAWNMOWER - Sears, 6.75 h.p., 22" elec. start, bag incl., $100 neg. Rob, 289-9533.

LAWN TRACTOR - white tractor, 42" cut, 11 h.p., runs & cuts well, hydrostatic trans., $150. Richard, Ext. 7160.

POOL FILTER - Hayward DE for in-ground or above-ground pool, in working order, $50. Kevin, Ext. 2431 or 929-1683.

RED MAPLE TREES - gooseblood variety, 7 ft. tall. $75. Cora, Ext. 3908 or 878-4825.

SAWS - Mikita cordless circular saw, $25; Milwaukee power saw, $30, both new in original boxes. Ext. 2913.

UMBRELLA TABLE - redwood w/4 oversize benches & matching Lazy Susan, $350. 473-0963.

Sports, Hobbies & Pets

GOLF CLUBS - custom made, 3-aw r-80 shafts, $125. Hank, 744-9812.

GUN CASE - new browning gun vault, 48" hard case, air & water tight, brand new, never used, cost $285, ask. $175 obo. Kevin, Ext. 2431 or 929-1683.

POOL LADDER - aluminum, for above ground pool, $20. John, Ext. 2788.

VIOLIN - half size, $100. Ext. 3828.

WETSUIT - men's spring Ripcurl w/shirt, med., $50; wt. bench w/leg curl, bars & weights, $60. George, 472-1479.

WINDSURFER - O'Brian, beginner style, $100. Ext. 5437.

Audio, Video & Computers

COMPUTER - Dell, 1.1 Ghz CPU, CDRW/DVD dr., 20Gb HD, 256Mb mem., 10/100 Ethernet, 56K mdm., 2-usb ports, Windows ME, more, $200 firm. Don, Ext. 7237 or 929-6571.

DIGITAL CAMERA - Sony, DSC-F707, like new, 16 mb, 5 mega pixel, everything incl., $580 obo. Jeong, Ext. 7646 or Ext. 1025.

STEREO - Sony model No. HCD-H100, compact disc deck receiver & speakers, am/fm/CD/cass., good cond., cost $180, ask. $30. Ext. 4346.

TV/VCR - 19" Magnavox television, works well, remote, instruction manual, $60; 4-head Magnavox VCR, $30. Nick, Ext. 7139.

Miscellaneous

AIR CONDITIONER - 6,000 compressor, v.g. cond., $50. Ext. 3838 or 744-2940.

AWNINGS - 2, aluminum, 1 lg., 1 small. 929-4716.

BABY CRIB - for infants 5-14 lbs., brand new, cost $100, ask. $40. Ext. 4346.

BASSINET - white wicker bassinet, excel. cond., $15. Kim, Ext. 4304.

TICKETS - to Broadway version of *La Bohème* for Wed. matinée, May 21, 2 tickets, cost $90/ea, ask. $90/both. Ext. 3767 or 744-3744.

Yard & Garage Sale

MASTIC - moving sale, Memorial day weekend, 5/24-5/26, 9 a.m. - 4 p.m., 154 Clinton Ave. Kathi, 399-0925.

MASTIC BEACH - multi-family yard sale, 5/17, 10 a.m., corner of Cypress & Cedar, off neighborhood. Ext. 6358 or 281-3414.

ROCKY POINT - 5/16 & 17, 9 a.m.-4 p.m., 31 Evergreen Rd. Some vintage, some junk. Joan, 744-9423.

Lost & Found

LADY'S WATCH - found near Bldg. 130. Sue, Ext. 7235.

Community Involvement

SOUP KITCHEN NEEDS HELP - Thee Island INN, Middle Island, desperately needs help w/rent, garbage disposal, etc., expenses. Contact B. Royce, Ext. 2098 or Royce@bnl.gov. No donation too small.

Free

FISH TANK - 20 gal., Ext. 5437.

MICROWAVE OVEN - old, '88, Goldstar microwave, still works. Dirk, 286-3686.

PROPANE TANKS - 2, BBQ size, 455-6125.

SKI BOOTS - Lange x6, 24.5 cm, yellow. Ext. 8095.

Wanted

BASSINET - immediately. Sarah, Ext. 4862 or 331-0173.

RIDE - for handicapped person desperately needed Backup ride from Lake Pointe Middle Island, to/from BNL, Mon. Tues., & Thurs., 8:30 a.m. & 5 p.m. Jennifer, Ext. 7300 or 345-3425.

RESEARCH VOLUNTEERS - healthy men and women, ages 18 and over, are needed for MRI study. Strictly confidential, fee provided. 344-2773.

RIDING MOWER - old, garden tractors, or implements, etc., for machine art. 286-6492.

Announcements

RETIREMENT PARTY - for Richard Spellman, on 6/6, 6:30 p.m. at the Meeting House Creek Inn in Aquebogue, $30/person incl. buffet, soda, gift. Cash bar RSVP by 5/23 to Karen Lucadamo, Ext. 3356.

For Rent

BELLPORT - Village, lg. 2nd-floor studio apt., private ent., wood & ceramic floors, heat, elec., water, digital cable, w/d, near golf, marina, beach, $800/mo. incl. all. David, 776-0794.

BELLPORT - 2-bdrm, 2-bath Colonial house w/delightful yard, 3 blocks from the Village, avail. 9/15 - 5/15, $1,000/mo. Mark, Ext. 2367 or 286-1973.

CATSKILLS - near Windham & Hunter mts., 3-bdrm chalet w/sleeping loft, fully furnished. Kay, Ext. 4501 or Bea, Ext. 3642.

EAST MORICHES - share big house on a quiet, short block. Professional, own lg. bdrm w/phone & cable, 300 ft. to water, 10 mi. to BNL, single, non-smoker. 744-8386.

FARMINGVILLE - 3-room apt., separate ent., full carpet, refrig., gas stove, all util. & cable, single, non-smoker preferred, $700/mo. plus one mo. sec. Tom, Ext. 4866.

Potluck, Karaoke, U.S.O. Dance, 5/23

On Friday, May 23, the BNL Social & Cultural Club (SCC) and the BERA Asian Pacific American Association (APAA) invite all to their 2nd Annual Potluck Dinner and Karaoke, 5-8 p.m. at the Recreation Hall. Bring a favorite ethnic dish, enough to share with six people.

At 8 p.m., as one of the May Asian Pacific American Heritage events, the United States Officers' (U.S.O.) Dance Party! will start at the North Ballroom at the Brookhaven Center, with music by "Memories of Swing." Buy tickets at $10/members, $15/nonmembers, at the BERA store, Berkner Hall. For more information, contact Rudy Alforque, Ext. 4733 or rudy@bnl.gov, or visit www2.bnl.gov/rudy/social.

MANORVILLE - 1-bdrm apt., util. & basic cable incl., private ent., separate thermostat, freshly painted, clean carpets, lg. bdrm closets, no pets, $950/mo. Lisa, 793-5945.

MANOR PARK - small 1-bdrm apt., full bath, private ent., $750/mo. incl. util., 5 min. to BNL, avail. 6/1. 395-2557.

MASTIC BEACH - new studio, private ent., parking, 15 min. to BNL, quiet area, single, no smoking/pets, 2 mo. sec., refs. required. John, 399-1671.

NORTH PATCHOGUE - share house, spacious bdrms., parking avail. & close to Lab & shopping area. 447-6899.

NORTH SHIRLEY - 1-bdrm apt., l/rm, kitch., full bath, sep. ent., no pets, $850/all, 1 mo. rent, 1 mo. sec., Pat, 399-5083.

RIDGE/SHOREHAM - 1-bdrm apt., new kitch. & bath, 5 min. to BNL, quiet, now avail., $850. Greg, Ext. 2278.

SELDEN - 2 rm. for 1 person, heat, water, electric, $1,000/mo., 1 mo. sec., no smoking/pets. George or Paul, 281-5035.

SELDEN - North, 121 Strauss Avenue, 1 bdrm, l/rm/kitch. combo., full bath, w/d, no smoking/pets, $800 incl. all except electric, sec. & ref. req. ALSO, at same address: 3 bdrm, l/rm, d/rm, eik, full bath, hardwood floors, deck, yard, SD11, no smoking/pets, $1,700 plus util., ref. required. Helen, Ext. 6235 or 928-7107.

SHIRLEY - lg. 2 bdrm, close to Lab, rent depends on no. of people, neg. incl. elec., heat, water & cable tv, $1,300. Ext. 7448.

S. SETAUKET - 4-bdrm Col., l/rm, d/rm, den, 2-car garage, 3-Vill. SD, no pets/smoking, $2,000 mo. plus sec. & util. 455-6121.

WADING RIVER - 3-bdrm house, very secluded, steps to private beach, 10 min. to Lab. $1850/mo. Tom, Ext. 3731.

HILTON HEAD, SC - 2-bdrm house on lagoon in gated Moss Creek Plantation w/2 priv. golf courses, clubhouse restaurant, tennis, trails, biking & pools. 286-3833.

ST. CROIX, VI - timeshare, Divi Carina Bay, 1 bdrm, sleeps four, 5/10 - 5/17, new upper unit overlooking ocean, private pod, casino, top rated, $700. Bill, 732-9102.

For Sale

AQUEBOGUE - 3-bdrm, 2-bath Colonial, on quiet tree-lined street, fireplace, cac, deck, full basement, 1.5 car garage, .55 acre, $349,000. Rob, Ext. 5161.

HOLBROOK - 4-bdrm, center-hall Colonial in Birchwood Estates, l/rm, d/rm, 1.5 baths, lg. den, basement, pool, deck, patio, shed, Sachem SD, $409,000. George, 472-1479.

PORT JEFFERSON - 2-bdrm, 2.5-bath townhouse, Jacuzzi, f/p, deck, eik, finished basement, garage, 20 min. to BNL, $339,000. Matthew, 476-4631.

SHIRLEY - 478 Carnation St., 5-bdrm house, 2 baths, fence. 345-3754.

SHOREHAM - mint, 5 bdrm, 3 full bath, wood floors, basement, f/p, cac, gas & heat, 5 min. to Lab, many extras, $574,900. Ext. 2457.

SHOREHAM - North, ranch, 3 bdrm, 2 new full bath, l/rm, d/rm, den w/f/p, eik, basement, 2-car gar., Trex deck, fenced yd., shed, quiet street, $354,000. 744-1199.

SHOREHAM - ranch, private half acre, cul-de-sac, lg. country kitchen, 4 bdrms, 2 bath, fin. bsmt. w/3 fin. rms, workshop, SWR SD, $348,500. Lynn, 495-9770.

CLEARWATER, FL. - lg. eik, 2 bath, 2 bdrm, d/rm, lg. l/rm, covered patio, 2-car garage, $139,000. Dean, Ext. 4677.

FT. LAUDERDALE, FL. - RCI Gold Crown Resort, world class golf/fitness center spa, 3-bdrm lockout, sleeps 8, trades for 2 weeks, $7,000. Ken, 281-5565 or 516-446-1670.

the Bulletin

Published weekly by the Media & Communications Office for the employees, facility-users, and retirees of Brookhaven National Laboratory.

LIZ SEUBERT, editor
JOHN GALVIN, reporter
ROGER STOUTENBURGH, photographer

On the World Wide Web, the Bulletin is located at www.pubaf.bnl.gov/bulletin.html. A Weekly Calendar listing scientific and technical seminars and lectures is found at www.pubaf.bnl.gov/calendar.html.

Bldg. 134, P.O. Box 5000
Upton NY 11973-5000
phone (631)344-2345, fax (631) 344-3368
e-mail: bulletin@bnl.gov