the Bulletin

BROOKHAVEN NATIONAL LABORATORY

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Grooving Down the Helix

Researchers show that proteins slide along DNA to carry out vital biological processes

A team of scientists from BNL, Harvard University, and the Indian Institute of Science (IIS) has made a major step in understanding how molecules locate the genetic information in DNA that is necessary to carry out important biological processes. The research, published in the December 1, 2009 edition of *Nature Structural & Molecular Biology*, confirms that many proteins responsible for interacting at specific sites on DNA find their targets by sliding along one of the grooves of the DNA double helix in a spiraling fashion. The research was funded by the National Institute of Allergy and Infectious Diseases, part of the National Institutes of Health, the National Science Foundation, and the Department of Science and Technology of India.

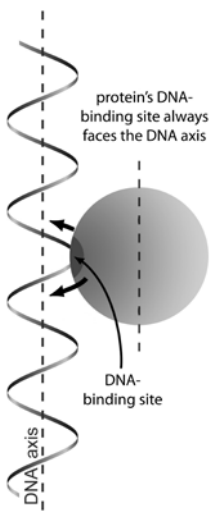
Walter Mangel

Roger Stoutenburgh D0021008

"Essentially, proteins that search for specific information spin down the double helix of the DNA, like traveling along the threads of a screw, until they locate their target," said co-author Walter Mangel of BNL's Biology Department.

This research provides experimental proof of a recent theory put forth by the team. It could lead to new ways to alter the behavior of DNA-binding proteins, which are responsible for replicating and repairing DNA, and for turning genes on and off.

For decades, scientists have known that proteins searching for genetic sequences are able to locate them at rates much faster than expected. They found that



Visualization of a protein molecule sliding along DNA. The protein (the sphere) travels along the DNA helix as if it were spinning along the threads of a screw.

rather than moving around the entire three-dimensional space inside a cell, they moved in one dimension, along DNA molecules. The Harvard group showed, in 2006, that the proteins slide back and forth in direct contact with the DNA as part of the search for specific sequences.

Until now, however, the exact nature of the path these molecules take along the DNA has not been known. One challenge is that the very fine and quick motions occur at extremely small space and time scales and the precise motions of a DNA-binding molecule are difficult to observe directly. So the researchers used indirect methods to determine the protein's path.

With a special fluorescence microscope, collaborating scientists led by Sunney Xie at Harvard observed single protein molecules labeled with a fluorescent dye binding to and then sliding along the DNA. They could not see the exact path the molecules were sliding on, but they could measure the speed of the molecules.

Depending on how a protein moves along a DNA axis — either in a linear or helical pattern — it will encounter different degrees of resistance, as shown in the earlier paper. If protein motion is linear, its speed will decrease proportionately as its radius increases. If a protein exhibits helical motion, it will experience additional friction and its speed will decrease much faster as its radius increases.

Using a human DNA repair protein as a test for the protein rotation model, Paul Blainey, now at Stanford University, found the latter case to be true. When he increased the size of the protein, the rate of motion decreased much more rapidly than it would have for a simple linear motion.

Relying on the same technique, the group went on to analyze the diffusion rates of eight different proteins of various sizes. These molecules had highly diverse functions — such as DNA replication, cleavage, and repair — and DNA-binding mechanisms. They were also taken from a range of organisms, including mammals, bacteria, and human viruses.

The researchers observed the same pattern: The speed of each protein decreased dramatically as its radius increased, as predicted by the theory for helical sliding.

"The data present strong evidence that proteins seek out targeted DNA sequences by spinning down the helix rather than linearly sliding along its axis," said Biman Bigachi, an IIS co-author.

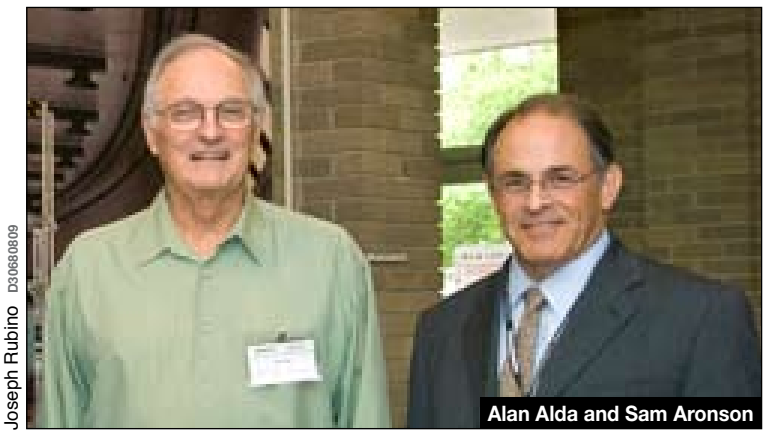
This work validates the new equation for describing and predicting the motion of protein molecules along strands of DNA with a higher degree of accuracy than ever before. It enhances the possibility of future research in understanding and manipulating the DNA-binding and sliding behavior of proteins.

Said Mangel, "By being able to predict the DNA-sliding rate of a protein, one could alter the size of a protein and thereby alter its sliding rate. For example, certain viral proteins need to slide along DNA in order to cause infection. A small protein could be designed to bind to the viral protein to slow down its sliding rate. This might be a useful means to block a virus infection."

— Steven Dietz

'Communicating Science' Alan Alda To Talk at Workshop, 4/9

A Message From Lab Director Sam Aronson



Joseph Rubino D30680809

Alan Alda and Sam Aronson

Alan Alda, the highly acclaimed actor and host of PBS' "Scientific American Frontiers," and Howie Schneider, Dean of the Stony Brook University School of Journalism and one of the founders of its Center for Communicating Science, are both deeply committed to helping scientists — and all who care about science — talk about their research and what is happening in the field with greater clarity and understanding.

Last fall, Alan and Howie piloted an innovative program at Stony Brook and at Brookhaven to help advance these goals.

Designed by Alan, the program uses improvisational theater techniques to help scientists describe their work in a variety of situations. I watched as 12 of our scientific staff practiced these techniques, engaged with each other — and had fun in the process. The results were very impressive — so much so, that Alan and Howie are continuing this effort and coming back to the Lab on Friday, April 9 for a full-day program. The improvisational workshop is one of four sessions that will help us hone our communication skills; a complete agenda can be found at *http://www.bnl.gov/csw/*.

Last week I met with Congressman Steve Israel in D.C. He, too, commented on the importance of better communication by scientists and his belief in this program. Representative Israel secured $214,000 in start-up funds for the program because he believes that as public citizens, it is our obligation to be able to communicate much more effectively what we do and what it means to our society.

I'd like to encourage as many of you as possible to participate in the workshop sessions, as well as to join Alan Alda and a panel of experts — including BNL's Joanna Fowler — for the morning talks about science communication.

All are welcome, with supervisory approval, to attend Lab Director Sam Aronson's welcoming remarks, Alan Alda's talk, and the expert panel discussion on science communication, starting at 9 a.m. on April 9 in Berkner Hall. Registration is required to attend the workshops in the afternoon. Please go to http://www.bnl.gov/csw/ to learn more about the workshops and to register.

IBM Nano Study Paves Way for Remote Access at NSLS

Synchrotron-based x-ray diffraction techniques have become largely automated, yet researchers must still travel from all over the world to BNL's National Synchrotron Light Source (NSLS) simply to load their samples and program a few computer parameters before the system takes over.

"We would like to figure out ways to offer more flexibility for researchers using the NSLS," said Kathy Nasta, the NSLS user administration office manager. "We are trying to learn how to use the system we have in place to build a remote access program."

IBM researcher Jean Jordan-Sweet had plenty of reasons to volunteer one of IBM's beamlines, X20A, for pioneering remote access protocols.

"IBM has multiple worksites statewide and numerous U.S. and international partner alliances," said Jordan-Sweet. "Remote access can help our researchers who can't get here or who are really busy and have other work they need to do during the hours that data are automatically collected."

IBM's researchers use the x-ray beamline to investigate how different nanomaterials "behave" after exposure to thermal treatments that mimic the microelectronics manufacturing process. The technique allows researchers to determine the best combination of materials and processes to use when advancing, and shrinking, new technologies.

Joseph Rubino D30220210

IBM's Jean Jordan-Sweet loads a silicon wafer sample into the diffractometer at NSLS X20A for colleagues performing a remote access experiment.

Two of Jordan-Sweet's colleagues, Bin Yang, a technical staff member at IBM's alliance partner, GlobalFoundries, and his collaborator at IBM, Christian Lavoie, eagerly volunteered their beam time for a remote access attempt.

"Our studies are pushing the physical limits of nanomaterials since technological devices are becoming so small," said Yang. "We need synchrotron sources to study thin silicide films in order to understand processes better and to make better computer chips, but the commute to use this resource can be difficult. My drive is only two hours from Westchester County, New York, but other researchers come from all over the world."

Bin Yang (left) of GlobalFoundries and Christian Lavoie of IBM collect NSLS-generated data remotely while at the IBM T.J. Watson Research Center at Yorktown Heights, New York.

For Jordan-Sweet, getting the necessary software for remote access was as simple as downloading and configuring free online programs called PuTTY and NX Client. She received software guidance from NSLS Controls Computing Leader Zhijian Yin.

After BNL's Information Technology Division provided the team with a gateway server for secure access to the BNL network and Jordan-Sweet relayed a quick software tutorial to Yang and Lavoie, they were ready for testing.

For the first test experiment, they chose a relatively simple study that involved collecting texture data, or pole figures, for a thin, nickel silicide film.

"We mailed our samples to Jean and she did the initial setup," said Yang. "Then we were

(continued on page 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.*
- *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, Intermed., 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 & Thursdays: Kickboxing
$5 per class. Noon–1 p.m. in the gym. Pay as you go. Ext. 2873.

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, noon–1 p.m. Gym. Registration is required. Ext. 2873.

Tuesdays: Knitting Class
2–4 p.m. Rec. Hall. All levels of skill. Free. Ext. 5090 for information.

Tuesdays: Toastmasters
Two monthly meetings: 1st & 3rd Tuesdays, 5:30 p.m., Bldg. 463, Rm 160. Guests and visitors welcome. *http://www.bnl.gov/bera/activities/toastmstrs/*.

Tue., Wed., & Thurs.: Rec Hall Activities
5:30–9:30 p.m. General activities, TV, ping pong, chess, games, socializing. Christine Carter, Ext. 5090.

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. Ext. 2873. See also *http://www.meetup.com/BNL-Playgroup/*

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
5 p.m., Brookhaven Center. First Thurs. of month. Tim Devine, Ext. 2350.

Thursdays: Reiki Healing Class
Noon–1 p.m., Call for location. Nicole Bernholc, Ext. 2027.

Fridays: Family Swim Night
5–8 p.m. BNL Pool. $5 per family. Ext. 2873.

Fridays: Family Gym Night
5–8 p.m. Family gym activities. Free. Ext. 2873.

In Memoriam

John White, who came to BNL as Labor Relations Manager in the then Personnel Division on November 15, 1967, and retired from the division on October 31, 1983, died at the age of 89 on January 10, 2010.

Clyde Sipe, who joined the Medical Department as an assistant technical specialist on December 1, 1957, and rose to medical associate I before retiring on December 31, 1978, died on January 20, 2010. He was 93.

John Maddock, Jr., who joined the Alternating Gradient Synchrotron Department as a technician on September 5, 1967, and retired from that department as a senior technical specialist on October 31, 2003, died on February 3, 2010. He was 66.

Arthur Hansen, who joined the Plant Engineering Division as a steamfitter A on March 28, 1966, and retired on July 3, 1987, died on February 14, 2010. He was 82.

Jane Setlow, who joined the Biology Department in 1974 as a senior geneticist with tenure, working on the effects of radiation and chemical mutagens on DNA, died at 90 years old on March 4, 2010. From 1974 to 1980, she served on the National Institutes of Health Recombinant DNA Molecule Program Advisory Committee, chairing the committee 1978-80. She was also founding editor of the series of annual volumes of *Genetic Engineering: Principles & Methods* with co-editor Alexander Hollaender, and was sole editor from volume 10 in 1988 through volume 28 in 2007. She retired from BNL on September 30, 1993, continuing her work as a guest senior geneticist in the Biology Department until 2007.

Colleagues and family members who would like to contribute information or remembrances about BNL retirees who have died, to be posted on that retiree's page in the Bulletin Obituary section, www.bnl.gov/bnlweb/pubaf/bulletin/obit/, may contact Liz Seubert, lseubert@bnl.gov or Ext. 2346.

BWIS: Promoting Women, Advancing Science

In honor of Women's History Month, this is the fourth and final article in a series of profiles of women who are members of Brookhaven Women in Science.

Meet Kahille Dorsinvil


Roger Stoutenburgh D3490310
Kahille Dorsinvil

Kahille Dorsinvil, an educator in BNL's Office of Educational Programs (OEP), thinks science is cool, and conveys that idea through teaching — with the aid of hands-on projects and exhibits — to elementary school children at the Science Learning Center.

"We have equipment and materials set up for students to explore, and we introduce and reinforce concepts aligned to the New York State school curriculum," she said. "We also link the programs we teach to science at BNL."

In addition, Dorsinvil travels to local schools to teach "Magnets to Go," a popular program also linked to schools' curriculum and Brookhaven science. "The children learn about magnets, and they are introduced to Brookhaven Lab," she said.

Dorsinvil earned a B.S. in biology, anthropology, and African American studies from Stony Brook University in 1999. She worked for Computer Horizons Learning Center and Islip Tutoring Services before she started her career at BNL in 2006, having learned about the job opening for educator OEP's Renee Flack, now retired. When Dorsinvil was a high school freshman, she attended the Lab's Minority Apprenticeship Program, which Flack coordinated.

While working, Dorsinvil attended Dowling College part-time, and she earned an M.S. in adolescent education in 2009. She also received accreditation to teach biology and general science.

In 2007, Dorsinvil became a Brookhaven Women in Science executive board (BWIS) member and volunteered to coordinate BWIS's Career Day, an annual program that aims to interest young women in careers in science. In the program, approximately 50 female high school students from four local high schools listen to panel discussions by female Brookhaven scientists about their careers and research, and get an opportunity to ask questions and interact with them. Also, the students are treated to lunch, take a guided tour of Laboratory facilities, and enjoy hands-on exhibits at the Science Learning Center.

"Seeing instant mentoring happen between the women scientists and the students is great," Dorsinvil said. "Historically, it's been difficult for women and minorities to advance in science. At Career Day, multiple perspectives and networking create a lot of ideas and often a lot of enthusiasm for science. Also, the female scientists are excellent role models for the girls."

Dorsinvil and her husband, Phil, have two daughters: Djane, age 15; and Sarina, age 10. "They are the best daughters in the world, and they love the Lab," Dorsinvil said. They are interested in science, which pleases her.

"There are so many fields in science," she said. "There is no limit to where you can go."

— Diane Greenberg

BSA Noon Recital, 4/7
Cavalli's Opera *Eliogabalo* in Preview

The next BSA Noon Recital will be held on Wednesday, April 7, in Berkner Hall, with a performance preview of Cavalli's Opera *Eliogabalo,* featuring one complete semi-staged act, sung in the original Italian with projected subtitles and directed by David Lawton, with accompaniment on period instruments directed by Arthur Haas. Stony Brook Opera and Stony Brook Baroque Ensemble will present the complete *Eliogabalo* on Friday April 9, at 8 p.m., and Sunday, April 11, at 2 p.m. in the University's Staller Center.

The BNL performance, sponsored by Brookhaven Science Associates, the company that manages BNL, is free and open to the public. Visitors to the Lab of 16 and older must carry a photo I.D.

TIAA-CREF One-on-One Retirement Counseling

A TIAA-CREF consultant will visit BNL on six days in April: Thursday, 4/1; Wednesday, 4/7; Thursday, 4/8; Thursday, 4/15; Tuesday, 4/20; and Wednesday, 4/28. For an appointment, call 1-800-732-8353 or go online at *http://www.tiaa-cref.org/bnl* and select "set up a meeting."

Arrivals & Departures

— Arrivals —

Walter Copan	TC&P
Timothy Johnson	ES&T
John Moloney, Jr.	C-AD
Benjamin Muse	Site Services
Sunita Srivastava	CFN

— Departures —

Kaushik Nanduri	Physics
Sujit Tandel	ES&T

Fidelity Counseling

A Fidelity representative will be on site on Friday, April 23, and Friday, May 7. Sessions will be for approximately half an hour. For an appointment, call 800-642-7131, weekdays, 8 a.m. – midnight, or go to *http://www.fidelity.com/atwork/reservations*.

IBM Nano Study Paves Way for Remote Access at NSLS

(continued from page 1)

... able to use a webcam to see the machine and remotely take over the computer."

Yang controlled the diffractometer, which collects the pole figure measurements, by logging into a remote desktop through the free software programs and positioned the machine to his precise specifications using a standard synchrotron beamline control program called SPEC Connect. Yang visually monitored the machine's movements via a webcam to avoid colliding diffractometer components together as he changed the x-ray detector's angle and the sample's orientation within the diffractometer.

Yang and Lavoie successfully collected their data while comfortably seated in an office at the IBM T.J. Watson Research Center at Yorktown Heights, New York. They later used these data to construct 2-D orientation maps of the nickel silicide crystal grains, which had been formed using temperatures near 500 degrees Celsius. The maps give data that indicate whether these materials form good contacts after withstanding the temperatures used during manufacturing processes.

"The remote access was great for us on our end," said Yang. "But at this point, Jean needs to do the initial sample alignment. Hopefully, in the future, she won't need to do anything; a robotic arm can take over the job."

"For now, I'm the robot," said Jordan-Sweet, noting that robotic sample-loading technology is already available at IBM and is slated for installation on an endstation being planned for NSLS-II.

Jordan-Sweet expects to streamline the remote access process at X20A before expanding the technology to the other beamlines that have more complex capabilities such as time and temperature diffraction, and eventually to NSLS-II.

Yang already has other remote access experiments planned with Jordan-Sweet in April using an additional time-saving device — a linear detector that takes multiple pole figure measurements at once.

"The remote access will benefit us even more with our upcoming experiments because they are very time consuming," said Yang. "One measurement, in particular, will take up to 48 hours."

Jordan-Sweet also plans to introduce her Belgian colleagues at the University of Ghent to remote access during their scheduled visit to Brookhaven in April.

"I think they will be keen on the remote access, too," said Jordan-Sweet. "They will save a lot of time and money on traveling if they use it."

The NSLS User Office is using Jordan-Sweet's remote access attempts to help figure out the best way to build a program to meet the remote user population's unique needs.

"Other groups have dabbled with remote access at the NSLS, but Jean's experiment was the first time that we set out to build a formal remote access program," said Nasta.

"We hope that building a remote access program will attract new users to the NSLS by lowering the overhead for them to use the facilities," said NSLS Chair Chi-Chang Kao. "Moreover, we believe this effort will lead to more efficient use of the NSLS and promote new types of collaborations." — Tianna Hicklin

BERA Spring Fling! 4/23

Enjoy DJ Dancing at the Brookhaven Center North Room, 6-11 p.m., on Friday, April 23. Tickets (150 limit) are available for $5 each at the BERA Store in Berkner Hall. For more information, call Kevin Hester, Ext. 2953, or Charles Gardner, Ext. 5046.

2009 Reimbursement Account Claims: Deadline by 3/31

March 31, 2010, is the deadline for submission of any 2009 reimbursement account claims. Send claims to CIGNA via mail at CIGNA HealthCare, PO Box 182223, Chattanooga, TN 37422-7223; or via fax: (423) 553-8953. All claims must be sent with a claim form, picked up in the Benefits Office, Bldg. 400, or from: *http://www.bnl.gov/hr/Benefits/ReimbursementAccounts.asp*.

BERA Sports, Trips, Events, Updates

Swimming Pool, Locker Room: closed for general use from 2:30-5 p.m. during the BERA Mini Camp for children, March 29-April 2.

Play Softball: in a fun, family oriented setting. Join the BERA Softball League, all levels of skill welcome. Call Softball Board President, Pat Browne, Ext. 4638; or Vice President Jim Durnan, Ext. 5993. They will direct you to a team needing players, or help you form a new team.

Drawing for Yankee Tickets: BERA has tickets for only one Yankee game this year, for the Sunday, April 18, 1 p.m. game vs. Texas. Fill out one raffle ticket per employee or retiree in the BERA Store in Berkner Hall for a chance to buy two of only 55 Yankee tickets available from BERA this year. If you win at the drawing at 2 p.m. on Friday, April 2, you may buy two tickets at $35 each. Luxury coach transportation is included. The winner must go on the trip!

Book Fair: 4/1 & 2 in Berkner Lobby, 10 a.m. – 2 p.m.

International Auto Show: Sat., 4/10, at the Javits Center, NYC. $20/person. Leave BNL at 9 a.m., leave the show at 4:30 p.m.

Atlantic City: Sat., 4/17, at the Showboat casino on the boardwalk. $25 per person, get $25 in slotplay on arrival. Leave Brookhaven Center at 9 a.m., leave Atlantic City at 8 p.m.

Long Island Ducks: BERA has six seats for each home game of the Ducks' baseball season. Buy your $10 tickets at BERA Store.

Meet the Candidates for the BERA Board

Eight candidates running for four positions, election to be held 4/5-8

An election for four BERA Board members will be held between April 5-8. Eight candidates are running, and active employees of BNL, BSA, DOE, or permanent on-site employers (not retirees, guests, or contractors) may vote for four of them. You may vote on line (http://www.bnl.gov/bera/recreation/candidates.asp) or get paper ballots 11:30 a.m.-1:30 p.m. on Tues. and Wed., April 6 and 7, in Berkner Hall lobby; or Thurs., April 8, in Bldg. 400 lobby. A brief summary of each candidate's reasons for wanting to be a Board member follows.

John Addessi

"Hello," says John Addessi of the Collider-Accelerator Department:

"I have been a BERA member since I joined the Lab in 1984 (25-plus years). I have been involved mainly with sports, but I have also participated and enjoyed many of the BERA trips. I've been involved in softball and volleyball, and have captained both for many years. I have also enjoyed other BERA activities such as bowling, racquetball, whitewater rafting and camping.

"I believe that as a board member, I would be an asset to BERA. I would help promote BERA and would try to arrange more trips that would be of interest to many of us. Some trips that I have in mind are: Mountain biking along the Lehigh River in PA, a fishing trip in Long Island Sound, and a trip to Longwood Gardens near Philadelphia. Your ideas are welcomed."

Linda Barrett

Linda Barrett joined the Fiscal Services Division in 2006. She and her family enjoy BERA's outings, social functions, Summer Camp Programs and some really neat employee discounts.

"I would love to be part of the BERA team, by promoting 'Fun without the Fuss!'" says Barrett. "I want to support the BERA Clubs, coordinate a Dude Ranch trip to Rocking Horse Ranch, expand amusement park trips to include Busch Gardens & Six Flags New England. Comedy Shows and food/wine tasting nights are on my list of things to do, too.

"I would also like to extend the BERA fun to our pets, by holding the 1st Annual Bring Your Dog to Work Weekend Barbeque and Fitness Walk," she continues. "Vote for me!"

Ruth Comas

Ruth Comas has been associated with BERA since September 2002. She is president of the newly formed BERA Craft Club. She participates in the many BERA activities offered on site, such the Aqua Aerobics, the Bodybuilding Club, and, in the past, Pilates and the Dance Club. Working on site since 1997 and currently as the Conference Support Supervisor for the Staff Services Division, she has participated in many BERA-sponsored activities, trips and events. Her interests include hiking, cycling, fishing, book clubs, cooking, and camping. She is also involved in organizations such as the Certified Meeting Planners Association and volunteer groups doing charity work.

If elected, Comas would continue to support successful events and research new trips & events to interest a broad spectrum of BNL employees.

"I would solicit input from fellow employees and take suggestions to the board in addition to my own ideas," she says. "I believe that club camaraderie and experiences shared while attending special events and trips foster good relationships and help to enhance BNL's working environment."

Augie Hoffmann

Augie Hoffmann has been an employee at BNL for over 30 years, working in the Physics Department. In that time he has participated in many BERA activities, as well as having served on the board. Having been an avid cyclist for some time, he would like to see more activities for cycling and possibly incorporate them into the Healthfest Program.

"I have asked a few other cyclists here, and they are interested in a time trial and a duathlon," he says.

Hoffman was also instrumental in the creation of the mountain bike trail in Rocky Point, and would like to see a similar trail here at BNL. As the organizer of many ski trips, he is familiar with organizing bus trips, and has some places he would like to have trips to, such as Storm King Art Center, Cabela's, and possibly more ski trips. He has attended many of the concerts hosted by the Music Club, and would like to offer lunchtime movies, perhaps once a month in Berkner, similar to the program at the Huntington Arts Theater.

"Huntington Arts has several showings of rarely seen concert footage, and the screenings I attended have been sold out, with people waiting outside for extra tickets."

Georgia Irving

Georgia Irving joined the Lab in 1969 in the then Department of Applied Science, moved to the Director's Office in the 80s, and now handles outside user accounts, technical service agreements, and Work for Others projects in the Budget Office.

Always into sports, Georgia immediately joined an informal ladies' softball team that competed with outside industry teams like Grumman and LIPA. "We could never get enough females to play," she recalls. "So we finally convinced BERA that we needed a Mixed Softball League — they thought the girls would get hurt!"

Irving has also been involved in BERA activities, such as volleyball, tennis, and bowling. She learned to play tennis on the BNL courts, served on the Tennis Committee, and twice ran the summer tournament. Although not a runner, she also served on the Perimeter Run and Bike Race Committee 1972-1974. Over the years, Irving has enjoyed the gym, the pool, photography club, the spring plant swap, and lately all the great trips including Boston and Cape Cod. "My son learned to swim in the BNL pool; how great is that!"

"BERA, in some form, has always been part of the BNL Community. We are social animals; we like to interact, and BERA helps us do it," she says. "As a board member, I hope to work on activities, trips, and shows with wide appeal, especially to those of us who still like to participate but no longer have the knees for softball."

Kim Mohanty

Kim Mohanty started at BNL 31 years ago in the Accelerator Department, testing magnets. Later, he helped with the commissioning of some of the Physics Department's beamlines at the Light Source and then with the operation of some of their beamports at the High Flux Beam Reactor. Most recently, he helped developed new crystal growth facilities in the Condensed Matter Physics & Materials Science Department. Mohanty formed a BERA Chess Club in the 1980s and was coach for three years of BERA's soccer team, which competes in Suffolk County Men's Soccer League.

Says Mohanty, "I would appreciate the opportunity to serve the BNL community through BERA with an eye also toward building links to local communities beyond BNL's boundaries that can enrich through arts, entertainment, sport, and involvement."

Joe Vignola

Joe Vignola, an employee of Radiological Control since 1987, co-founded the BERA BNL Music Club in 2000 and, with a committed board, he has booked, promoted, produced and run nearly 80 shows since. The BNL Music Club has donated more then $7,000 to charitable organizations through the years. Vignola is also a member of the BERA Cycletrons Club and he organized and ran with Wayne Boyd the very successful noontime event "A Conversation with Lee Arthur Hayes Tuskegee Airman." With Helio Takai and Sean McCorkle he helped organize Equinox Explanations, and Café Physics in 2009.

Should he be elected, Vignola says, he will work with BNL employees, guests and their families through BERA Clubs to make the recreation experience on site more rewarding. "Some ideas I hope to work on are more bicycle lanes and paths, film nights, and live theater," he says.

Susan Wells

Susan Wells, an applications engineer at the Business Systems Division in the Technical Services group has been a BNL employee since 1981. She has been a volleyball player in the BERA league for about 20 years; captained and played on several BERA softball teams for about five years; has been a member of the BERA Bodybuilding Club for about 10 years; and she is currently in her second year as secretary for the BERA BNL Camping Club. In addition, she is currently thoroughly enjoying Zumba® and Aqua-Aerobics classes on site. In past years, she also attended kickboxing classes.

Although Wells has already served on the BERA board as vice president from 2004 through 2008, she's excited to be adding her name to the list of candidates for another four-year term. If elected, she states, "I will continue to run the annual amusement park trip I started in 2004. I'd like to run some NYC show and/or sporting event trips and, as always, I'll remain open to suggestions from all Lab employees for new ideas."

Calendar

Today, Friday, 3/26

***Virginia Bluegrass Concert**

8 p.m. Berkner Hall. "The Crooked Road" star performers and guests. Ticket info.: pg. 4.

Saturday, 3/27

***Gypsy Jazz Concert**

8 p.m. Berkner Hall. Frank Vignola & the Hot Club; Bucky Pizzarelli. Ticket info.: pg. 4.

— WEEK OF 3/29 —

Thurs. & Fri. 4/1 & 2

Book Fair

10 a.m.-2 p.m. Berkner lobby. Books, games, discounted prices.

Friday, 4/2

BWIS Starts New Networking Group

Noon. Berkner Hall, Room B. All welcome. Melissa Bittrolff, Human Resources & Occupational Medicine Division, will discuss some of the benefits available to BNL employees.

— WEEK OF 4/5 —

Wednesday, 4/7

***BSA Noon Recital: Opera**

Noon. Berkner Hall. One act of Cavalli's *Eliogabalo*. See pg. 2.

Friday, 4/9

***Communicate Science With Alda**

9 a.m. Berkner Hall. Talks, panel discussion, workshops. Lab community welcome. See pg. 1.

— WEEK OF 4/12 —

Monday, 4/12

Pegram Lecture I : Dark Energy

4 p.m. Berkner Hall. Christopher Stubbs, Harvard University, will give the first of two Pegram Lectures, on dark energy. All are invited to these free lectures, open to the public. Visitors to the Lab of 16 and older must carry photo ID.

Tuesday, 4/13

BREA Meeting

1-2:30 p.m. Research Support Bldg. 400, Conference Room 1. Brookhaven Retired Employees Association meeting. All retirees welcome.

Pegram II : Gravitational Effects

4 p.m. Berkner Hall. Christopher Stubbs to give the second Pegram Lecture, on novel gravitational effects.

Classified Advertisements

Placement Notices

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

OPEN RECRUITMENT – Opportunities for Lab employees and outside candidates.

LABORATORY COUNSEL (ENVIRONMENTAL, M-1) – Responsible for advising the Laboratory concerning its legal rights, obligations, and privileges. Relies on statutes, previous decisions, ordinances, and decisions of judicial and quasi-judicial bodies. Advises on litigation or arbitration, prepares and presents cases as necessary. Acts as agent of the Lab in various transactions. Makes available, as required, advice and assistance on negotiation and interpretation of contracts affecting the Lab. Maintains close contact with the General Counsel in various aspects of work as necessary. Will have a JD degree and hold membership in the New York Bar (or have the ability to obtain within six months); have sound legal and business judgment, excellent decision making and negotiating skills, oral and written communication skills; a minimum of 10 years' relevant legal experience which includes a minimum of five years of environmental law; experience with Federal agencies, especially Department of Energy, highly preferred. This position requires the ability to obtain and maintain a DOE Security Clearance which requires US Citizenship. Apply to Job ID #15254.

ASSOCIATE SCIENTIST (Nuclear Theory) - Requires a Ph.D. in physics with a minimum of five years' experience past receipt of Ph.D. The RHIC Spin and Nuclear Theory Groups are seeking an experienced theoretical physicist to play a significant role in the Lab's research program with spin-polarized proton-proton collisions at the Relativistic Heavy Ion Collider (RHIC). Candidate should be a scientific leader with a well established research record in nuclear and particle physics and is also required to take a prominent role in carrying out the spin research program and in shaping the future plans for the RHIC facility, including a proposed Electron-Ion Collider (eRHIC). RHIC is a world-leading facility for high energy nucleus-nucleus and spin-polarized proton-proton collisions. BNL's Nuclear Theory Group, working with international collaborators, plays a central role in the theoretical analysis and planning of spin measurements at RHIC and elsewhere. The appointment has an expected start date of October 1, 2010. The application deadline is April 2, 2010. Under the direction of D. Kharzeev (Group Leader/Nuclear Theory Group) and E. Aschenauer (Group Leader/RHIC Spin Group), Physics Department. Apply to Job ID #15261.

CONSTRUCTION SAFETY PROJECT ENGINEER II/I (P-7/P-9) – Requires a BS in engineering, industrial or occupational safety, or other relevant technical discipline, a working knowledge of 29 CFR 1926, and seven years of construction site safety experience. Qualification as a scaffold and/or excavation-competent person and/or fall protection qualified person and a CSP are highly desirable; PE license is a plus. Responsibilities will include: reviewing and approving contractor safety plans; participation in design reviews and reviewing design plans and projects to ensure construction safety requirements are addressed; daily construction site oversight inspection; attending contractor job safety planning meetings and toolbox meetings; monitoring and auditing contractor implementation of safety programs and compliance with state, federal (OSHA) and contractual construction safety requirements, including industrial hygiene monitoring and the proper use of PPE; analyzing, tracking and trending construction site safety performance, preparing weekly/monthly/quarterly job site safety performance statistical reports for Laboratory and Contractor personnel and ensuring that actions to improve performance are implemented. Will review and maintain institutional construction policies, standards, guidelines procedures and requirements for conformance with Laboratory objectives and applicable laws, regulations and construction industry best practices; provide technical assistance, interpretation and guidance, and resolve conflicts arising from construction safety policies, procedures and guidelines; will be subject matter expert for construction site, scaffold, aerial lift, excavation, fall protection and construction equipment safety. Will maintain, implement, and improve the Construction Safety Program for Brookhaven National Laboratory. 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. Safety & Health Services Division. Apply to Job ID #15265.

PROJECT ENGINEER II (P-7) (CENTRAL CHILLED WATER FACILITY) - Requires a bachelor's degree in engineering (marine, mechanical, etc.) and at least seven years of progressive responsibility in mechanical utility plant operations. Previous supervisory, related business, energy management and/or project management experience will be a plus. Responsible for planning, budgeting, scheduling, coordinating and overseeing the safe, reliable and efficient operation and maintenance of BNL's 7,500-ton Central Chilled Water Facility (CCWF); associated chilled water distribution system; compressed air system; and site-wide energy management control systems. Identifies reliability-improving/energy-conserving/cost-reducing operational modes and projects for the chilled water and compressed air systems. Oversees work of skilled craft to maintain the plant and implement modifications. Helps ensure work meets BNL, engineering code and ES&H regulatory standards. Duties also include overseeing operator training and plant "conduct of operations." Assists in bargaining unit grievance resolution. Maintains configuration of plant (including control systems), operational log information, operator aids, and alarm response procedures. Generates all reports and records required by management and regulatory agencies, including chilled water usage, water testing, and equipment operational status. Performs timely back up of all electronic control systems (PC, PLC, Database and Wonderware). Will coordinate construction, start-up and acceptance of new CCWF-Phase II with existing plant operations. Provides technical assistance and information on chilled water availability and routing to BNL "customers" and projects. Energy & Utilities Division. Apply to Job ID #15264.

ADVANCED/SR. APPLICATIONS ENGINEER (I-7/I-8) - Requires a BS degree in physics, computer science, or a related field, with at least five years of experience in real time software development and hardware and software integration, and a strong interest in working within a scientific research environment. Must have experience with programming in C and C++, and working in a team environment. Experience with LabView is a plus. Experience with UNIX/Linux and X Windows is desirable. Must have demonstrated skills in problem solving, software design, hardware/software system integration techniques and debugging of networked systems. Must demonstrate good communications skills, both written and oral. The position is within the Controls Division of the Collider-Accelerator Department, developing and maintaining distributed embedded systems for accelerator control. Will assume responsibility for supporting both new and existing systems, working closely with hardware specialists and system vendors to analyze system requirements and incorporate appropriate technology. Collider-Accelerator Department. Apply to Job ID #15246.

ASSISTANT BUDGET ANALYST (A-4) - Requires a bachelor's degree in a related business field or equivalent experience, generally on the basis of 2:1 (experience:college) years, with a minimum of three years of experience in a finance field or budget capacity preferred. Requires strong oral and written communications skills, interpersonal skills and complex problem solving ability. Excellent computer skills required with proficiency in Excel and other Microsoft applications. Should have an understanding of principals of budgeting and be able to identify and solve problems or issues. Will assist in the performance of special budget assignments, which typically involve the review, coordination, and control of data used for preparation of budgets and forecasts. With minimal guidance, will plan and set priorities in assigned area. Other duties include maintaining records of cost and personnel assignments. Able to apply independent judgment within Lab policies to complete assigned projects. Periodically prepare reports dealing with the performance of cost to budgets and budgets to forecasts. Performs other miscellaneous administrative functions and management information studies as requested. Reports to the Business Operations Manager. Apply to Job ID #15262.

ELECTRICAL/MECHANICAL TECHNICIANS (TW-2, term appointment) – Requires a high school diploma (an AAS degree is preferred) and a minimum of one year work of experience with the fabrication and installation of electro-mechanical equipment. Must demonstrate the ability to follow procedures to perform technical work assignments. Must be self-motivated, have good communication skills, and able to work effectively as part of a team. Experience performing large scale installation and termination of scientific apparatus preferred. Basic computer skills are desirable. Work will include the installation and termination of cables used for particle accelerator systems including high current/high voltage copper, multistrand and co-axial instrumentation, fiber optic, and RF heliax cable. Cabling installations will require strength and coordination to work with equipment and material weighing up to 50 pounds. Some cabling installations will require working at heights by use of ladders and man lifts and access to cable trenches. Job qualifications include safety training certification for LOTO, electrical safety, and fall protection. Under technical direction and/or with written procedures and guidelines, will assist technicians and engineers in the development, fabrication, testing, installation, and maintenance of electrical/electronic systems that support the Relativistic Heavy Ion Collider operations and system upgrades Collider-Accelerator Department. Apply to Job ID #15250.

VACUUM/ELECTRONIC PRINCIPAL TECHNICIAN (TW-4) - Requires an AAS degree in electronic/electrical technology and a minimum of two years' experience in assembly, maintenance, repair and operation of ultra-high vacuum systems or related electrical/electronic equipment. Will be responsible for fabricating, assembling, commissioning, troubleshooting, and repairing vacuum systems and related equipment such as leak detectors, turbo molecular pumps, ion pumps, titanium sublimation pumps, residual gas analyzers, vacuum gauges, and their associated controls. Extensive experience in the use of hand tools and electronic test instruments is required as well as the ability to work from drawings, schematics, and verbal instructions. Proficiency with computers, electrical heater systems, PLC controls, and machine shop practices is a plus. Must be self-motivated, able to work with minimum supervision, and have good communication skills. Experience with particle accelerator systems and/or large vacuum systems is preferred. Apply to Job ID #15248.

Motor Vehicles

05 HONDA SHADOW SPIRIT – 750, mint w/ w'shield, saddle bag, chr. upgrades, more. Just svcd, runs perf. 3,063 mi. Ext. 7132.

02 LINCOLN TOWN CAR – 47K mi. Sig. Series, 1 owner, all opts incl, heated seats, CD, shwrm cond. $9,500 neg. 698-0057.

01 DODGE NEON – 104K mi. a/t, a/c, cd, p/w, am/fm, 4dr, sun roof, gd cond. $2,500 neg. Ext. 2560.

00 FORD RANGER – 121K mi. 4wd, 6cyl, blk, excel cond, cap & bedliner, pics avail. $5,400. Ext. 7186 or kwilson@bnl.gov.

98 ACURA INTEGRA, Excel cond, 158k mi. $2,900. 5Spd manual, leather, new tires, batt; pwr windws, steerg, more. Ext. 8213.

97 NISSAN ALTIMA – 169K mi. a/c,4 dr., pwr steer & windw, cass, gd cond. $1,400 neg. 646-331-1686 or wange@bnl.gov.

96 AUDI A6 QUATRO – 110K mi. Nr perf cond. All opts. All whl dr. Leather. Always garaged. $3,950 neg. Mark, Ext. 2599.

96 BUICK ROADMASTER WAGON – 194K mi. 5.7 ltr. lt1, 9 pass wagon, leather, new brakes, loaded, $2,000 neg. Ext. 5110.

95 FORD CONTOUR – 96K mi. Needs TLC. 6cyl, a/t. Body & int, excel. $500 neg. Rick, Ext. 7444 or rickj@bnl.gov.

TOYOTA COROLA LE - Very good condition, runs well. 4dr. 3200.00, 298-5625.

Furnishings & Appliances

ADJUSTABLE SINGLE BEDS – 2, one w/ working w/less remote $200; one nds replacemnt remote ($50) $140, 433-9205.

BUNK+DESK BED – child/teen, all wood, desk pull out bed ask $500, Ron, 379-0742 or rrje4019@msn.com.

COUCH/SOFA - 3 seater, gd cond, $50. 315-403-7216 or hayat_banym@yahoo.com.

DINING ROOM TABLE – 68X42 plus 2 12" leaves, total 92" Mediterr. w/Formica top, $200. David, Ext. 5460 or kirby@bnl.gov.

DINING ROOM TABLE, HUTCH – Pine table & Maple hutch w/glass dr, moving, must sell, $100/ea. Anne, aschroed@bnl.gov.

ELECTRIC STOVE – GE Hotpoint w/ceramic top. In gd cond. Located 1 mile from Lab. $75. Bernard, Ext. 2017.

KITCHEN ISLAND - white with black granite counter, $250 (neg). 751-4539.

QUEEN BEDRM SET - $375. Maple wood, vg cond: bed w/Beautyrest mattress, 5 drwr chest, 3 drwr night table, pix. Ext. 4872.

WALL UNIT – Dark Maple. Adjust for diff. TV's. Glass drs on upper, storage w/solid drs below. Grt Cond. Pics. $300. 834-6956.

WASHER & DRYER – Must sell. Kenmore Heavy Duty. under 2 yrs. old. Mint, $550 for both. 834-6956.

WICKER DESK & CHAIR – H29" W 48," pics, $25. David, Ext. 5460 or kirby@bnl.gov.

Audio, Video & Computers

52 – projection screen on wheels, excel cond, 3 yrs old, to lg for rm, model #R52WH76, ask/$450. Ext. 7216, 445-4027.

6 CD CHANGER – Onkyo, model DX-C340, $35. Bill, Ext. 2378, 793-9111.

GPS GARMIN NUVI205 – bought last year, like new, $70, neg. 742-1202 or cjz_chem@yahoo.com.

HP NOTEBOOK COMPUTER – Model #G7134ous. Like new, still in box. W/ extnded warr. $650. 563-6596.

NORTON INTERNET SECURITY 2010 – For 1PC. New/$20. Ext. 3485.

TV & DVD PLAYER – Disney/Mickey Mouse 13" TV + DVD player. 3 remotes, built in spkrs, ears, $40. Sean, Ext. 5331.

Sports, Hobbies & Pets

DOG GROOMING TABLE - Therapet, w/ arm, new, still in box 30L x 18W foldable table. $30. Leslie 631-325-1394.

GUITAR AMP - 100W HALF-STACK – Peavey Windsor 100W All Tube (EL34) (Head) & 4-12" Speaker Bottom. $375. Ext. 2599.

ICE SKATES – Men's Bauer Turbo hockey skates, size 11, Ladies Riedell figure skates, size 8,hardly used,$15/ea. 741-9169.

Tools, House & Garden

Screens- 1x1 alum. frame 3-5x7 2-5x6 1-5x4. screen door 30in x 80in. 298 5625.

Miscellaneous

BASKETBALL HOOP – Little Tykes basketball hoop. Extends to 6 feet $10.00. John, Ext. 4028 or biemer@bnl.gov.

ANDERSEN WINDOW - dble casement 48x40 3/4, $100; car ramps,$15; wire dog cage 20x20x24, $15; TV, $50. Ext. 7502.

GOWN – for mother of bridegroom, beaded lace, organza, Google/Montage, style #14925, cocoa, size 20, $225. 871-3533.

PLANTS FOR TLC: – Very exotic palm tree ~6' tall, cactus tree ~8' tall, need warm home. Pics avail. Edward, Ext. 7502.

POWERCHILL – Hot/Cold Thermoelectric Cooler. Excel cond. Little use. $75. Donna, Ext. 2716, 878-2425 or storan@bnl.gov.

SWEET 16 DRESS – Beautiful white w/ pink chiffon, bead-work on top, sequins below. Size 1. $200 neg. 834-6956.

Happenings

7TH ANNUAL MOTHER'S DAY GALA – Evening of fine dining/Gospel Entertainment, Sun, 5/9, 5:30-10pm, Sheraton LI Hotel, Hauppague, $60/adv; $65/after May 1, child/$30 @ dr only, 4 & under/free. Wm McPherson, 369-0627.

CHINESE AUCTION/CRAFT FAIR – Sat, 4/17 9a-3p @ Riverhead H.S. to support Riverhead NJROTC. 35 vendors, 50/50, refreshments, over 150 gift certificates & baskets to win! peragine@bnl.gov.

DGB ROCK N ROLL PARTY BUS! – To Don Hill's NYC, Record Company Showcase, 4/17, 6pm, $40 gets you Party on bus, round trip & admission=. dgbdoug@gmail.com.

DINNER/SHOW OUTING – Sat, Oct 16, to see "Joseph," Sight & Sound Theatre, iPA. Dinner at Good n Plenty. $115pp. Discs for teens & child. $60 depos due 5/7. Call Kim, Ext. 7465, 399-3098.

Free

CAR SEAT – Call to view. Nina, Ext. 5894.

COAL – for coal burning stove. You pick up. Peter, 467-4386.

DRESSER – wood, painted white. Approx 48"h x 36"w x 18". Sean, Ext. 5331.

Wanted

APT/ROOM TO RENT – In NYC vicinity for Aug 2010-June 2011. Reasonable rent, for female 24 yr old serious college student. Will share w/female adults. Mary, Ext. 3927.

CAR – for son going to college, lup to $1,200. 291-0245 or bilacqua@bnl.gov.

CLEAN & WAX KITCHEN FLOOR – approx 12'x16'. Looking to pay someone, Cheryl, Ext. 2272, 732-7634.

DONATIONS OF DOG/CAT FOOD – needed for pets of struggling families/elderly. on LI. If you can also help w/collecting pls call. Kathleen, Ext. 3161.

FIREARMS – I will pay a fair price for your unwanted firearms, New or Old any type. Joe, Ext. 3783, 487-1479.

FIREWOOD – got downed oak trees from last storm? I need firewood. No cash either way. Will cut & remove logs. 775-9627.

NON-WORKING LAP TOP – wanted, non-working LCD monitor and non-working LCD TV. Free or reasonable.516-380-5300.

OLD HAIR DRYER – old fashioned type, either domed or bonnet. Free or reasonable. 790-6431 or dreynolds@bnl.gov.

SPRING/SUMMER NEW OR GENTLY – used clothing all sizes, books, toys to be donated to 76 families living in a shelter, Laura, Ext 4027 or lbuscemi@bnl.gov. Kathleen, Ext. 3161 or kratto@bnl.gov.

Community Involvement

VOLUNTEERS NEEDED - to help educate students on dangers of smoking, alcohol, drugs. Training provided. 2hrs/month Nov-May. For more info, call Marilyn, 744-4077.

For Rent

KISSIMMEE, FL – timeshare available – 2-bdrm unit, slps 8, Orlando, 15 mins to Disney World, pics @ www.calypsocay.com for pics. $1,200/wk neg. Ext. 5894.

NEW BERN, NC – T/share, Waterwood Townhouses on Lake, 2 bdrms, sleeps 8, full kit, w/d, peaceful, 7/18-7/25/10, http://tinyurl.com/af8zc5. $550/wk. Ext. 3750.

CENTER MORICHES – waterview 1 bdrm apt, recent renov, single only, no smkg/pets, util incl, 1 mo sec. $1,100/mo. 831-4500.

FARMINGVILLE – Furn bdrm in lg house, share bath, l/r, d/r, kitch. incl. elec/wifi/phone/cable. $450/mo. Ben, 513-8275.

HUNTINGTON STATION – 4 bdrm. Duplex: l/r + fpl., d/r, eik, 2 fll bth. 2 flrs, bsmt., 2 car gar. Pets poss. Refs, credit check. Heat incl., plus utils. 2 mo sec. $2,500/mo. 549-1486.

MANORVILLE – 1 bdrm, l/k.combo, full bth, pvt ent, 9 mi to Lab., inc all, single only, no smkg/pets please. $800/mo. 591-1315.

MASTIC – 1 bdrm, ek, fll bth, den, own entr, own d/way,1 mo sec, no pets/smok,10 min to Lab, all incl. $850/mo. joe mondi, Ext. 3499, 219-7241.

MASTIC – new aptt,1 Bdrm Kit. Liv/rm combo, fll bth, priv. ent, own thermostat, util incl, nr LIRR, no smkg/pets, walk to shop, one mo. sec. $775/mo neg. 335-4907.

MASTIC BEACH – Spacious 1b/r, full bth, l/r & kit, priv ent/drwy, no smkg/pets, sec & ref req, Lease provided & immed occp, all incl except cable. $900/mo. 281-4559.

ROCKY POINT – 2 bdrm, 2 bath sm hse near beach, wood flrs, w/d, f/p, util not incl. $1,250/mo. Bjorg, 745-9611.

SOUND BEACH – Col, 4/5 bdrm, 2 bath eik, w/d, nr transportation & beach, share for 4 persons at $650/ea or $1,950/mo. Marilyn, 516-983-8670.

For Sale

AQUEBOUGE – 3 lvl 3,000 sq ft condo-3 1/2 baths, cent.a/c & vacc--2 car gar-hot tub-walk on priv beach-3-zn b/board heat, pool, tennis. $775,000. Carmine, Ext. 5101.

FLANDERS – Peconic Bay, wtrfront, deep-wter dock, bulk heading, dded beach rights, cath ceilg, 3 bdrm, 2 bth (Jczzi), nat gas, deck, 1850 Sq. Ft., gar. $499,000. Ext. 3078.

MEDFORD – L ranch, EIK w/new S.S. appl., d/r, l/r, den, deck. 3bdrm, 2 1/2 bth, b/ment, 2 car gar, IGS, alarm. New: Andrsn wndws, roof, boiler, fence, $359,000. 987-6479.

SHOREHAM – N of 25A, L-ranch, 5 bdrm, 3 bth, fam rm w/fp, eik, dn/lr, wd flrs. Fin. bsmt w/2 bdrm, 1 bth, summr kit, poss m/d. igp, nr. priv bch, SWRSD. $389,000. 518-506-3146.

Services

A list of services available from BNLers — bricklayers, carpenters, chefs, electricians, house cleaners, personal trainers, photographers, tutors, elder caretakers, and more — is included in the PDF version of The Bulletin, March 12, 2010 at *http://www.bnl.gov/bnlweb/pubaf/bulletin/default.asp*. Or, call for a printed copy, (631) 344-2346.

Musical Weekend, 3/26 & 27

Traditional Country Music Arrives On Long Island via 'The Crooked Road'

Virginia bluegrass musicians will perform, 3/26

The uniquely American folk music of the Appalachian Mountain region of southwestern Virginia is very much alive and well. Sponsored by BERA, BNL will host an evening of music and fun when musicians from Virginia's "Crooked Road" project perform at Berkner Hall on Friday, March 26, starting at 8 p.m. The Crooked Road in the Appalachians has a rich musical heritage, including banjo music. Through "The Crooked Road: Virginia's Music Heritage Trail," a project founded in 2003, the tradition is being preserved.

Among performers will be singer and bassist Linda Lay and her husband David on guitar, and recording stars Jonny Clutch and the Jambusters.

Tickets are $15 in advance at the BERA Store in Berkner Hall and *www.ticketweb.com* and $20 at the door. All visitors to the Lab 16 and older must bring a photo I.D.

Now We Hazz — Jazz! 3/27

Guitar virtuoso Frank Vignola & the Hot Club With guitarist, banjo player 'Bucky' Pizzarelli

Berkner Hall will surge to life with wild, gypsy jazz music on Saturday, March 27, when guitar virtuoso Frank Vignola and the Hot Club perform the music of jazz legend Django Reinhardt. Joining Vignola on stage will be "Bucky" Pizzarelli, an American jazz guitarist and banjoist.

Sponsored by the BNL Music Club, the concert, which starts at 8 p.m., is open to the public. Visitors to the Lab 16 and older must bring a photo I.D.

Tickets for the show are $25 in advance and $30 the day of the show. Buy tickets at the BERA Store, or *www.ticketweb.com* or at the door.

the Bulletin

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Liz Seubert, editor
Joe Gettler, staff
Roger Stoutenburgh, photographer

On the Web, the Bulletin is located at *www.bnl.gov/bnlweb/pubaf/bulletin.html*. A calendar listing scientific and technical seminars and lectures is found at *www.bnl.gov/bnlweb/pubaf/calendar.asp*.

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