

BNL Celebrates Opening of Center for Functional Nanomaterials

Joseph Rubino D2790307



About 350 members of the Lab community helped celebrate the official opening of the Center for Functional Nanomaterials (CFN) on May 21, while envisioning its importance in helping the U.S. achieve energy independence. The 94,500-square-foot, user-oriented science facility will attract researchers from Brookhaven and academic and industrial organizations around the world to study and manipulate materials at the nanoscale using the CFN's unique array of scientific tools. Fittingly, the event took place on the first day of this year's joint National Synchrotron Light Source (NSLS) and CFN Users' Meeting.

"Our mission at Brookhaven is to carry out the basic and applied research that enables breakthroughs in the use of renewable energy through improved conversion, transmission, and storage as our contribution to solving the nation's energy challenges," said Laboratory Director Sam Aronson, who helped dedicate the facility along with numerous Lab and government leaders.

The powerful suite of tools at the NSLS, the CFN, and the future National Synchrotron Light Source II (NSLS-II) are a crucial part of that vision, Aronson said, adding that "these facilities and the scientific communities that work at them are vital in securing the nation's energy future."

The last of five Nanoscale Science Research Centers around the country to be funded and built by the Office of Basic Energy Sciences within DOE's Office of Science, the CFN is an \$81-million facility, which includes major equipment. These world-leading scientific tools,



Wielding the scissors at the ribbon-cutting ceremony of the Lab's new Center for Functional Nanomaterials (CFN) is Patricia Dehmer, Associate Director of DOE's Office of Science for Basic Energy Sciences. With her (from left) are: Michael Holland, Head, DOE's Brookhaven Site Office; Sam Aronson, BNL Director; Shirley Strum Kenny, President of Stony Brook University and Chair of Brookhaven Science Associates (BSA); Carl Kohrt, Battelle President and CEO and BSA Vice-Chair; Emilio Mendez, CFN Director; The Honorable Tim Bishop, U.S. House of Representatives; and Doon Gibbs, Associate Laboratory Director for Basic Energy Sciences.

to have the same opportunity that you and I have had at a DOE laboratory, opening up new fields of research at the nanoscale, which was not even talked about when I was in school."

CFN Director Emilio Mendez, who said the Lab already feels like home in the short seven months he has spent here, likened the new building to the Guggenheim Museum in Spain.

"It might seem like a strange comparison," he said. "But there is a connection between the two buildings. Both are gorgeous, have bold lines, and are committed to changing the neighborhood in which they

have been erected. Both indicate renaissance. At Brookhaven, it's a renaissance in the science we do in the laboratory as well as the way of doing science."

Said Stony Brook University President and Brookhaven Science Associates Chair Shirley Strum-Kenny, "The opening of this center is further evidence that we are in the forefront of cutting-edge technology that addresses real problems, and we at Brookhaven Science Associates are delighted to be part of such an important future."

Doon Gibbs, Associate Laboratory Director

for Basic Energy Sciences, led the ceremony, thanking DOE, BSA, Stony Brook University, HDR Architecture, E.W. Howell Co., NSLS and CFN users, Plant Engineering, and numerous others in the Lab community for their support.

"Today is a really exciting day. The future is even brighter, and I'd like to congratulate everyone involved in this achievement," he said.

— Kendra Snyder



Joseph Rubino D3210507

including a scanning transmission electron microscope (STEM), a low energy electron microscope (LEEM), a proximal nanoprobe, and an electron beam lithography laboratory, will enhance research in the areas of nanocatalysis, as well as in the study of biological and electronic nanomaterials.

"We simply must plot a clean and independent energy future. It is an economic imperative for our nation, it is a

national security imperative for our nation, and for our world, it is an environmental imperative," said U.S. Representative Timothy Bishop, adding that he is working in Congress to ensure that NSLS-II will soon receive the funding to help the CFN fulfill those needs. "We know that when that facility joins this one, the possibilities are endless."

First envisioned about eight years ago as part of DOE's

contribution to the National Nanotechnology Initiative, the CFN is expected to attract an estimated 300 researchers annually.

"I spent 23 years in a DOE laboratory and I know what a wonderful place it is to do research," said Patricia Dehmer, Associate Director of DOE's Office of Science for Basic Energy Sciences. "This provides an opportunity for generations of new scientists

CALENDAR
OF LABORATORY EVENTS

- The BERA Store is located in Berkner Hall and is open weekdays from 9 a.m. to 3 p.m. For more information on BERA events, contact Andrea Dehler, Ext. 3347, or Christine Carter, Ext. 2873.
- Additional information for Hospitality Committee events may be found at the Lollipop House and the laundry in the apartment area.
- The Recreation Building #317 (Rec. Hall) is located in the apartment area.
- Contact names are provided for most events for more information.
- Calendar events flagged with an asterisk (*) have an accompanying story in this Bulletin.

— EACH WEEK —

Weekdays: Free English for Speakers Of Other Languages Classes

Beginner, Intermediate, Advanced classes. Various times. All are welcome. Learn English, make friends. See www.bnl.gov/esol/schedule.html for schedule. Jen Lynch, Ext. 4894.

Mondays: BNL Social & Cultural Club

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

Mondays: Pilates

12:15 & 5:15 p.m. Rec. Hall. Ext. 5090.

Mondays: Jiu Jitsu Club

6-7:30 p.m. B’haven Center. All levels, ages 6 & up. \$10/class. Tom, Ext. 4556.

Mondays & Thursdays: Kickboxing

\$5 per class. Noon-1 p.m. in the gym. Registration is required. Christine Carter, Ext. 5090.

Mon., Tue. & Thu: Ving Tsun Kung Fu

Noon-1 p.m., B’haven Center, North Room. Taught by Master William Moy. Scott Bradley, Ext. 5745, bradley@bnl.gov.

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

Noon-1 p.m., B’haven Center North Rm. Adam Rusek, Ext. 5830, rusek@bnl.gov.

Tues. & Thurs: Jazzercise

Noon, Rec. Hall. Ext. 5090.

Tuesday & Thursday: Aerobic Fitness

5:15 p.m., Rec. Hall. 10 classes for \$40 or \$5 per class. Pat Flood, Ext. 7866, flood@bnl.gov.

Tuesday & Thursday: Aqua Aerobics

5:15 p.m., Pool. Ext. 5090.

Tuesdays: Welcome Coffee

10 a.m.-noon, apartment area gazebo. First Tuesday of every month is special for Lab newcomers and leaving guests. Lisa Yang, 979-3937.

Tuesdays: BNL Music Club

Noon, B’haven Center, North Room. Come hear live music. Joe Vignola, Ext. 3846.

Tuesdays: Toastmasters

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

Tue., Wed. & Thu: Rec Hall Activities

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

Wednesdays: On-Site Play Group

10 a.m.-noon, Recreation Bldg. An infant/toddler drop-in event. Parents meet while children play. Petra Adams, 821-9238.

Wednesdays: Ballroom Dance Class

B’haven Center, N. Ballroom. Instructor: Giny Rae. Arup Ghosh, Ext. 3974; Donna Grabowski, Ext. 2720; or Vinita Ghosh, Ext. 6226.

Wednesdays: Weight Watchers

Noon-1 p.m. Michael Thorn, Ext. 8612.

Wednesdays: Yoga

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

Wednesdays: Pilates

5:15 p.m., Rec Hall. Ext. 5090.

Thursdays: Reiki Healing Class

Noon-1 p.m., Bldg. 211 Conference Rm. Nicole Bernholz, Ext. 2027.

Fridays: Family Swim Night

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

Fridays: BNL Social & Cultural Club

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

Nanoscience 101

This past Monday, May 21, the BNL community celebrated the dedication of its new Center for Functional Nanomaterials (CFN). Science and technology based on nanoscience is expected to be revolutionary, and could lead to groundbreaking advances in the design and fabrication of a wide range of products — from automobile tires to vaccines, to computer chips, to objects not yet even imagined.

Below is the third in a series of questions and answers to help familiarize members of the BNL community with nanoscience in general, the types of research planned at the CFN, and health and safety aspects of CFN operations.

Q: What are engineered nanoparticles?

A: Engineered nanoparticles refer to those particles that do not occur naturally but are purposely created by people. Two other types of nanoparticles exist: naturally occurring, and those produced as a by-product of other processes. Naturally occurring nanoparticles are found in ocean spray and volcanic ash. By-product nanoparticles are present in smoke and fumes from combustion processes, such as car/diesel exhaust, airplane exhaust, power production, welding exhaust, and wood fires.

Q: What are “fixed” and “free” engineered nanoparticles?

A: A “fixed” nanoparticle is physically bound to a large-area substrate or surface that prevents the nanoparticle from dispersing (or floating) in air. Fixed nanoparticles may also be attached to liquid molecules in a solution. Nanoparticles may also “agglomerate” or clump together, creating a larger sticky substance that is not likely to disperse in air. Free nanoparticles are neither attached to any surface nor immersed in a liquid and have the potential to float freely in the air.

Q: How much research does the Lab currently conduct using or creating “free” engineered nanoparticles, and in what facilities?

A: It is anticipated that 95 percent of the nanomaterials research conducted by BNL scientific staff will involve “fixed” nanomaterials, meaning that the nanostructured systems will be contained within a solution or adhered to a surface. Any work involving manipulation and study of “free” nanomaterials will involve tiny amounts of materials, similar in quantity to a dash or two from a salt shaker. Conservative controls are being employed to prevent these free nanomaterials from escaping into the air, such as work planning; doing the work within closed, sealed systems; and using filtered exhausts.

BNL Veggie Club

Fresh organic produce from a local Long Island farm is available, delivered to BNL for Community Supported Agriculture (CSA) members to pick up for 26 weeks, June through November. The fee for a season of produce is \$405. Pay immediately or in installments of \$200 on sign-up, by May 31, with two post-dated checks: \$105 for July 10, and \$100 for September 4. For information, contact Ruth Comas, comas@bnl.gov or Ext. 3545.

Introducing the Brookhaven Council

The Brookhaven Council is composed of: (seated, from left) Subramanian Swaminathan, Biology; Jean Logan, Medical; Council Chair Vladimir Litvinenko, Collider Accelerator; Council Secretary Lawrence Kleinman, Environmental Sciences; Sergei Lymar, Chemistry; and Dmitri Kharzeev, Physics; (standing, from left) Robert Bari, Energy Sciences & Technology; Peter Daum, Instrumentation; Christopher Homes, Condensed Matter Physics & Materials Sciences; John Tranquada, Condensed Matter Physics & Materials Sciences; Trevor Sears, Chemistry; David Morrison, Physics; G. Lawrence Carr, National Synchrotron Light Source; Dejan Trbojevic, Collider Accelerator. Not present are: John Dunn, Biology; Steven Kettell, Physics; Ronald Pindak, National Synchrotron Light Source; and Pavel Rehak, Instrumentation.

The BNL Council, which is elected by the scientific staff, is a body that advises and makes recommendations to the Director about Laboratory policies affecting the scientific staff. The Council is particularly concerned with the maintenance of an atmosphere conducive to excellence in scientific research at BNL. The Council reports to the Director. The term of membership

is three years. New members normally begin service at the March meeting of the Council.

This year, Vladimir Litvinenko of the Collider Accelerator Department is serving as Council Chair, and Lawrence Kleinman of the Environmental Sciences Department is serving as Council Secretary. More information is available at www.bnl.gov/bnlweb/Admin/council.asp.

Talk on Diversity, Culture Education, 6/4

On June 4, consultant Brian McNaught will give a talk focusing on differences in the workplace. All employees are invited to join the Diversity staff for this presentation, which will be held in Snyder Hall, Bldg. 911A, 10 a.m.-noon.

During his talk, McNaught will help participants to understand their role in creating a corporate culture that feels safe and welcoming to gay, lesbian, bisexual, and transgender colleagues. This presentation underscores BNL’s commitment to valuing diversity by helping the participants understand the impact of day-to-day encounters on productivity and retention, and aiding open communication and innovative approaches to maximizing productivity by minimizing conflict.

Summer Science Explorations Camp

Children or grandchildren of BNL employees fourth-to-sixth grade may be registered for the free, three-day science camp provided by the Lab’s Science Learning Center. Dates are: July 10-12 and August 14-16, 8:30-11:30 a.m. Call Ext. 4495 for more information.

BNL’s Model Bridge Contest Winner Takes Second in International Bridge Contest

Benjamin Coburn (center), a home-schooled student from Center Moriches, won first place in BNL’s 2007 Model Bridge Contest, and he placed second in the 2007 International Bridge Building Contest held in Chicago, Illinois, on April 28. Coburn won second place in the BNL contest last year, and he also placed first in 2005.

More than 150 students from 12 Suffolk County high schools entered their model basswood bridges in the BNL contest with the goal of making the lightest bridge that held the most weight, up to 50 kilograms, or 110.2 pounds. In the BNL contest, Coburn’s bridge weighed 12.4 grams and held 84.4 pounds, or 3,084.8 times its own weight. He improved on those figures in the international contest by building a bridge that weighed 13.3 grams and held 50 kilograms, or 3,757 times its own weight.

Fifty-seven students, all first- or second-place winners in their regional contests, entered the international contest. BNL paid for the top two winning students’ trips to the international contest, and, as second-place winner, Coburn won a video iPod®, as well as a trophy, in that contest.

James Dowd (second from right), from Islip High School, won second place in the BNL contest with a bridge that weighed 17.6 grams and held 131.7 pounds, or 2,840.9 times its own weight. He also won fifth place in the international contest, with a bridge that weighed 14.24 grams and held 43 kilograms, or 3,020 times its own weight.

Third-place honors in the BNL contest went to Christopher Durcan (third from left), from Patchogue-Medford High School, whose 17.7-gram bridge held 121.7 pounds, or 2,824.8 times its own weight. Jeffrey Petracca, (third from right) Walt Whitman High School, won the aesthetic prize for creating the most attractive bridge. Joining the winners (from left) are John Carter, Director of Community Affairs, DOE Brookhaven Site Office; Andrew McNerney, Assistant Lab Director, Facilities & Operations; and (far right) Melvyn Morris, Educational Programs Coordinator, who organized the contest. — Diane Greenberg

Service Anniversaries

The following employees celebrated service anniversaries during February 2007.

— 30 Years —	
Richard Thomas	SMD
Creighton Wirick	EENC
Kathy Doty	Env. Sci.
Jagdish Tuli	ES&T
William Leonhardt	CMP&MS
Thomas Muller	Physics
Patricia Jencius	PPM
— 25 Years —	
Donald Makowiecki	Instrum.
— 20 Years —	
Allan Corby	ITD
George Gottschalk	ITD
Douglas Paquette	EWSD
Angela Bowden	NSLS
Robert Lofaro	ES&T
Mary Franchi	HR&OM
— 10 Years —	
Christopher Salat	C-AD
Joanne Beebe-Wang	C-AD
Wolfram Fischer	C-AD
Stanley Yakaboski, Jr.	C-AD
Donald Hensley	Plant Eng.
Donald Zaharatos	Plant Eng.
Shinan Qian	Instrum.
Lijun Wu	CFN

The following employees celebrated service anniversaries during March 2007.

— 30 Years —	
Kathleen Tuohy	Physics
Richard Kuczmariski	Plant Eng.
Eugene Von Achen	Instrum.
— 25 Years —	
Joseph Levesque	F&O Dir.
Graham Smith	Instrum.
John Taylor	BES Dir.
— 20 Years —	
Benjamin Ocko	CMP&MS
Brian Boyle	NSLS
Fred Wojtuniak	Plant Eng.
Henry Jones	Plant Eng.
Joseph Vignola	Rad. Con.
Anette Meier	NNS
Nikolaos Laloudakis	C-AD
Christopher Degen	C-AD
Robert Bellando	Plant Eng.
— 10 Years —	
Jack Fried	Instrum.
Christine Brakel	IP&SR
Susan Centore	ITD
Travis Shrey	C-AD
Karen Johnson	ES

Arrivals & Departures

— Arrivals —	
Richard Portesy	BSD
— Departures —	
None	

CIGNA: Tuesdays, Bldg. 400

A CIGNA Healthcare representative will be on site in Human Resources, Bldg. 400, on Tuesdays, to assist with any claims issues that you have been unable to resolve yourself. Janice Petgrave will be available for 30-minute meetings, by appointment only, 10 a.m.-1 p.m. Bring all pertinent documentation. To schedule, call Linda Rundlett, Benefits Office, Ext. 5126.

Then & Now — the NSLS Designers

Ever since BNL's National Synchrotron Light Source (NSLS) came online in 1982, it has made possible countless research findings and breakthroughs in new investigative techniques. Some of the latest of these were among the topics of the NSLS and Center for Functional Nanomaterials (CFN) Users' Meeting held earlier this week. Among other highlights of the meeting were the CFN ribbon-cutting ceremony (see story, page 1) and an overview of the plans and designs for NSLS-II, the proposed next generation light source recently approved by DOE.

Now, therefore, when intense research and development on NSLS-II is consuming many accelerator physicists at BNL and elsewhere, it is appropriate to look back to 1976-77, when two brilliant BNL Accelerator Department physicists were designing the NSLS. Ken Green, known for his early work on the Cosmotron and for managing the Alternating Gradient Synchrotron (AGS) construction project, was Design Manager. Renate Chasman, who had been the chief theorist for the AGS linac injector, was Theory Division Head. As principals of a design committee chaired by Martin Blume, then of the Physics Department [later, BNL Deputy Director, then *American Physical Review* Editor-in-Chief 1997-2007] they worked closely with others including Chalmers Frazer and Dick Watson of Physics; Jules Godel and Morris Perlman of the Chemistry Department; and John Blewett, Director's Office.

Synchrotron radiation is the electromagnetic radiation emitted by a rapidly moving charged particle when it moves in a curved path. In 1976, a National Research Council panel funded by DOE's predecessor, the Energy Research & Development Administration (ERDA),



From left: Ken Green, Martin Blume, and Renate Chasman

and the National Science Foundation to assess its use reported that "structural studies using synchrotron radiation will have a dramatic impact in biology, chemistry, and the physical sciences as well as on research and diagnostic applications relevant to the nation's energy, environmental, and communication technologies."

In a July 1976 Brookhaven Bulletin article, Blume explained some of the history of synchrotron radiation, which was first studied at the turn of the 1900s in connection with the motion of electrons around the nucleus in an atom. Then, in the 1940s, when electron synchrotrons were built, it was found that the radiation emitted by the electrons made it difficult to accelerate them because the radiated energy had to be replaced.

BNL's John Blewett, credited as the experimental discoverer of synchrotron radiation, perceived

it during his work at General Electric just after World War II. His discovery rekindled interest in the topic. Pioneering experiments in solid state physics were done at Cornell University and at the National Bureau of Standards (NBS); electron storage rings, such as SPEAR at Stanford University, followed. The first machine dedicated to using these rings was an ultraviolet ring at the University of Wisconsin. By June 1976, when BNL sent ERDA the proposal to build the NSLS, synchrotron light was being used at Cornell, the NBS, and SPEAR.

BNL's 1976 proposal described a facility of two electron storage rings, which would produce electromagnetic radiation to use in experiments. The large, 2 GeV ring had provision for about 40 x-ray beam ports, and the smaller, 700 MeV ring provided for about 16 ultraviolet beam ports.

The basic accelerator storage

rings at the NSLS were innovative structures capable of very high synchrotron light brightness, which were to hold the world record for brightness for many years. They were designed by Chasman and Green, who both died in 1977. At the time of Green's death, said Blewett in the Brookhaven Bulletin of August 19, 1977, "Ken was deeply involved in every detail of the NSLS construction, including magnet design, vacuum technique, electronics, soil mechanics, building design and staff organization."

In September, Lab Director George Vineyard then named Arie van Steenberg Head of the NSLS Construction Project. Renate Chasman died in October. Blewett commented on her NSLS contributions: "For some time, Rena and the late Ken Green were the whole team doing this design. The results of their work were quite remarkable; a design emerged which was a vast improvement on similar designs being evolved elsewhere in the world. Other machine designs were based on electron storage rings built for use in high energy physics. Rena recognized the different requirements for this machine and devised an arrangement of components peculiarly suited for use as a light source. Many other problems associated with the light source and its special components were solved either by Rena alone or in association with others who later joined the project."

The brilliant achievements of Chasman and Green are remembered around the world. Also, at BNL, the Renate W. Chasman Scholarship for Women is awarded annually to qualified candidates in science, engineering, or mathematics. This year, the scholarship was won by Noelle Cutter, a graduate student at Stony Brook University (see The Bulletin, March 2, 2007). — Liz Seubert

LIANS Dinner Meeting

BNL's Mark Davis talks on L.I. and Lab history, 5/31

The next meeting of the Long Island Chapter of the American Nuclear Society (LIANS) will be held on Thursday, May 31, when Mark Davis of BNL's Environmental & Waste Management Services Division will talk on "Wampmissic: From Mid-1800 to Big Science." The meeting will be held at the South Shore Restaurant, Rte. 112, Patchogue. Complimentary appetizers/cash bar will start at 6 p.m., dinner at 7 p.m., and Davis's talk at 8 p.m. The cost is \$25/person. Reserve by Monday, May 28, leaving a message with Arnie Aronson, Ext. 2606.

Pool, Gym Close Weekends Until Labor Day

The Pool & Gym complex will be closed during the weekends from this Memorial Day weekend, May 26, through Labor Day.

JOHNNYVOLUME Band at BNL, 6/15

JOHNNYVOLUME, a band that plays a mix of Chicago and British blues, rhythm and blues, Motown soul and rock 'n' roll, will appear in concert on Friday, June 15, at 7:30 p.m. in the Brookhaven Center. Sponsored by the BNL Music Club, the concert is open to the public. All visitors to the Lab age 16 and over must bring a photo ID.

JOHNNYVOLUME features Mitchell Ames on lead vocals and guitar, Philip Gardner of Long Island's own "The Rhythm Kings" on vocals and bass guitar, Skip Krevens on guitar and vocals, and Chris "Hadj" Hadjopoulos on drums and percussion. Lead singer/guitarist Mitchell Ames played and recorded with The



Fleshtones, the Hurricanes, and "Guys and Dolls," an original group formed with two of Johnny Thunder's "Heartbreakers," Walter Lure and Billy Rogers.

Tickets cost \$10 each and can be bought at the BERA Store in Berkner Hall, at www.ticketweb.com, or at the door on the evening of the show. Call Ext. 5257 for more information.

Noon Talk on Motorcycle Safety, 5/31

The BERA Cycletrons MC Club invites all to attend a presentation on "Motorcycle Safety and the Motorcycle Safety Foundations Rider-Training Classes," by Senior Instructor Mike Wexler and Bea Trama. The talk will be held on Thursday, May 31, at noon, in Berkner Hall, Room B. For more information, contact FrankD@bnl.gov or see www.bnl.gov/bera/activities/mcycyle/.

Trip to NYC, 6/17

The Hospitality Committee will sponsor a "do as you like" bus trip to the Bryant Park area, in Manhattan, on Sunday, June 17, departing BNL's Recreation Hall in the apartment area at 9 a.m. and leaving the city at 6 p.m. Cost: adults, \$10, children up to 12, \$5. E-mail Jing at deshanghai@yahoo.fr to reserve. Pay at the Recreation Hall on Wed., 6/13, 10-11:30 a.m.

Classified Ads

MIDDLE ISLAND - Fairview Circle Condo. lg. 2 bdrm., 2 full bath, lots space, l/r & d/r, w/d, garden, balcony, pond view, close to Lab. \$1,500/mo. Pavlos, 922-2559.
MILLER PLACE - 2 rms. bdrm., living area/kit., bath w/shower, grd. flr., no smkg/pets, suit. for 1 person. avail. mid-June. \$750/mo. Laurie, 928-8322.
RIDGE - 1 br excel. apt. eik, l/r, bath, sm. priv. yd., w/d, only 2 mi from BNL, all util. incl. cable, internet \$950/mo. 682-1943.
RIDGE - 1 bdrm. apt. eik, l/r, bath, 2 mi to BNL, incl. all, w/d, pvt. ent., yd., [http://new.photos.yahoo.com/\\$950/mo.682-1943](http://new.photos.yahoo.com/$950/mo.682-1943).
ROCKY POINT - 1 bdrm. furn./unfurn. apt. patio, 2 lg. closets, bright, quiet, 15 min. to Lab, gas, water incl., \$1,100/mo. 593-4561.
ROCKY POINT - 1-bdrm. apt., kit., l/r, bath, priv. drway/ent., no smkg/pets, 1 mo. sec., util. not incl. \$850/mo. 821-3287.
SAINT JAMES - 3 bdrm., 1 bth apt. elect. incl. w/d & use of yd., cable/lnet optional, excel. sch. dist. \$1,800/mo. 553-4868.
SOUND BEACH - 5 br. house w/opt to buy, util. extra, nr beach, 1/3 acre, mint cond. 702-5531 \$2,600/mo. Ext. 2350.

SOUND BEACH - 3-bdrm. house, 1-1/2 baths, lg. closets, eik, d/w, w/d, rec. paint, carpets, fenced yd., lg. deck, mpsd, no smkg/cats, plus util. \$1,600/mo. 744-8673.
WADING RIVER - Renov. 1 bdrm cottage, excel cond, lg rms, poss 2nd bdrm. Nr Wildwd Park, bch. 15 min to Lab. No smkg/pets. util xtra. Also For Sale, \$209K. \$1,000/mo. Michael, Ext. 4202.

For Sale

MANHATTAN - Timeshare, any 7 days per year. Across from Carnegie Hall. Sleeps 4, 1 bath, kitchen. \$23,500 OBO. Gerhart Friedlander, 631-650-3222.
MEDFORD - updated 3 bdrm. condo, Blue Ridge Developmt, see www.forsale-byowner.com/20793141 , \$329,900/neg. Ext. 3995 or 696-4366.
MIDDLE ISLAND - Custom quality home on 1/2 acre shy prop nr Pine Lake, 4br., 2 ba, some oak flrs., spac kit. & fam rm., a/c, 15 min to Lab. \$329,000, 751-3470 x288.
WESTHAMPTON - Condo-1 bdrm., 1 bath upper unit in sm. quiet complex w/ swimming pool. \$345,000/neg. 523-1050.

CALENDAR

Friday, 5/25

Scharff-Goldhaber Prize Reception
3 p.m. Large Seminar Room, Physics, Bldg. 510. Stony Brook University (SBU) and BNL communities all invited to the award ceremony and reception for the 2007 Gertrude Scharff-Goldhaber Prize won by Manuela Kulaxizi, SBU graduate student. Kulaxizi will give a short talk on her research, titled "Gauge theories, gravity and noncommutative geometry. Refreshments will follow.

— WEEK OF 5/28 —

Monday, 5/28

BNL Closed for Memorial Day
The Lab will be closed in observance of Memorial Day. No Bulletin will be printed on Friday, June 1.

Wednesday, 5/30

BSA Distinguished Lecture
7 p.m. Berkner Hall. Lawrence Krauss, Professor of Physics and Astronomy at Case Western University, will talk on "Einstein's Biggest Blunder? A Cosmic Mystery Story." All are welcome at this free lecture, sponsored by BSA and open to the public. Visitors to the Lab of age 16 and over must carry a photo ID.

Thursday, 5/31

***Talk on Motorcycle Safety**
Noon. Berkner Hall, Room B. the BERA Cyclotrons MC Club invites all to a talk on motorcycle safety and training classes, by Senior Instructor Mike Wexler and Bea Trama. See notice below, left.

— WEEK OF 6/4 —

Monday, 6/4

***Talk on Diversity in Workplace**
10 a.m.-noon. Snyder Hall, Bldg. 911A. See notice, page 2.

Tuesday, 6/5

Retirees' Get-Together Lunch
Noon-3:30 p.m. Bellport Country Club. Brookhaven Retired Employees Association (BREA) event. To attend, send \$30 check made to BREA, to BREA, P.O. Box 5000, Bldg. 475C, Upton, NY 1193-5000. 344-2707, www.brea.bnl.gov.

Wednesday, 6/6

Talk on Veterans' Benefits
Noon. Berkner Hall, Room D. "The Invisible Wounds of War," by Lawrence Brown, retired career military and mental health counselor, Babylon Vet Center of U.S. Veterans' Administration. This talk may be of special interest to veterans, veterans' spouses, surviving spouses of deceased veterans, or veterans' parents. Contact the Employee Assistance Program, Ext. 4567 or dipierro@bnl.gov to register.

Remember!

BNL Food Drive

Bring canned food and leave it in the special bins around site, for example, at the Post Office in Bldg. 179. Hungry people in Brookhaven Town really depend on these gifts. Thanks.

Join the Brookhaven Advocacy Council

The Brookhaven Advocacy Council (BAC) seeks representatives of the Lab's diverse workforce to become a member of the council.

If you are a good listener who can maintain confidentiality, remain impartial, are interested in establishing an atmosphere of trust between BNL management and its employees, and are willing to devote time and energy to ensure that everyone enjoys the quality of life that BNL offers, consider becoming a BAC member.

The BAC is a key component of BNL's system of justice. BAC members advise and make recommendations to the Lab Director on resolving employee/guest/user concerns or issues that are brought to the BAC's attention. The BAC is charged with the authority to receive and respond to employee/guest/user concerns or issues; analyze and research data; and propose resolutions. Members have access to all pertinent, uncensored information within BNL's guidelines regarding confidentiality. Membership responsibility consists of regular participation in the monthly Council meetings for three years. The BAC functions independently of the Human Resources & Occupational Medicine Division, reporting directly to the Lab Director.

If you are interested in being a candidate, contact Ernie Tucker at tucker@bnl.gov, Ext. 5735, or Amber Aponte at aaponte@bnl.gov, Ext. 3807. Provide your name, extension, e-mail address, department/division, and position.

Classified Advertisements

Placement Notices

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

OPEN RECRUITMENT – Opportunities for Lab employees and outside candidates.

ASSISTANT PHYSICIST (S-1) - ACCELERATOR PHYSICS - Requires a Ph.D. in accelerator physics with experience in the area of storage rings. Proficiency in computer simulation codes for linear and non-linear dynamics studies of particle beams will be significant plus. The successful candidate will join the NSLS-II accelerator physics team and will be involved in the development and design of the NSLS-II accelerator systems. Example assignments include: beam dynamics studies related to operations with ultra-small emittance, the impact of insertion devices on storage ring performance, and investigation of future upgrade opportunities. Working under the supervision of the Accelerator Physics Group Leader, the successful candidate will also be contributing to the development of other aspects of the NSLS-II accelerator, such as developing techniques to produce short x-ray pulses. National Synchrotron Light Source II. Two-year term appointment. morton@bnl.gov referring to Position No. TM 4621.

PROJECT ENGINEER I (P-9)/SENIOR PROJECT ENGINEER (P-10) - Requires an advanced degree in Physics or Electrical Engineering and 15 years of relevant experience. Extensive experience and successful track record in analog and digital signal processing is required. Experience in low-level RF control and/or an accelerator timing systems is a significant plus. Candidates with experience developing global timing control systems will be given preference. Prior project management experience is highly desirable. Excellent written and oral communication skills coupled with the ability to interact effectively with a diverse group of scientist, technical staff and users is required. Responsibilities will include providing strong technical leadership in optimizing accelerator performance and operational stability. Reporting to the NSLS-II Accelerator Physics Group Leader, the selected candidate will provide technical expertise in the R&D, design, installation, and commissioning of accelerator timing systems. Will also provide support in beam position monitoring systems, global orbit feedback systems and diagnostics to improve storage ring orbit stability and injector performance. National Synchrotron Light Source II. morton@bnl.gov referring to Position No. TM 4622.

SYSTEM ADMINISTRATOR (I-6) - Requires a BA/BS Degree in Computer Science or a related discipline and 3+ years of relevant experience. Strong communication skills and the ability to manage multiple as-

signed tasks are required. Must possess a high level of expertise with Active Directory management and group policy objects. Significant experience required with administering Microsoft SQL and IIS 6.0 servers. Working knowledge of TCP/IP, RAID technologies, server hardware and LAN administration as well as knowledge of SQL query language and scripting is highly desirable. Candidate will report to the Light Sources Directorate Network Manager and will be responsible for the configuration, management and monitoring of the directorate Microsoft Windows 2003 server infrastructure including file/print servers and application servers (SharePoint, MS Project, MS SQL and IIS 6.0) in a production environment. The System Administrator will monitor, analyze, optimize and report on system performance, workload and stability. Additional responsibilities include managing application user accounts and authorizations and troubleshooting and resolving problems related to applications architecture and deployment in conjunction with end user needs. Light Sources Directorate. morton@bnl.gov referring to Position No. TM 4670.

DESKTOP SUPPORT SPECIALIST (I-5) - Requires a BA/BS Degree in Computer Science or a related field plus a minimum of two years of relevant experience. Strong problem solving skills are required along with knowledge of Microsoft applications and LAN fundamentals (TCP/IP, Ethernet, Wi-Fi). Knowledge of Microsoft's Active Directory and GPO, cyber security issues, and video conferencing hardware is desirable. Must possess outstanding customer service and be able to work effectively as part of a team. Reporting to the Light Sources Directorate Network Manager, the Desktop Support Specialist will be responsible for the deployment and configuration of new computer systems and technical support for end users as necessary. Will troubleshoot and solve a wide variety of operating system and application software issues by using effective methods and various tools (MS Remote Desktop, Ghost, Sysprep, ERD). Additionally, the Desktop Support Specialist will assist in moving, adding or changing user workstations and peripherals as needed. Light Sources Directorate. morton@bnl.gov referring to Position No. TM 4669.

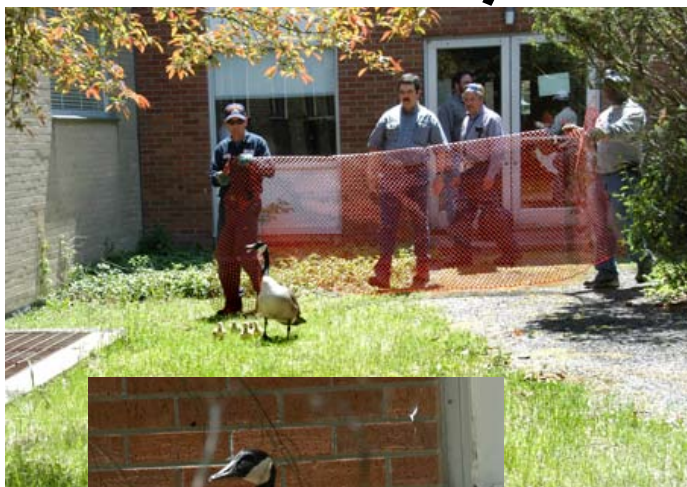
SR. TECHNICAL SPECIALIST/MECHANICAL (T-3) - Requires AAS in mechanical technology or equivalent, and a minimum of 8 years experience in the fabrication and assembly of extremely precise mechanical components and assemblies. Requires the ability to work from mechanical prints, verbal instructions and rough engineering sketches. Must have experience with precision measuring devices including equipment used in the measurement of magnetic fields of superconducting and conventional style magnets. Demonstrated ability to operate machine tools and basic electronic wiring techniques is necessary. Magnet Division/Collider Accelerator Department. morales@bnl.gov referring to Position No. RM 8649.

VETERINARY SERVICES ASSISTANT (CW-1) (2 part-time positions, 50 percent) - Under direct supervision, performs tasks connected with the care, feeding, cleaning, treatment and bedding of laboratory animals. Performs general cleaning of quarters and similar duties as assigned. Entry qualifications typically consist of high school diploma or equivalent. Prior experience working with animals is desirable. Ability to lift 50 lb. feed bags and work week-end/holiday hours is needed. Medical Department. (reposting) hubertd@bnl.gov referring to Position No. DH 4459.

Motor Vehicles & Supplies

04 CHEVROLET SILVERADO 1500 - LS, 5.3L, 4x4, 8cyl., c/c,p/b,p/l,p/s,p/w,a/c,a/t, keys ent., 40K mi. \$24,000/neg. Ext. 7132.

04 TOYOTA COROLLA - LE, a/t, a/c, c/c, Cass/CD, p/l, p/b, p/s, p/w, abs, DRL, keyless entry, 75k warr., excel. cond. 45K mi. \$14,000/neg. Anna, Ext. 7132.



This year, a pair of Canada geese decided that the north courtyard of the Physics Department, Bldg. 510, was a safe haven for a nest. In mid-May, the eggs hatched, and five goslings appeared. However, they needed to get out into the world to learn to get food in the wild. The courtyard is closed, accessible only by various glass doors that form the interior wall of the hallway outside and doors across from them that open to parking lots. The little non-flyers had to exit the courtyard on foot. It was not clear that Mother Goose would recognize the good intentions of those ousting her from her retreat, so outside help was brought in. Timothy Green, the Lab's Natural Resource Manager, and Mike Pankowski from the Plant Engineering Division (PE) devised a method of friendly persuasion, and they and other members of PE's Grounds Maintenance managed to usher the small goose family out from Eden without great angst. The smallest of the five was carried through the slippery tiled hallway by caring hands. — Liz Seubert

01 HONDA SHADOW SPIRIT - pearl white, clean chrome, saddle bags, 3100 mi. \$3,700/neg. 834-6637.

99 NISSAN SENTRA - hwy. mi., 5spd., manual, a/c, new batt. am/fm, cass., 4dr, 4 cyl., orig. 160K mi. \$3,500/neg. (301)518-5674.

99 TOYOTA COROLLA - a/t, a/c, p/l, p/w. 70K mi. \$4,500/neg. 591-1054.

96 JEEP CHEROKEE SPORT - 4WD, new tires, brakes, batt, wires & water pump, Orig. owner. 101K mi. \$2,950/neg. 553-2477.

Boats & Marine Supplies

21' MOTORBOAT - 1983 Marathon 2100, cuddy cabin, repowred 120hp stern drive, excel. head, galley, trailer, \$4K. Ext. 2788.

SAILBOAT MORGAN 24 - sleeps 5, gd. cond., w/8 HP Evinrude. 2 sets sails, ready to sail, incl. launch from Oakdale. Ext. 5636.

Furnishings & Appliances

CURIO CABINET - bleached oak 7'h 3'w, lots of glass, excel. cond., ask. \$175. Bob, 654-3989/278-2192.

FLOOR BUFFER/POLISHER - Kenmore, \$20. Chris, Ext. 2094.

GRILL - Kenmore, outdr. BBQ, bubble on tripod style, hardly used, \$50. Julie, Ext. 3379.

SEWING MACHINE - Kenmore Mdl 86 w/ cabinet, circa 1950's, bobbin winder broken, otherwise works well. \$50/neg. Ext. 4538.

Audio, Video & Computers

APPLE/MAC ITEMS - Performa 13" Portrait Display color monitor, \$10; ADB extended kybrds (2) w/mice, \$5/ea. Ext. 4538.

COMPUTER ITEMS - Iomega zip drive w/ cartridges, \$10; external floppy drive w/ disks, \$10; Canon printer, \$10. Ext. 4538.

DURABRAND IN DASH CAR STEREO - CD/MP3/CDRRW playback w/MP3 display, 45Wx4, more, \$100.434-5824.

IPOD ISYMPHONY MUSIC SYSTEM - w/ Univ. Dock for Apple iPod, never opened, sells for \$150, ask \$100. Donna, Ext. 2826.

PIONEER CAR STEREO - 50W/channel, CDRRW/MP3/WMA playback, satel/ipod compat, blue OEL display/sc/saver, \$180. Laura, Ext. 7842.

Friendly Persuasion



Sports, Hobbies & Pets

BICYCLE - men's 12-sp'd touring, excel. cond., used twice. \$75/firm. Ext. 4538.

ELLIPTICAL TRAINER - Pro-Form 320., like new, pd. over \$400, ask. \$300. Michelle, Ext. 6387 or 793-7080.

EXERCISE EQUIPMENT - stair climber w/electronic readout, needs batt., \$10; Ab Roller, never used, \$5. Must sell! Ext. 4538.

GOLF CLUBS - 3 sets avail. w/ bags, call for details. Chris, Ext. 2094.

ROLLER BLADES - men's roller blades, size 9.5/10, used once, ask \$25. Ext. 4538.

SLOT MACHINE - Triple Triple Diamond, actual Las Vegas Casino IGT quarter jackpot slot mach., accepts bills \$850. Ext. 3005.

Tools, House & Garden

BAND SAW - elect., 4 yr. old Grizzly. 220v, b/o. 924-0139.

CHAIN SAW - Craftman, 14", gd. cond. \$75.00. Joe, Ext. 3783 or 487-1479.

MTD RIDING LAWNMOWER - Yardman, 20 HP, 46" cut, runs well, new blades. \$595 neg. Dennis, Ext. 4028 or 298-4117.

RYOBI 6 - w/ light kit. great for sharpening mower blades, like new cond., \$35. Chris, Ext. 2094.

TABLE SCROLL SAW - Delta, great for intricate wood work, \$50. Chris, Ext. 2094.

SHED - Westminster pine, 5-sided, 38 sq. ft. (euroshed.com), finish., nr. new, rdy for pick-up, asmbly, \$2,000. Ext. 3375 or 751-6139.

Wanted

APT OR ROOM - sm., cheap, nr Lab, kit. & bath, for at least 1 yr. & max. 2 yrs. 1 person. Eugenio, Ext. 2365 or 375-6341.

2 BEDROOM APT/HOUSE - Western Suffolk, Babylon, W. Babylon, Lindenhurst, Massapequa area. Non basement. \$1,350 max. Lori, Ext. 5167.

BERA STORE CLERK - Summer Sundays, all 8 weeks from 10am-3pm. Please call for information. Christine, Ext. 5090.

HOME COMPANION/AIDE - Non-Medical Aide needed for elderly woman in Smithtown area, approx. 4 hours per day. 828-2172.

HOUSE TO RENT - 2 bdrm., pref. nr. Lab, \$1,400/mo or less, excel. tenants. Ext. 5351.

ROW BOAT - 7-8 ft. aluminum preferred, oars & small motor for senior fisherman. Frank, Ext. 2022 or 433-9205

Miscellaneous

YANKEES TICKETS - 2 for Angels vs. Yankees, 5/26 1:05 p.m. Tier 12, Row P, \$20/ea. Andrea, Ext. 4656.

Lost & Found

PEDOMETER - SPORTLINE 340 - lost 5/17, if found please call. Dorene, Ext. 4153.

Yard & Garage Sales

SMITH POINT-SHIRLEY - Sat. 5/26 (rain date 5/27), 9 am - 4 pm, 32 Roneck Ct. Sue, Ext. 7235 or 399-7997.

YAPHANK - 482 Yaphank-Mdl Is Rd., May 19-20, 9:00-4:00, no reasonable offers refused, something for all. Ext. 4538.

Happenings

MC SAFETY LECTURE - Tramas Senior Motorcycle Riding Class Instructor to give lecture at Berkner Hall Rm. B, noon, Thurs. May 31st. Frank, Ext. 2022.

For Rent

CENTER MORICHES - 1 BDRM, Apt. Full bath, large closet, own yard area, parking. eat in kitchen area. New rugs, floors. Nice area. 15 min to Lab. \$800/mo. 878-1178.

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

FARMINGVILLE - bdrm. in lg house, share bath w/2, full kit., l/r, d/r, elect. incl. \$450/mo. Ben, 513-8275.

MASTIC BEACH - 2 bdrm basement apt. All new, full LR/Kit/bath, all new appls, off str prkg. \$1,250 total. Refs & sec required. \$1,250/mo. 516-817-1428.

More ads are on page 3. For a list of services provided by BNL employees see the lower right side of the Intranet or email lseubert@bnl.gov.