

Physicists at BNL Win 2009 Onnes Prize For Superconductivity Experiments *Prize shared with Stanford University physicist*

J.C. Seamus Davis and John Tranquada, physicists at BNL, with Aharon Kapitulnik of Stanford University, have won the 2009 Heike Kamerlingh Onnes Prize for outstanding superconductivity experiments. Named after the winner of the 1913 Nobel Prize in physics for the discovery of superconductivity and related research, the Onnes Prize is awarded every three years for outstanding experiments that illuminate the nature of superconductivity — the disappearance of electrical resistance in certain materials at specific temperatures, mostly in the range of nearly absolute zero (minus 459.67 degrees Fahrenheit).

The prize was presented at the Ninth International Conference on Materials and Mechanisms of Superconductivity on September 9 in Tokyo. The recipients each received a diploma and shared

a \$5,000 award sponsored by Elsevier, a publisher of academic journals and books.

Seamus Davis

J.C. Seamus Davis was cited “for pushing the limits of spectroscopic imaging scanning tunneling microscopy at low temperatures and applying it to pioneering studies of the cuprate high-temperature superconductors.”

Davis built a scanning tunneling microscope that can resolve details smaller than the diameter of an atom and used it to study the movement of electrons in superconducting materials. His insights on how the behavior of electrons in high-temperature superconductors affects the transition temperature — the temperature at which a material loses its electrical resistance — may lead to the discovery of new superconducting materials that



Seamus Davis

Photo courtesy of Cornell University

are suitable for applications such as zero-loss energy generation and transmission systems.

“I am delighted and honored to receive this award,” Davis said. “I will continue to improve and expand the capabilities of the instrument I built to elucidate the properties of superconductivity.”



John Tranquada

Roger Stouffer/bnl

John Tranquada

John Tranquada was cited “for pioneering neutron scattering experiments leading to the discovery of the stripe phases in the cuprate high-temperature superconductors.”

In the 1990s, Tranquada and his colleagues discovered that high-temperature super-

conductors have a tendency toward charge segregation, which enables the coexistence of conducting and insulating properties. This work indicates that the electronic structure of high-temperature superconductors consists of fluctuating strings of charge, known as stripes, a concept that is increasingly influencing the current models of high-temperature superconductors.

“It is a great honor to receive this prize and share it with such excellent colleagues,” Tranquada said. “My work has built on the contributions of many researchers at Brookhaven, so this honor is a tribute to them all.”

— Diane Greenberg
For more on the experience and honors of the recipients, see http://www.bnl.gov/bnlweb/pubaf/pr/PR_display.asp?prID=986.

See also related stories below.

Scientists Detect ‘Fingerprint’ Of High-Temp Superconductivity Above Transition Temperature

A team of U.S. and Japanese scientists has shown for the first time that the spectroscopic “fingerprint” of high-temperature

superconductivity remains intact well above the super chilly temperatures at which these materials carry current with no resistance. This finding confirms that certain conditions necessary for superconductivity exist at the warmer temperatures that would make these materials practical for energy-saving applications — if scientists can figure out how to get the current flowing.

The technique and findings, described in a paper published August 28, 2009, in *Science*, may point the way to identifying what inhibits coherent superconductivity at higher temperatures. That knowledge, in turn, may help scientists achieve the ultimate goal of developing superconducting materials for real-world practical devices such as zero-loss power transmission lines.

The research was supported by the Office of Basic Energy Sciences in the DOE Office of Science; the U.S. Office of Naval Research; the Ministry of Science and Education (Japan); and the Japan Society for the

This method
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Promotion of Science. One collaborator also receives support from the U.S. Army Research Office.

“Our measurements give the most

definitive spectroscopic evidence that the material we studied is a superconductor, even above the transition temperature, but one without the quantum phase coherence required for current to flow with no resistance,” said physicist Seamus Davis of BNL and Cornell University, who led the research team. Davis was recently selected to head a DOE-funded Energy Frontier Research Center at Brookhaven that will examine the underlying nature of superconductivity in complex materials.

“The spectroscopic ‘fingerprint’ confirms that, at these higher temperatures, electrons are pairing up as they must in a superconductor, but for some reason they are not co-operating coherently to carry current,” Davis said.

The next step is to figure out why. What breaks the cooperation of the electron pairs? What is the problem that is overwhelming the superconductivity?

These are questions Davis’ technique can address in a quantitative manner.

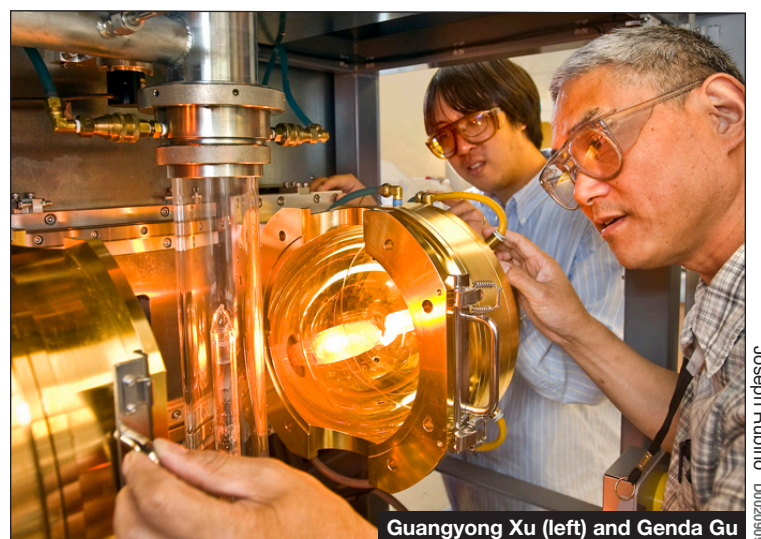
See *Fingerprint* on pg. 2

Magnetic Measurements Rouse Questions in Assumptions About High-Tc Superconductors *Quest for understanding high-Tc materials that carry current with no resistance continues*

Conquering one of the biggest challenges in the study of high-temperature (high-Tc) superconductors, scientists at BNL have grown crystals of one such material that are large enough to directly measure the material’s magnetic properties. These measurements, published online on August 2, 2009, by *Nature Physics*, cast considerable doubt on some assumptions commonly made in trying to understand the role magnetism plays in these materials’ ability to carry current with no resistance. Such materials promise more efficient and lower cost energy transmission if they can be made to operate under real-world conditions. The research was funded by the Office of Basic Energy Sciences within the DOE Office of Science.

“Many theorists believe that magnetism is important for high-temperature superconductivity, although they don’t agree on how it is important,” said John Tranquada of the Condensed Matter Physics & Materials Science Department (CMP&MS), who led the research team. Figuring out this puzzle has been complicated by the fact that techniques used to measure materials’ magnetic properties require good-quality, large, single crystals — and growing such crystals of high-Tc materials has been a long-term challenge.

The Brookhaven team stud-



Guangyong Xu (left) and Genda Gu

Joseph Rubino bnl/200909

ied the copper-oxide superconductor that has undergone the most extensive electronic analysis of any high-Tc material. Abbreviated as BSCCO, the material contains bismuth, strontium, and calcium in addition to copper and oxygen.

“It’s very easy to produce the small crystals required for electronic studies, but it is very difficult to grow the large BSCCO single crystals with millimeter thickness that are required for magnetic analysis,” said CMP&MS’s Genda Gu, an expert in crystal growth. “We developed a special technique and operated two specialized furnaces continuously — 24 hours a day and 7 days a week — for two years to grow the large crystals used in this study.”

Since magnetic properties in conventional metallic conduc-

tors are a direct result of those materials’ electronic properties, theorists have used the same well-established mathematical approach for deriving magnetism from electronic measurements in high-Tc materials.

“The calculations based on the material’s *electronic* properties — which change dramatically as the material is cooled and transitions from its electrically resistive state to become a superconductor — predicted there would be a similar large change in *magnetic* characteristics below the transition temperature (Tc),” said Guangyong Xu, also of CMP&MS. “But our direct measurements of the magnetic properties showed surprisingly little change. This implies that the model the theorists have been using to...

See *Superconductors* on pg. 2

CALENDAR
OF LABORATORY EVENTS

- The BERA Store in Berkner Hall is open weekdays from 9 a.m. to 3 p.m. For more information on BERA events, contact Andrea Dehler, Ext. 3347, or Christine Carter, Ext. 2873.
- Additional information for Hospitality may be found at www.bnl.gov/hospitality/calendar.asp.
- The Recreation Building #317 (Rec. Hall) is located in the apartment area. Ext. 2873
- Events flagged with an asterisk (*) have an accompanying story in this week's Bulletin.

— REGULARLY —

Weekdays: Free English for Speakers Of Other Languages Classes

Beginner, Intermediate, Adv. classes, various times. All welcome. Learn English, make friends. See <http://www.bnl.gov/esol/schedule.asp> for schedule. Jen Lynch, Ext. 4894

Mondays: BNL Social & Cultural Club

Noon-1 p.m., Brookhaven Center, South Room, free beginners dance lessons. Rudy Alforque, Ext. 4733, alforque@bnl.gov

Mondays & Wednesdays: Pilates

Mondays, 12:15-1:15 p.m. Mondays and Wednesdays, 5:15-6:15 p.m. Rec Hall. Registration is required.

Mondays & Thursdays: Kickboxing

\$5 per class. Noon-1 p.m. in the gym. Pay as you go. Ext. 8481

Mon., Tues., Thurs., & Fri.: Tai Chi

Noon-1 p.m., B'haven Cntr N. Rm. Adam Rusek, Ext. 5830, rusek@bnl.gov

Tuesdays: Zumba

Tuesdays, 12:15-1:15 p.m. Gym. Registration is required.

Tuesdays: Knitting Class

2-4 p.m. Rec. Hall. All levels of skill. Ext. 5090 for information.

Tuesdays: Toastmasters

3 monthly meetings: 2nd Tuesday: Noon, Berkner, Rm. D: 1st & 3rd Tuesdays, 5:30 p.m., Bldg. 463, Rm 160. Guests, visitors welcome. <http://www.bnl.gov/bera/activities/toastmasters/>

Tue., Wed., & Thurs.: Rec Hall Activities

5:30-9:30 p.m. General activities, TV, ping pong, chess, games, socializing. Christine Carter, Ext. 5090

Tuesdays & Thursdays: Jiu Jitsu

6:30-7:30 p.m. Tuesdays: Brookhaven Center, Thursdays: Gym. All levels, 6 yrs. to adult. Tom Baldwin, Ext. 4556.

Tuesday & Thursday: Aqua Aerobics

5:30-6:30 p.m., Pool. Registration is required. Ext. 2873

Wednesdays: On-Site Play Group

10 a.m.-noon. Apartment area playground. Infant/toddler drop-in event. Parents meet while children play. Restarts 9/10. Petra Adams, 821-9238

Wednesdays: Ballroom Dance Class

Classes at 5:15, 6:15, and 7:15 p.m., based on experience. North Ballroom, B'haven Center. Donna Grabowski, Ext. 2720.

Wednesdays: Yoga

Noon-1 p.m., B'haven Center. Free. Ila Campbell, Ext. 2206, ila@bnl.gov

1st Wednesday of month: LabVIEW

1:30-3 p.m., Bldg. 515, 2nd fl. Seminar Rm. Free technical assistance from LabVIEW consultants. Ext. 5304, or Terry Stratoudakis, (347) 228-7379

Thursdays: BNL Cycletrons Club

Noon-1 p.m., First Thurs. of month. Toni Hoffman, Ext. 5257

Thursdays: Reiki Healing Class

Noon-1 p.m., Call for location. Nicole Bernholz, Ext. 2027

Thursdays: Craft and Cooking Club

2 p.m. Rec Hall. Free.

Fridays: BNL Social & Cultural Club

Noon-1 p.m., B'haven Center, S. Room, free beginners dance lessons. 7-11:30 p.m. N. Ballroom, Dance Social, workshops. Rudy Alforque, Ext. 4733, alforque@bnl.gov

Fridays: Family Swim Night

5-8 p.m. BNL Pool. \$5 per family

Fridays: Family Gym Night

5-8 p.m. Family gym activities. Free

Blood Drive, 9/29

BNL will hold a Blood Drive on Tuesday, September 29, 9:30 a.m. – 3 p.m. in the Brookhaven Center. Donors must be 16 to 75 years of age, in good health and weighing over 110 lbs. Restrictions may apply to some from the UK and Europe. Donors must have a photo ID and know their social security number.

To make an appointment, log on to the Human Resources webpage, click on “Blood Drive,” then “Schedule an Appointment.” Or, call Liz Gilbert, Ext. 2315.

In Memoriam: Edwin ‘Ed’ Losee

Edwin “Ed” Losee, a senior technical specialist in the National Synchrotron Light Source Department (NSLS), died on August 9, 2009. He was 51.

Losee, who is described by colleagues as outgoing, humorous, innovative, and an extremely hard worker, first came to Brookhaven Lab in 1988 as a computer numeric control operator in the Central Shops Division. In 1995, he became a principal technician in the Alternating Gradient Synchrotron Department, and in 1997, he returned to Central Shops as a tool and instrument maker. He joined the NSLS in 2005 as senior technical specialist.

“He was the workhorse in the shop,” said Losee’s supervisor Bob Scheuerer, an NSLS senior technical project manager. “If he had even 10 minutes of free time, he’d be in my office asking what he could do. He was always the first to offer a helping hand.”

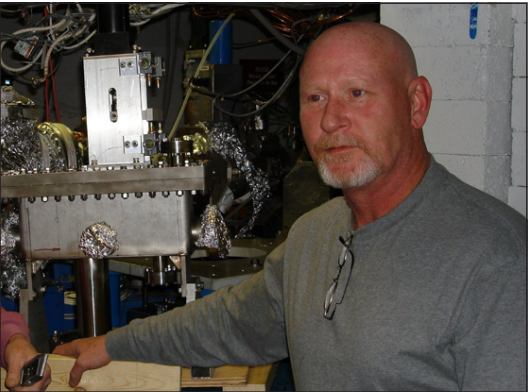
Losee’s coworker, Jim Newburgh, remembers him as an

outstanding machinist, always determined to do whatever he could to keep the NSLS rings running and willing to sign up for the “nasty” tasks that others avoided.

“It was always a pleasure to work with him,” Newburgh said. “Whenever he appeared on a job, I knew it was going to go better from there on out.”

In addition, Losee had a great sense of humor, Scheuerer said. “He was so outgoing and friendly,” he said. “And he was always kidding with us. He actually was cracking jokes right before he walked out on his last day here.”

Colleagues also remember him as a dedicated family man who, along with his wife, took care of numerous foster children, many of



whom were born with disabilities or to drug-addicted parents. They also had three children of their own.

“It wasn’t easy,” Scheuerer said. “They probably had five or six different foster babies in the house during the last two years. There were many trips to the doctor’s office and many sleepless nights. It’s definitely a sign of the kind of heart he had.”

Ed Losee, a resident of Mastic Beach, is survived by his wife, Renee, and three children.

— Kendra Snyder

Fingerprint from pg. 1

For example, by varying the chemical composition, level of doping, or characteristics of the copper-oxide planes in the layered material, the scientists can measure the strength of quantum phase fluctuations affecting electron-pair cohesion.

These measurements may help scientists zero in on ways to induce coherent superconductivity at a higher range of temperatures than previously possible. And that would be an essential step to achieving real-world applications without the need for expensive cooling systems.

— Karen McNulty Walsh
For a fuller account of this research, see http://www.bnl.gov/bnlweb/pubaf/pr/PR_display.asp?prID=994.



Roger Stoutenburgh 07/24/09

146 BNLers Receive FY08 Spotlight Awards

For extending extraordinary efforts in response to the needs of their departments or divisions, the following 146 BNL employees, including those pictured above, were honored during fiscal year 2008 by Spotlight Awards: Doug Aichroth, Lee Akas, Joshua Allen, Leesa Allen, Richard Allingham, Maureen Anderson, James Anselmini, Karen Apelskog-Torres, Sandy Asselta, Rick Backofen, William Bambina, Deborah Bauer, Marsha Belford, Cyrus Biscardi, Tracy Blydenburgh, Ken Boland, Kimberly Boomer, Ripp Bowman, Steven Bugros, Laura Buscemi, John Butler, Patrick D. Bynum, Nelson D. Cause, Matt Ceglia, Cheryl Christie, Pam Ciufo,

Susan Clements, Cheryl Conrad, Todd Corwin, Anthony Costantini, Kathleen A. Dargan, Peter Davila, Walter DeBoer, Chris Deegen, Suresh Deonarine, Richard V. DeRocher, Marge Desmond, Ray Diaz, Joann Durham, Catherine Ennis, Joe Famiglietti, Richard Felter, Lynda Fitz, German Flete, Jean Frejka, John Galvin, Marie Gavigan, Louis Gerlach, Beth Gilman, Darryl Goldberg, Dean Green, Kathleen Gurski, Michael Hamilton, Antonio Hammil, Guy Hartsough, Claudia Hatton, Jennifer Higbie, A. Hoffmann, Diana Hubert, Wayne Hulse, Dean Ince, Allen Jones, Kenneth Jones, Laura Jones, Barbara Juliano, Dimitrios Katramatos, Deborah Kerr, Sung

Won Kim, Bill King, Cynthia Klemm, Anastasia Kuczewski, Cheryl Ann Kuhn, Walter Lamar, Eileen Levine, Alexsandra Lopez, Ed Losee, Elaine Lowenstein, Phyllis Lucas, Tadashi Maeno, Dean McDonald, Breffni Medcalf, Anette Meier, Jim Milligan, John Mingoa, Jody M. Mitchell, Thomas Morton, Starr Munson, George Murdock, Frank Naase, William Newburgh, Peter Oddo, Gail O’Hern, Jorge Oliva, Kenneth Pederson, Lauri Peragine, Anna Petway, Paul Philipsberg, Eileen Pinkston, Marylou Poli, Gloria Ramirez, Marteenio Rankine, Arlene Rementer, Dennis J. Robertson, Donna Rubino, Amna Saeed, Linda Sallustio, Chris-

tina Sanfilippo, Mark Sardzinski, Carrie Sauter, Robert Scheuerer, Dawn Schick, Michael Schueler, Betsy Schwartz, Scott Seberg, Thomas Seda, Andy Seelin, Bonnie Sherwood, Craig Sirot, Yuri Smirnov, Kelly Smith, Scott Smith, Kendra Snyder, Janet P. Soper, Paul Sparrow, Dave Stillwell, Donna Storan, Shantilata Subudhi, Jack R. Tallent, Joan Terry, Judy Thompson, John Tradeski, Jr., Bernadette Uzzi, Joyce Vail, Thomas Van Winckel, Cynthia Vongerichten, Richard Wall, Chris Watts, Alan Weston, Edward Whittle, Sarah Wiley, Jim Williams, John “Jay” Woods, Lijun Wu, Andrea Wund, Marilyn Zane, and Philip Zeo.

Superconductors from pg. 1

...describe these magnetic properties is incomplete.” The measurements were made at a neutron scattering spectrometer at the Rutherford Appleton Laboratory in the U.K, and verified with additional measurements at the Institut Laue-Langevin in France.

It is not that the magnetic properties are completely unrelated to the electronic properties; they are both still part of the same system, the scientists emphasize. Magnetism, after all, comes from the relative arrangements of the directions in which electrons spin, like a collection of tiny bar magnets.

“It could be that the magnetism somehow drives the electronic structure, rather than

the other way around — or that something underlying both magnetism and electronic structure influences both but in different ways,” Xu said.

“You can think of it as the foreground and the background of a painting,” Tranquada suggested. “We are interested in the superconductivity, which is what stands out — the foreground. And we know electrons are involved in that by pairing up to carry current with no resistance. But are those same electrons defining the magnetic properties? Or do other, ‘background’ electrons define the magnetism?”

Studying these characteristics will be important as scientists search for or try to design new materials that act as supercon-

ductors at temperatures appropriate for real-world applications, such as high-efficiency power transmission lines.

“If the dual existence of localized and free-flowing electrons is important, we want to look for other materials that have those characteristics, but transition to superconductivity at even higher temperatures,” Tranquada said.

— Karen McNulty Walsh
For the full news release on this research, see http://www.bnl.gov/bnlweb/pubaf/pr/PR_display.asp?prID=989. From this link, you may link to the published paper, the related story about the Energy Frontier Research Center at Brookhaven Lab, and more stories about superconductivity research at BNL, including “Fingerprint” story, pg. 1.

Second Therapist for Physical Therapy

In October, a new physical therapist assistant will join the staff at the Occupational Medicine Clinic (OMC) to provide physical therapy services for lab employees. Employees with a prescription from their doctors for physical therapy services may call Ext. 3328 and make an appointment. In addition, PTD will install the Biodex Isokinetic dynamometer, an advanced tool used to rehab and strengthen patients with many conditions that affect the musculoskeletal system. For more information on rehab system at http://www.biodex.com/rehab/system4/system4_feat.htm.

Congratulations, Volleyball League Winners



Open A League Champions: Empire Defeated Pandemonium in the finals, 3 games to 0. (25-12, 25-17, 25-22) From left: Greg Marr, Art Sedlacek (?), Travis Shrey, Ruimei Ma, Dan Mulaly. Not pictured: Alain Domingo, Tom Hayes



Open B League Champions: Shankadelic Defeated Late Entry in the finals, 3 games to 2. (13-25, 23-25, 25-13, 25-15, 25-21) From left: Cecilia Sanchez-Hanke, Gene Van Buren, Marie Van Buren, Art Sedlacek, Kensuke Okada, Christie Nelson. Not pictured: Dario Arena, Jen Arena.



Mixed 2 League Champions: Another Round Defeated Team Bad Pass in the finals, 3 games to 2. (25-21, 26-28, 11-25, 25-18, 25-23) From left: Tom Morello, Lisa Morello, Michelle Wilinski, Rich Alles. Not pictured: John Bohnenblusch, Lisa Bohnenblusch, Enessa Fusco, Louis Nieves



Mixed 3 League Champions: Cobbled Together Defeated Upton Ups in the finals, 3 games to 0. (25-17, 25-16, 25-13) Front from left: Sabine Kessler, Marissa Familette, Debbie Brodbar. Back from left: Rich Alles, Gary Polonski. Not pictured: John Bohnenblusch, Lisa Bohnenblusch, Elizabeth Caparelli, Gary Schroeder.

Play Volleyball!

For its 2009-2010 season, the BERA Volleyball League resumes play on Monday, October 12. The league offers teams for players of every ability and skill level, so come and join in the fun! All players are invited to get warmed up for the season by playing open volleyball in the gym on Monday and Wednesday nights.

Service Anniversaries

The following employees celebrated a service anniversary in June:

— 40 Years —	
Bette Morgan.....	EENS
— 35 Years —	
Morgan May.....	Physics
— 30 Years —	
James Alessi.....	C-AD
Vincent Castillo.....	C-AD
David Derryberry	C-AD
John DiNicola	Facil./Ops.
Dawn Farrell.....	CEGPA
Stephen Howell	Chemistry
Christopher Manning...	Maint./Fab.
Bonnie Miller	HR0M
Roger Stoutenburgh.....	CEGPA
William Newburgh	NSLS
Susan Wong.....	ITD
— 25 Years —	
Robert Best.....	NSLS
Yusuf Celebi.....	En./Scis./Tech.
Mary Durham	Facil./Ops.
Robert Selvey	S&H Svcs.
George Kontovrakis	En./Utils.
John Skaritka.....	NSLS-II
— 20 Years —	
Anthony DiDio.....	Maint./Fab.
Raymond Dumont	CEGPA
Betty Elder	Bus. Svcs.
Joyce Fortunato	Q/Mngmt.
Robert Selvey	S&H Svcs.
Celeste Tymann	Staff Svcs.
Jia Wang	Chemistry
— 10 Years —	
Stuart Carroll.....	Facil./Ops.
Gloria DeBoer	NNS
Alexei Fedotov	C-AD
Lisa Folk	HR0M
Henry Hocker.....	Magnet
James Marron.....	BSD
Jorge Oliva.....	NSLS-II
Leo Palumbo.....	Waste Mngmt.
Andrew Salamone, Jr...	Maint./Fab.
Robert Skeeter	Site Svcs.
Brian Van Kuik	C-AD
Igor Zaliznyak	CMP&MS

The following employees celebrated a service anniversary in July:

— 40 Years —	
Thomas Crews.....	Site Svcs.
— 35 Years —	
Cora Feliciano.....	Physics
David Stampf	Comput. Sci.
— 30 Years —	
John Biggs.....	Physics
Cyrus Biscardi	C-AD
Richard DiFranco.....	C-AD
Stephen Gill	C-AD
Edward Murphy	Facils./Ops.
Lev Neymotin.....	NNS
Joseph O’Conor	Medical
Dysart Ravenhall, Jr.....	C-AD
Carl Skrezec, Sr.	C-AD
John Tradeski, Jr.	Physics
Clarence Wilkins	Proc./Prop.
— 25 Years —	
Tsong-Lun Chu.....	En./Scis./Tech.
Robert Hackenburg	Physics
Frank Pomaro	En./Utils.
Johnnie Turner, Jr.	Site Svcs.
— 20 Years —	
John Bruce	Maint./Fab.
Gary Danowski	C-AD
Stevenson Eckhoff ...	Maint./Fab.
Thomas Hayes	C-AD
Patricia Lee	NNS
Beth Lin	Biology
David Scott Coburn.....	CMP&MS
Jesse Schmalzle.....	Magnet
Edward Zeitler	NSLS
— 10 Years —	
James Anselmini	Chemistry
Maryellen Braunreuther.....	HR0M
Benjamin Mastrocola ..	Proc./Prop.
Bobbi Micari	Proc./Prop.

Cashier Hours, 9/28

The Cashier will open 9 a.m to 12:30 p.m. on Monday, 9/28, and resume 9:30 to 11:30 a.m. service on 9/29.

Volleyball Captains’ Meeting, 9/23

Captains interested in fielding teams for the Volleyball League should attend the captains’ meeting on Wednesday, September 23, at noon in Berkner Hall, Room A. Bring a signed roster form with you. For more information, visit the league’s web site at www.vb.bnl.gov, or contact Marie Van Buren, Ext. 4727 or vanburen@bnl.gov; or Alain Domingo, Ext. 7060 or domingo@bnl.gov.

Employee Depression & Alcoholism Screening Week, 9/21-25

The Employee Assistance Program in the Occupational Medicine Clinic is holding a depression and alcoholism screening program from Monday through Friday, September 21-25. Depression is a serious medical condition that involves the body, mind, and moods. It can affect your sleep, how well you get along with others, and your outlook on life. All screenings are completely confidential. Call Ext. 4567 for an appointment. Walk-ins are accepted, but appointments are strongly encouraged.

Employee Lunchtime Tour: PHENIX, 9/25

The employee lunchtime tour on Friday, September 25, will visit the 4,000-ton PHENIX detector at the Relativistic Heavy Ion Collider (RHIC). Inside the RHIC ring, two beams of particles are guided by magnets in opposing directions until they collide at predetermined points. PHENIX shows the “inside” of the hot, dense matter formed in the collision. To learn about PHENIX and how it records the different particles emerging from RHIC collisions, join a group in Berkner Hall lobby at noon to be taken to PHENIX. No reservations are necessary. The group will return to Berkner by 1 p.m.

AdoptaPlatoon Book and Bake Sale, 10/1

The Brookhaven Veterans Association’s AdoptaPlatoon Committee will hold a book and bake sale in the lobby of Bldg. 400 on Thursday, October 1, from 11 a.m. until 3 p.m. All items, both books and baked goods, cost only one dollar each and all proceeds will go to support our troops serving in the military.

Volunteer bakers are needed for the fundraiser. Slices of cakes, breads, cup cakes, and small bunches of cookies should be pre-wrapped for the sale. Call Joanne Rula at Ext. 8481 with any questions.

Defensive Driving Course In Two Parts, 9/21 & 24

The next six-hour Defensive Driving (Point & Insurance Reduction) course will be held in two parts on Monday and Thursday: September 21 and 24, in Berkner Hall, Room B, from 6 p.m. to 9:15 p.m. The course is open to BNL, BSA, and DOE employees, facility-users, and their families. The cost is \$38 per person. Preregistration is required. To register, call Ed Sierra, 821-1013, and leave a message. Include your phone number. Another two-part course is scheduled for October 19 and 20.

CALENDAR

— WEEK OF 9/21 —

Mon.-Fri. 9/21-25

*Depression/Alcoholism Screening Employee Assistance Program offers 30 min screening. See www.bnl.gov/hr/occmed/EAP. Call Ext. 4567 for appointment.

Monday, 9/21

*Defensive Driving, Part I of Two 6-9:15 p.m. Berkner Hall, Room B. \$38. Call 821-1013, leave tel. no. See notice below, left.

Thursday, 9/24

*Defensive Driving, Part II of Two 6-9:15 p.m. Berkner Hall, Room B. Part II. See notice below, left.

Friday, 9/25

*Employee Lunchtime Tour: PHENIX Noon-1 p.m. Berkner Hall lobby. Meet the group to be taken to learn about the PHENIX detector at the Relativistic Heavy Ion Collider. No reservations needed. See notice below, left.

Saturday, 9/26

*Spanish & Flamenco Concert 7 p.m. Berkner Hall. The Sol y Sombra Dance Company will perform Spanish and Flamenco music and dance in celebration of the guitar. All are welcome. Tickets are \$12 in advance at the BERA Store. To benefit the BHHC’s scholarship fund for high school students. See pg. 4.

— WEEK OF 9/28 —

Monday, 9/28

Apple Picking Trip

10 a.m. Recreation Hall. Come apple picking with the Hospitality Committee and the English for Speakers of Other Languages. Children are welcome. Some drivers are needed. Contact Jennifer Lynch, 344-4894 or jlynch@bnl.gov for more information.

IBEW Meeting

6 p.m. Centereach Knights of Columbus Hall, 41 Horseblock Rd., Centereach. A meeting for shift workers will be held at 3 p.m. in the union office. The agenda includes regular business, committee reports, and the president’s report.

Tuesday, 9/29

*Give Life at the Blood Drive

9:30 a.m.-3 p.m. Brookhaven Center. As always, blood is desperately needed. See pg. 2.

Thursday, 10/1

*AdoptaPlatoon Book & Bake Sale

11 a.m.-3 p.m. Bldg. 400 lobby. Food for body and spirit on sale for \$1 a-piece to support troops serving in the military. Organized by the BNL Veterans Association’s AdoptaPlatoon Committee. Volunteer bakers, please contribute, all items pre-wrapped. Contact Joanne Rula, Ext. 8481. See notice at left.

Body & Soul Health Month Starts With Fitness Walk

Noon-1 p.m. Science Education Bldg. 438. Meet for 2-mile walk. Details on month’s activities in next week’s Bulletin and at <http://intranet.bnl.gov/bodyandsoul/>.

Arrivals & Departures

— Arrivals —

Alessandro Cunsolo	NSLS-II
Wisman Dartiguenave	C-AD
Jasmine Hatcher.....	Chemistry
Petr Ilinski	NSLS-II
Shaorui Li.....	Instrumentation
Wuyin Lin	ESD
Zhaoming Ma.....	Physics
Lawrence Margulies	NSLS-II
Yasuo Matsubara.....	Chemistry
Kelly Roy	NSLS-II
Lutz Wiegart.....	NSLS-II

— Departures —

Jeremy Jacobsen	C-AD
Patricia Fachini-Laue	Physics
Jay Packard	Physics

Classified Advertisements

To apply for a position, go to www.bnl.gov. Select "Job Opportunities," then "Search Job List."

LABORATORY RECRUITMENT - Opportunities for laboratory employees only.

ADMINISTRATIVE ASSISTANT (A-4, reposting) - Requires some form of secretarial or office administration training, plus eight years of experience which includes two years at BNL in a current or similar role. Must possess excellent organizational skills and ability to develop and implement systems to improve Division efficiency and effectiveness. A bachelor's degree in a business field with coursework, or training, specifically related to the position requirements, may offset qualifying experience, with the exception of the two years experience at BNL in the current or similar role which cannot be offset by a bachelor's degree. Must possess strong communication skills, both oral and written, and be able to work under pressure, balance priorities, and perform multiple tasks. Comprehensive knowledge of Laboratory policies and procedures and proficiency in MS Word, Excel, PowerPoint, Outlook and FrontPage are required; as is knowledge of PeopleSoft foreign and domestic travel systems and web requisitions. Must have the ability to work independently as well as function effectively as a team member. Reporting directly to the Safety & Health Services Division (SHSD) Manager, will apply independent judgment within policies and standards to formulate approach to completing projects and administering processes. With minimal guidance, will investigate and resolve matters of significance on behalf of Division Manager. Will also provide varied support including: travel arrangements for Division Manager and all Division staff, records management, tracking deliverables and corrective actions in CCTS and ATS, arranging meetings/coordinating schedules for Division Manager and staff, maintaining and updating SHSD web pages, taking minutes and editing correspondence and reports. Will act as Training Coordinator and Records Management Representative for the Division Safety & Health Services Division. Apply for Job ID #14996.

OPEN RECRUITMENT - Opportunities for Lab employees and outside candidates.

SCIENTIFIC STAFF POSITION (ASSISTANT/ASSOCIATE/SCIENTIST) - (Nuclear Reaction Data Physicist) - Requires a Ph.D. in low energy nuclear physics, preferably with several years of experience after Ph.D. in low energy nuclear reaction research. Knowledge of nuclear reaction theory and models is essential. Familiarity with nuclear data evaluation, processing or validation would be considered an advantage. The position involves modeling nuclear reactions to develop evaluated cross section files along with the respective covariance data for the ENDF/B library. Depending on qualifications, the position might also involve processing and/or validation of nuclear reaction data. Development and maintenance of computer codes and/or web applications will be an inherent part of the job. Therefore, a thorough knowledge of computer programming languages, such as FORTRAN and C (++) is required. Acquaintance with the scripting languages such as bash shell, Tcl/Tk, Java or Python is desired. We are looking for a detail oriented person with good written language and communication skills, willing to take directions, to follow tight schedules, and be a team player able to work with others. Some basic research opportunities exist, but mostly at own initiative. The level of the position will be based on the background and experience of the selected candidate. Expected start date of this appointment is Spring 2010. under the direction of Dr. M. Herman, Head of the National Nuclear Data Center, Energy Sciences & Technology Department. Apply for Job ID #15035.

POSTDOCTORAL RESEARCH ASSOCIATE (Plant Biology, Metabolism, Plant Biochemistry, Systems Biology) - Requires a Ph.D. in biology, preferably in plant biochemistry or chemical engineering, and a publication record in international journals. Experience in two or more of the following areas are preferred: plant biochemistry, metabolic flux analysis, systems biology, and mass spectrometry. Skills in programming and using mathematics software (MatLab) are desirable. Will be part of an international team seeking to increase rapeseed oil yield using a systems biology approach and will focus on improving understanding of partitioning of carbon into oil production through the use of metabolic flux analysis and enzyme activity profiling. For more information regarding current research projects: <http://www.biology.bnl.gov/plantbio/schwender.html>. Under the direction of J. Schwender, Biology Department and A. Rogers, Environmental Sciences Department. When applying for this position, please include a CV and cover letter detailing research interests, including the required names and email addresses of at least three references. BNL policy states that Research Associate appointments may be made to those who have received their doctoral degrees within the past five years. Apply for Job ID #15036.

POSTDOCTORAL RESEARCH ASSOCIATE - NANOPositioning - 2 YEAR TERM POSITION - Under the direction of the Hard X-ray Nanoprobe (HXN) group leader, will carry out scientific and technical research needed to develop a prototype x-ray microscope for the HXN beamline of the NSLS-II. Will work closely with the nanopositioning engineer and beamline scientists of the NSLS-II on solving scientific and engineering problems associated with the nanopositioning/scanning system. The problems include developing of high-stiffness mechanical guidance, flexures, subnanometer laser interferometric techniques, dynamic controls for achieving high scanning speed, and appropriate temperature and stability methods. Will participate in design, construction, testing and x-ray microscopy experiments at synchrotron sources using the prototype. Requires a PhD in physics, mechanical engineering, electrical engineering, or related discipline, excellent problem-solving and communication skills and the ability to interact effectively with scientific and technical staff. Knowledge of and experience with x-ray microscopy, scanning-probe microscopy, laser interferometers, piezo-electric devices, mechanical guidance systems and/or dynamic controls and x-ray optics is highly desirable. BNL policy states that research associate appointments may be made to those who have received their doctoral degrees within the past five years. National Synchrotron Light Source II. Apply for Job ID# 15033.

ASSISTANT SCIENTIST - STRUCTURAL BIOLOGIST (S-1) - Requires a PhD in biochemistry, physics, or chemistry to support the National Institute of General Medical Sciences program at beamline X6A. Appointee will work closely with the scientific community. Responsibilities include conducting innovative research in structural biology and x-ray diffraction techniques. Requirements include at least two years of demonstrated user support at a macromolecular crystallography beamline; excellent written and oral communication, and ability to work with a diverse group of scientists, engineers and technical staff. Experience in design, installation and maintenance of beamlines and associated instrumentation at an existing synchrotron facility are a plus. National Synchrotron Light Source. Apply for Job ID #15027.

ELECTRICAL PROJECT ENGINEER (P-7/P-9, reposting) - Electrical Engineer with a BSEE, and a minimum of seven years' experience in power distribution and transmission engineering that includes five years of in-plant electrical power engineering experience in heavy industry, consulting engineering, or power generation. Professional registration or the ability to attain registration is highly desirable. Must have good communication skills and be self-motivated. Knowledge of Auto-Cad and electrical engineering analysis software is a plus. Experience with electrical distribution systems and power plant electrical equipment involving voltages from 120V up to 69 kV is required. Requires experience performing engineering studies, electrical engineering analysis and design, and troubleshooting of existing plant equipment. Experience in the incorporation of the National Electric Code as well as other electrical standards as referenced in the Building Code of NYS is necessary. Responsibilities include electrical design of building systems and plant distribution systems, specification development, and management of electrical construction projects. Will be placed at the P-7 or P-9 level dependent upon years of experience and depth and breadth of relevant knowledge and skills. Modernization Project Office. ERAP Eligible \$1,000. Apply for Job ID #4244.

STAFF ENGINEER/MECHANICAL ENGINEER (P-5/P-7, term position, reposting) - Duties include working on an engineering team in preparation for the preliminary design, specification, fabrication, procurement, installation and commissioning of various mechanical subsystems of NSLS-II. Will also build and evaluate prototypes of these systems and propose upgrades and improvements as needed. Requirements include a BS degree, or equivalent in mechanical engineering or closely related field, a minimum of three years of progressively responsible related work experience, substantial knowledge of mechanical designs, analysis, materials and manufacturing processes, and precision assemblies; considerable experience in the use of 3-D CAD (Inventor or Pro-E) tools, drawing standards and engineering codes. Must possess excellent communication skills and must be able to work effectively with the scientific, technical and procurement staff of the project. Preferred requirements include knowledge of accelerator magnets, vacuum system, and high-precision motion stages. Will report to the NSLS-II mechanical engineering group leader. National Synchrotron Light Source II. ERAP Eligible: \$1000. Apply for Job ID# 15026.

ELECTRONICS TECHNICIAN/TECHNICAL ASSOCIATE II (T-4) - Responsibilities include the calibration, testing, installation and assisting in the commissioning of NSLS-II facility beam instrumentation, as well as maintaining quality and test logs of all instrumentation systems. Must also be able to build, repair from schematic drawings, and assemble chassis using mechanical fabrication techniques using standard

test procedures. Must be self-motivated, able to work with a minimum of supervision, and have good communication skills. Requires an AAS degree in electrical engineering technology or equivalent experience, at least six years of experience in the maintenance and troubleshooting of complex electronic, electrical, and mechanical systems, and knowledge and use of standard test and measurement equipment such as function generators, oscilloscopes, multi-meters, and spectrum analyzers. Experience with electrical and mechanical systems in accelerator beam diagnostics instrumentation, computer controls, and basic machine shop skills are highly desirable. Will report directly to the Diagnostics and Instrumentation Group Leader, National Synchrotron Light Source II. ERAP eligible: \$1,000. Apply for Job ID #15034.

Motor Vehicles & Supplies

07 TOYOTA YARIS SEDAN - 31K mi. 5 spd, great cond, mostly hwy mi, no accidents, non-smkr. \$11,000. 338-6486.

06 HONDA CIVIC EX - 89K mi. dealer maintd, orig owner, hwy mi, \$11,800 neg. Ext. 7941, 766-3427 or mike@bnl.gov.

06 VW PASSAT - 32.348K mi. '06 mint cond, 2.0t, gray. \$14,000 neg. 525-8835.

05 CHRYSLER TOURING 300 - 82K mi. black pearl, mint, 6 cyl many extras. \$8,900 neg. 929-4978 or mjulian@bnl.gov.

01 MAZDA 626 - 101K mi. silver, 4 cyl, 2.0, 4 new tires/brakes, great gas mi, runs well. \$3,200 neg. 897-0632 or hzhai@bnl.gov.

98 CHEVY MALIBU - 135K mi. 4 dr, V6, pw, pl, well maint, burgundy. \$1,500. 882-0519.

98 H/D FXD - 9100 mi., runs well, looks great, many extras, asking \$9,000. John, Ext. 2790.

95 FORD F150 SUPERCAB - 180K mi. 8 cylinders, 8 ft. bed, cab & liner, alarm & remote start, best offer. 929-4438.

94 JEEP GRAND CHEROKEE LTD - 121K mi. loaded, 4WD, tow pkg, great off-road, many new parts. \$2,900. Ext. 3116.

94 OLDSMOBILE SEDAN 98 - 131K mi. 6 cyl, green, air, \$1,900 neg. 751-6820, Ext 4329.

93 DODGE RAM 150 - 132K mi. new pwr steering, brakes, battery, altinator, 318 eng, a/c, runs well. \$2,700. 626-0579.

92 BUICK CENTURY - 130K mi. 4 dr, excel cond, grt tires, recent brakes, \$1,650 neg. 298-4121.

MINI VAN SEATS - Ford Windstar 1 bench st \$100, 1 capt. st \$50. Step bars \$50, & bedliner, \$75, for 94-200 Ddgc pickup, \$50, across bed tool box, locks, \$100. 924-7476.

TRUCK CAP - F/Glass bed cap for full sz pickup, 1 wndw brkn, working locks, slgd windows w/ scrns \$200 neg. 924-7476.

Boats & Marine Supplies

27' CATALINA 1988 SAILBOAT - SLOOP - ready to sail, mint cond, dock slip space pd thru 09 sailing season, E. Hptn. \$18,000 neg. 773-837-4490, woicik@bnl.gov.

25' CHAPPARAL RUNABOUT - 25ft. Chapparral, 1989 rebuilt Merc Cruiser 280 hp 320 hour new out drive less 10 hours. \$8,500 neg. Fritz, Ext. 4049, 627-3016.

21' SUNRUNNER 210 - '87, cuddy cabin, 260merc-cruiser, extras, new canvas, new batt, potty, BBQ, pulls 2 skiers. tandem trailer w/surge brakes. \$4,500 neg. 821-2586.

'73 CATALINA 22 SAILBOAT - gd cond, 4 g sails, motor/trailer extra, \$1500/neg. 379-4036.

Furnishings & Appliances

AIR CONDITIONER - willing to bargain @ a substainial price. 730-0745.

BABY FURNITURE - white crib w/dresser drawer underneath and dressing table, ask/\$100. Ms. Scott, 698-9016.

BABY'S ITEMS - Crib, 4-drwr change table/dresser, it honey oak, excel. cond. Pics/ Dims avail., \$175. moloughlin@bnl.gov.

DESK, NIGHTSTAND - Oak vneer desk 40.75"wx29"h,\$55; matchg n/stand 20.75"wx19.5"h, \$25; bth 17"d w/drwr, Ext. 2897.

DISHWASHER - Stainless steel int, \$50, Range hood \$15, Fireplace double-sided \$100. Karl, Ext. 3116.

DISHWASHER - Kitchenaide dishwasher stainless steel tub \$50. 924-7476.

MICROWAVE CABINET - w/wheels, wood, storage, 52.5hx17.5dx24"w, towel rack, drawer, pics avail, \$35. 591-1183.

PANASONIC TV - 32", 8 yrs old, works well, \$75. Jeffrey, Ext. 2525.

Audio, Video & Computers

42 - 42" SONY Rare Projection TV, v/gd cond, ask/\$150, call after 6pm. Ying Yang, 443-4180.

Miscellaneous

ABS SEIZER - Body By Jake Abs seizer w/instructional DVD/\$50. 979-7043.

APARTMENT FOR MOM AND SON - lost all, presently living in shelter, dog at kennel, Boy worked all summer to help keep his dog at boarding kennel. Trying to reunite, need \$950-\$1050. Kathleen, Ext. 3161.

BALL POOL, BED RAILS - lg bag of balls, 4 ball pool & sm inflatable pool/\$20; 2 safety 1st bed rails/\$20/ea or 2/\$35. Dorene, Ext. 4153 or price@bnl.gov.



Spanish Classical and Flamenco Concert, 9/26

The Sol y Sombra Dance Company will perform a concert of classical Spanish and Flamenco music and dance on Saturday, September 26, at 7 p.m. in Berkner Hall. Sponsored by the Lab's Hispanic Heritage Club (BHHC), the event is open to the public. All visitors to the Lab age 16 and over must bring a photo ID.

Entitled "La Guitarra," the concert will celebrate 500 years of Spanish guitar and the music, song and dance that it has inspired. In addition to live guitarists, singers, and dancers, visual works will be featured from Latina artist Pura Cruz's "Broken Guitar" series.

This concert is made possible in part by grants from the New York State Arts Council's Decentralization Program, the Suffolk County Office of Cultural Affairs, and a community grant from Suffolk County Legislator Vivian Viloria-Fisher.

Tickets are \$12 in advance and \$15 at the door on the day of the performance. Buy tickets at the BERA Store in Berkner Hall or through www.ticketweb.com. Proceeds will benefit the BHHC's scholarship fund for high school students.

BOOKS - Readrs Digest Select Eds, 12 vol. hardcover set, like new, retail/\$264, \$22/ book ask/\$50/obo. moloughlin@bnl.gov.

CONCERT TICKETS - 1 tckt Ingrid Michaeelson 9/16 @ Webster Hall \$27. One tckt Rodrigo Y Gabriela @ Terminal 5, 9/16 \$43. Cheryl, Ext. 4617.

DIAMOND ENGAGEMENT RING - Solitaire SI2 White, .65ct, 14K gold, photo avail, \$850/obo. 516-817-0999.

NEW DGB CD AT BERA STORE! - The Doug Gordon Band's new CD "SPIN" is now available, \$10.dgbdoug@gmail.com.

VENDING MACHINE - Authentic/Vintage One-Cent Gumball Vending Machine/\$50. Chris, 979-7043.

Sports, Hobbies & Pets

HARROWS DELUXE POOL - abve grd, 15'dx4'h, heavy duty liner filter/skimmer/hoses/vacuum incl, no leaks. Joseph, Ext. 7625 or jpapu@optonline.net.

METS TICKETS - Two, Mets vs Atlanta 9/23/09 \$32 ea. Mets vs Houston 10/3/09 \$40 ea. Ext. 2745, benante@bnl.gov.

Happenings

"AMAZEDNESS KITE FLY" - to benefit American Cancer Society, Sun., Sept. 20, 12-4pm, Smith Point Beach. Bring your own kite or buy one there! free pkg. Adm. \$5. Tell cancer to go fly a kite!. 474-1213.

CREATION MYTHS & STORIES - Art Exhibit, Concert, Reception, music by Jack's Waterfall at Congregational Church of Patchogue. 95 E. Main St, Patchogue, Sat, Sept 19. Rev. Dwight Lee Wolter, 475-1235.

DGB - CD RELEASE PARTY! - 9/26, Mulcahy's Centereach. 7-11:30. All get the new Doug Gordon Band CD "SPIN" FREE!! \$10 admisn. 18 + over. dgbdoug@gmail.com.

Free

ORGAN - Organ in excellent condition. You pick up. 765-4944.

Wanted

BABY FOOD JARS - Looking for Empty, Clean baby food jars w/lids. All sizes appreciated. Sonya, 236-2315 or skiss@bnl.gov.

PATIO FURNITURE SET - white wicker, loveseat/chairs/table, inexpensive, gd cond. Rick, Ext. 3005 or rbuono@bnl.gov.

For Rent

BLUE POINT - fully furn 3 bdrm, 2 bath, d/r, w/d, nr major transportation, Serene n'hood, grt views of sunrises, all util incl, avail Oct thru June. \$2,500/mo. 987-6906.

CENTER MORIES - nice 1 bdrm apt, full closet, eik, close to lab, recently painted, v/quiet st, incl all. \$800/mo. George, 878-1178 or murdock@bnl.gov.

CENTEREACH - bright 1 bdrm grd level, pvt ent, l/r kit combo, new carpet & appl, no smkg/pets, util incl except cable, 20 min to lab. \$895/mo. Lorraine, 696-2467.

MIDDLE ISLAND - 1 lg bdrm bsmt apt, pvt ent, tel, cable/int/heat/elect all incl, no smkg/pet, quiet, nr Lab, BNL or SBU only. \$800/mo. 672-2451 or dioszegi@bnl.gov.

MIDDLE ISLAND - Newly redecorated furn. studio apt., clean, bright, for one person. All utilities incl., close to Lab, No smkg. no pets. \$750/mo. 516-205-6712.

MILLER PLACE - furn. Col. house in prof. resid. area, tv/cac/int, full kit, own bdrm, 8 mi to BNL, 10 mi to SBU, incl all, responsible non-smkr. \$675/mo. 744-8386.

MORICHES - 2bdrm, 2ba., 1150 sq.ft. apt, sublet Oct-Mar, can renew lease. w/d in unit. New kitch appl. heat incl. 15 min to BNL. \$1,600/mo. 344-2356 or rfllier@bnl.gov.

RIDGE - 1 bdrm pergo flrs, ceramic tile, SS appli, cac, drway prkg, prv ent, 5 mins from Lab. \$1,000/mo. 848-1648.

RIDGE - 1 bdrm, kit, l/r/dr combo, bath, 1 car gar, own drway, wdbrnng stove, quiet, 1 mi to Lab, ref/sec. \$1,200/mo. incl elect, water. 345-5426, sholaces@optonline.net.

ROCKY POINT - 1 bdrm upper unit, kit, bath, l/r, balcy, co-op comm, nr stores, lndry rm on prem, prkg spot, no smkg/pets, cac, incl, gas/water. \$1,150/mo. 806-5965.

S. SETAUKET - new, v/clean 1 bdrm, full kit, w/d, a/c, heat, cable, wireless int, drway prkg, prv ent, storage, nr LIE, Nrthrn State & 347, \$1,000/mo. 241-9389.

WADING RIVER - 2 bdrm., 1 bath, extra bdrm/bath in fin. bsmt., w/d, 1-car det. gar. w/storage, yard, pvt. beach, SWR schools, utils xtra., 2 mo. sec., \$1,800/mo. 987-3259.

WADING RIVER - 1 bdrm., full bath, kit, l/r, small xtra rm./office, fenced yard, lg. shed, short walk to beach, ref's & sec. req'd. \$1,150/mo. 886-1545.

WADING RIVER - 1 bdrm apt, bright, spacious, clean, pvt ent, walk to beach, heat, elect, incl, no smkg/pets. \$980/mo. 988-7008.

YAPHANK - fully furn spacious studio apt for 1, hi spd int, all util incl, quiet, lovely area, 5 min to Lab, no smkg/pets. \$850/ mo. 516-205-6712.

For Sale

BOYNTON BEACH, FL - 55+ condo, 1800sf, 2nd flr, priv ent, 2/2+den, near everything, shop/theaters/pool/tennis. \$135,000 neg. 561-495-0187.

BROOKHAVEN HAMLET - 3bdrm 2 bath house, dead-end st nr lib/elem sch., l/r w/ fp, deck, atch gar, hdwd fls, .5 acre, trees. \$405,000 neg. 286-1353 or weston@bnl.gov.

RIVERHEAD - Saddle Lakes 55+Gated Comm'n'y, Clbhs, in+outdr pools, tennis, 2-3-bdrm, 2-bth, CAC/Gas, fin bsmnt, cedar closet, gar, wtrview, \$360,000. 905-9617.

SHIRLEY - 5 bdrm ranch, bath, .5 acre, excel cond. \$260,000 neg. 843-215-2581.

YAPHANK - 2 bdrm., 1 bath, d/r, lg l/r w/vaulted ceiling, hardwd flrs, bsmt, priv. comm. on Yaphank lake, 5mi to BNL, taxes w/star \$2,800. \$190,000. 645-4359.

In Appreciation

To All at BNL - Many thanks for your support, prayers, and generosity during the passing of my mother-in-law. May God bless each and everyone of you. You will always be remembered. - Sal Zarba & the family of Patricia A. Hoppe.