

## BNLers Honored at Lab Recognition Ceremony

At the annual Employee Recognition Ceremony held on June 22 in Berkner Hall, 13 BNLers were honored with the Lab's highest awards: five received the Brookhaven Award, five, the Engineering & Computing Award, and two, the Science & Technology Award. Candidates are selected for the exceptional nature and difficulty level of their contributions as well as the benefit of the contributions to the Laboratory.

This year, one employee was honored with the unprecedented Lifetime BERA Service Award, in recognition of dedicated service to the Brookhaven Employees Recreation Association. Christine Carter, Recreation and Quality of Life Supervisor, presented

the Lifetime BERA Service Award to Elliott Levitt, Internal Audit & Oversight Office.

Sam Aronson, Laboratory Director, presented the Brookhaven Award to: Kathleen Barkigia, Policy & Strategic Planning Office; Patricia Carr, Energy, Environment, & National Security Directorate; Steven Coleman, Radiological Control Division; Mark Davis, Environmental Protection Division; Thomas Dilgen, Superconducting Magnet Division; and Emerson Vernon, Instrumentation Division.

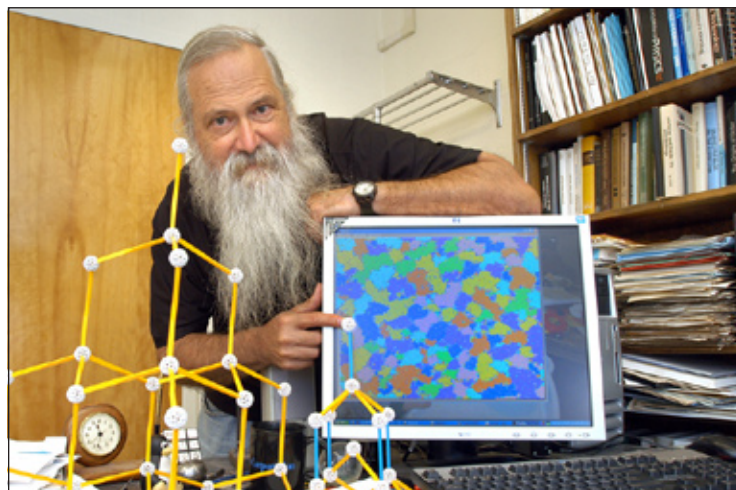
Michael Bebon, Deputy Laboratory Director for Operations, presented the Engineering & Computing Award to Gregory Flett, Modernization Project Office; Jesse Schmalzle, Super-

conducting Magnet Division; Alexander Zaltsman, Collider-Accelerator Department; Wu Zhang, Collider-Accelerator Department.

Doon Gibbs, Deputy Laboratory Director for Science & Technology, presented the Science & Technology Award to Serban Protopopescu, Physics Department; and F. William Studier, Biology Department.

Also congratulated were 146 Spotlight Award winners, cited for extending extraordinary efforts in response to the needs of their departments or divisions.

The Bulletin will feature each of this year's winners over the coming weeks, starting with the Science & Technology Award Winners below. Stay tuned!



## Michael Creutz Receives Humboldt Research Award

Michael Creutz of the Physics Department has received a Humboldt Research Award, which will allow him to spend up to one year working on a long-term research project with specialist colleagues at a research institution in Germany. The Humboldt Foundation grants up to 100 of the awards annually to researchers whose fundamental discoveries, new theories, or insights have had a significant impact on their own discipline and who are expected to continue producing cutting-edge achievements in the future.

"Starting in the fall, I plan on spending several two-month periods at the Johannes Gutenberg University Mainz to pursue research for an expanded understanding of the properties of quarks," Creutz said. "I am pleased to have this opportunity to interact with colleagues in Germany, who will provide a different way of thinking about my work. The experience will be very broadening and productive."

Michael Creutz's research is focused on quantum chromodynamics (QCD), a theory that describes the interactions of subnuclear particles. Specifically, Creutz first demonstrated that properties of QCD could be computed numerically on a four-dimensional lattice through computer-based calculations known as Monte Carlo techniques.

In one of the most cited papers of 1980, which was published in the journal *Physical Review*, Creutz provided strong numerical evidence that quarks cannot be isolated, thus confirming this conjectured property of QCD. He found that the force between widely separated quarks, which is

equal to 14 tons, did not decrease as the quarks move farther apart.

With his colleagues in Germany, Creutz will study the interplay of the lattice with another complementary technique called chiral symmetry to gain further understanding of the physics of quarks. Creutz will investigate how certain quantum mechanical anomalies give rise to an apparent clash between these techniques and how this is resolved as the lattice becomes finer. Such information is important for physicists to interpret new findings in experiments at accelerators such as BNL's Relativistic Heavy Ion Collider and the Large Hadron Collider at CERN, the European Organization for Nuclear Research.

Michael Creutz earned a B.S. in physics from the California Institute of Technology in 1966, and a Ph.D. in physics from Stanford University in 1970. He was a postdoctoral fellow at the Center for Theoretical Physics at the University of Maryland before he joined BNL in 1972 as an assistant physicist. He rose through the ranks to become a senior physicist in 1980.

A fellow of the American Physical Society (APS), Creutz received the APS's Anesur Rahman Prize for Computational Physics in 2000. He also received the Brookhaven Research & Development Award in 1991 and the Andrew Sobczak Memorial Lectureship from Clemson University in 1997. In 2008, he was honored with the Gian Carlo Wick Gold Medal Award from the World Federation of Scientists for outstanding contributions to particle physics.

— Diane Greenberg

## The 2009 Science & Technology Awards

Doon Gibbs, Deputy Laboratory Director for Science & Technology, presented the 2009 Science & Technology Awards, which recognize distinguished contributions to the Laboratory's science and technology mission over one or more years. Contributions may be in any scientific or technical discipline other than engineering and computing. Each awardee is presented with \$5,000.

Nominations for the Science & Technology Award are made by organization heads. A Lab-wide selection committee for this award consists of the Associate Laboratory Directors for scientific programs who recommend award recipients to the Laboratory Director for final approval. The committee members evaluate each nominee with respect to three criteria: the exceptional nature of the employee's contributions, the difficulty level of the contributions, and their benefit to BNL.

### Serban Protopopescu

Serban Protopopescu, a physicist in the Physics Department who joined BNL in 1972 is cited for his world-class contributions to high energy physics over the past three decades. In particular, he is recognized for his work on the D0 Experiment at the Tevatron collider at Fermi National Accelerator Laboratory. A founding member of the D0 collaboration, Protopopescu led the team that designed the early analysis software for this experiment and is credited as one of the very few people whose contributions were most crucial to the D0 detector's role in discovering the top quark at the Tevatron in 1995. The top quark discovery is recognized as one of the most significant in the last two decades of high energy physics research.

From 1996 to 2000, Protopopescu was the chief architect for new software for the D0 experiment's upgrade, and



Serban Protopopescu of the Physics Department (left) and F. William Studier of the Biology Department (right), the 2009 winners of the Brookhaven Lab Science & Technology Awards.

for the next two years led the D0 simulation, ready for Run II, which began in 2002. His main interest for the Run II data focused on tau lepton identification and physics processes such as the first observation of a Z boson to tau-lepton pair decay at a hadron collider, and the search for the Higgs boson to tau-lepton pair decays. Protopopescu is now recognized as one of the world's leading experts on tau-lepton identification in hadron colliders. In 2008, he joined BNL's ATLAS team to continue studying final states with tau leptons at the Large Hadron Collider in Geneva, Switzerland.

### F. William Studier

F. William Studier, a senior biophysicist in the Biology Department who joined BNL in 1964, is recognized for his outstanding contributions in characterizing the life cycle of the bacterial virus bacteriophage T7 and its interaction with its host bacteria, *Escherichia coli*, and for developing tools for the expression of proteins and the analysis of proteins and nucleic acids.

Studier's methodical genetic and physical analyses pro-

vided the basis for a sustained investigation of T7 genetics and biochemistry that has resulted in many important observations and over 90 peer-reviewed scientific papers that largely define the T7 system. His publications are among those most highly cited in biological research, and his work has stimulated the research of many others.

Studier's idea of casting flat gels that enable the simultaneous analysis of many proteins or nucleic acids revolutionized molecular biology research and was a forerunner of the modern, high throughput methods that have enabled a systems approach to biological research today. His system for the expression of proteins was critical to the success of structural genomics research and is probably the most widely used expression system for proteins today. Royalties from his patents continue to be a critical factor for developing new research programs at BNL, not only in the life sciences, but Laboratory wide. He is currently developing new ways to work with proteins that are difficult to clone and express.

— Liz Seubert

Brookhaven National Laboratory

RENAISSANCE ROAD

SIMONS CIRCLE

**Save the Date!**

**RHIC Renaissance Celebration, 7/30**

July 30, 2009

On Thursday, July 30, all BNL employees, summer visitors and other guests are invited to participate in a RHIC Renaissance Celebration, featuring:

- 11:30 a.m. — ceremony honoring Jim Simons and partners at Renaissance Technologies, Inc., who made the 2006 run of the Relativistic Heavy Ion Collider (RHIC) possible with their generous donation
- Noon — Lab community "Collide the Ions" 1.8-mile walk around the RHIC ring road, For each walker, BSA will donate \$10 toward autism research, one of Simons' charity research interests. T-shirts and ice cream will be given out free to all participants
- 2 p.m. RHIC Renaissance talks, with a keynote by William Brinkman, new Director of DOE's Office of Science.

Look for more information about this event next week.



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.

— 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: BNL Social & Cultural Club**  
Noon–1 p.m., Brookhaven Center, South Room, free beginners dance lessons. Rudy Alforque, Ext. 4733, [alforque@bnl.gov](mailto:alforque@bnl.gov)

**Mondays & Wednesdays: Pilates**  
12:15–1:15 p.m. Monds.; 5:15–6:15 p.m. Mon. & Wed. Rec. Hall. \$75/once/wk., Registration is required. Ext. 5090

**Mondays & Thursdays: Kickboxing**  
\$5 per class. Noon–1 p.m. in the gym. Pay as you go. Ext. 8481

**Mon., Thurs., & Fri.: Tai Chi**  
Noon–1 p.m., B’haven Cntr N. Rm. Adam Rusek, Ext. 5830, [rusek@bnl.gov](mailto:rusek@bnl.gov)

**Tuesdays: Hospitality Coffee**  
10:30 a.m.–noon, Rec. Hall lounge. All welcome. Ext. 5090

**Tuesdays: BNL Music Club**  
Noon, B’haven Center, N. Room. Come hear live music. Joe Vignola, Ext. 3846

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

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

**Tuesdays & Thursdays: Jiu Jitsu**  
6:30–7:30 p.m. Tuesdays: Brookhaven Center, Thursdays: Gym. All ages, 6 yrs. to adult. Class fees are \$65/month or \$10/class, pay as you go. Tom Baldwin, Bldg. 452, Ext. 4556

**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](mailto:flood@bnl.gov)

**Tuesday & Thursday: Aqua Aerobics**  
5:30–6:30 p.m., Pool. Registration is required. Ext. 2873

**Tuesday & Thursday: Jazzercise**  
Noon–1 p.m. Rec. Hall. 8-wk session, \$90 2x/wk. Holbrook & Wading River locations too. Registration is required. Ext. 2873

**Wednesdays: On-Site Play Group**  
10 a.m.–noon. Rec. Hall. Infant/toddler drop-in event. Parents meet while children play. Restarts 9/10. Petra Adams, 821-9238

**Wednesdays: Ballroom Dance Class**  
B’haven Center, N. Ballroom. Instructor: Giny Rae. Three 1-hr. classes, starting at 5:15 p.m. Ext. 3845

**Wednesdays: Yoga**  
Noon–1 p.m., B’haven Center. Free. Ila Campbell, Ext. 2206, [ila@bnl.gov](mailto:ila@bnl.gov)

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

**Thursdays: BNL Cycletrons Club**  
Noon–1 p.m., First Thurs. of month. Berkner, Rm. D. Toni Hoffman, Ext. 5257

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

**Fridays: BNL Social & Cultural Club**  
Noon–1 p.m., B’haven Center, S. Room, free beginners dance lessons. 7–11:30 p.m. N. Ballroom, Dance Social, workshops. Rudy Alforque, Ext. 4733, [alforque@bnl.gov](mailto:alforque@bnl.gov)

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

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

## Talent Show, 7/21

BNL’s Summer Talent Show will explode on the scene at 5:30 p.m. on Tuesday, July 21, in Berkner Hall. Organized by the Office of Educational Programs, this show is an annual event in which students and BNL staff sing, play instruments, and share dramatic moments and comedy.

If you have a talent you’d like to share at the show, contact Eric Jones, Ext. 4237 or [ejones@bnl.gov](mailto:ejones@bnl.gov). Interns who participate may win \$100, \$50, or \$25. Even if you do not participate, come watch, meet BNL students and staff. All are invited, admission is free!

# On Eve of Stonewall’s 40<sup>th</sup> Anniversary, Hildebrand Speaks of Prejudice and Pride

By most measures, the story of Anthony Woods is quintessentially American.

Growing up in a single-parent home, Woods overcame any disadvantages he may have faced, graduating with honors from his California high school and moving on to attend West Point on a prestigious Congressional appointment.

After finishing at the top of his class at the elite military academy, Woods served two tours of duty in Iraq, earning the Bronze Star for his distinguished service to the nation. He then began graduate studies at Harvard’s Kennedy School for Government on a military scholarship, planning to return to the service upon graduation.

There was one small problem, however: Woods, a bright, handsome, talented, honorable, duty-oriented American, also happens to be gay.

During his second year at Harvard, Woods felt compelled to come out to his commanders, necessitating his dismissal under the Defense Department’s “Don’t Ask, Don’t Tell” (DADT) policy (Title 10 of the U.S. Code § 654) – which bars self-identified homosexuals from serving in the U.S. Armed Forces. He received an honorable discharge in December 2008.

### No More Excuses

Steve Hildebrand, speaking at BNL on June 18, did not mince words in discussing the unjust treatment of lesbian, gay, bisexual, transgender and queer\* (LGBTQ) Americans under DADT and other federal policies. \*[Queer is used here as an inclusive umbrella term, not in its older pejorative sense. See note at end of article for more information.]

“It’s a disgrace that Woods was discharged from the military,” he said. “Many gay people are saying, ‘I’ve fought harder for them [the American people] than they’re fighting for me.’”

BNL’S Diversity Office, in cooperation with the GLOBE (Gay, Lesbian or Bisexual Employees) club, invited Hildebrand, President Barack Obama’s deputy campaign manager and the most senior openly gay member of the team, to speak at the Lab in honor of LGBTQ Pride Month, which is celebrated annually in June.

## BERA GLOBE Club

### Next meeting, 7/15

GLOBE, BERA’s Gay, Lesbian Or Bisexual Employees club at BNL, will hold its next meeting on Wednesday, July 15, at 5:15 p.m. in the second floor seminar room of Building 515. Discussions will include Steve Hildebrand’s recent visit to BNL, recent developments in HR, and other topics. GLOBE president John Reddy is open to answer any questions you may have and may be reached at Ext. 3284 or via email at [jreddy@bnl.gov](mailto:jreddy@bnl.gov).

To learn more about the group, see <http://www.bnl.gov/bera/activities/globe/>, where you may sign up for the club mailing list.

## Attention Golfers!

Please remember that golfing is only allowed on the lawns on the south side of the Brookhaven Center. Do not drive golf balls at the softball and soccer fields at the east end of Brookhaven Avenue. Balls that are left in the fields are dangerous for groundskeepers, soccer and softball players, and anyone else using the fields.



The message of Hildebrand’s talk, “The Obama Vision: Equality for All,” was clear: the queer community and its supporters should no longer take “no” for an answer.

“We are at the point where there really can be no more excuses,” he said.

### A Time for Pride

Considering the decades-long battle that LGBTQ people have fought for civil rights in the United States, Hildebrand’s impatience is not surprising.

Forty years ago this month, at a small bar called the Stonewall Inn in the Greenwich Village neighborhood of New York City, members and supporters of the LGBTQ community forcefully resisted discriminatory police harassment in a historical and cultural moment that would become known as the start of the “gay” civil rights movement.

In the years that followed, queer individuals, groups and their allies have marked the watershed event by designating June, particularly the days around June 28 (the beginning date of the Stonewall protest), as a time to celebrate “Pride.” On the first of the month, President Obama formally recognized the tradition, proclaiming June 2009 to be LGBT Pride Month.

### The Politics of Emotion

Raised in a “closeted, small-minded” community in South Dakota, Hildebrand recalled the difficulties of growing up gay, even in a household that “understood itself to be progressive.” It was this struggle,

combined with a sense of tenacity instilled by his mother, that led Hildebrand to a career in political consulting. He has since worked with many notable political figures, including U.S. Senator Tom Daschle (D-SD) and former Vice President Al Gore.

Hildebrand joined Obama at the beginning of the Presidential bid process, when the junior senator from Illinois was still deciding whether or not to run. As a person close to the candidate, Hildebrand claimed that he was responsible for “passing out the Kool-Aid” that influenced the ultimate decision.

“I just knew it was time for him [Obama],” he said. “I had — and still have — hope that this man can really make positive change in America.”

Political advising aside, however, Hildebrand noted that his most important contribution to the campaign was to attach emotional weight to Obama’s somewhat “cerebral” policy positions. Unsurprisingly, much of the talk echoed this way of thinking.

“Too many kids live in fear,” he said of teenagers living in homophobic communities. “Too many young [queer] people are turning to drugs, alcohol — even suicide — to deal with hate. We can’t afford to wait anymore.”

### Airing the Laundry

Hildebrand came ready with a “laundry list” of legal steps that should be taken immediately to protect LGBTQ civil rights, including the Safe Schools Improvement Act, the Hate Crimes Protection Act and em-

ployment discrimination legislation. These, he said, are the “easy ones.”

More controversial issues, such as marriage equality and joint-adoption rights, did not escape Hildebrand’s attention, however. He spoke of his sister’s 27-year legal marriage and all the state-afforded rights and benefits she and her husband enjoy in stark contrast to the lack of those same necessities imposed on his own equally committed 16-year partnership.

“We don’t get marriage rights, we don’t get [hospital] visitation rights, we don’t get tax benefits and so on and so on and so on. The word ‘no’ comes before so much...,” he said.

Speaking of the future of LGBTQ civil rights under the Obama administration, Hildebrand conveyed a sense of hope, even in the midst of mounting criticism from segments of the queer community that the President is taking too long to fulfill campaign promises, such as the repeal of DADT.

“Much is going on behind the scenes,” he assured the audience. “Obama has reaffirmed his commitment to changing these things.”

### Embracing Diversity

As a sign of progress, Hildebrand pointed to Obama’s recent decision to expand federal benefits for domestic partners of government employees. In conversations with members of the audience following the talk, Hildebrand said he was pleased with current efforts at BNL to extend similar benefits to the Lab’s LGBTQ employees.

Still, much work remains to be done. While GLOBE and the Diversity Office have hung the rainbow flag – an international symbol of gay pride – in the lobby of Berkner Hall during June for a number of years now, it was torn down and stolen as recently as 2004.

Concluding his talk, Hildebrand offered his wish that BNL will continue to work for the acceptance of its LGBTQ employees, as well as all marginalized groups.

“You have to embrace diversity,” he said. “We should have pride in every kind of person, every day.” — J. Bryan Lowder

## Open House, 7/14

### L. I. Solar Farm Public Information Forum

*‘Harvesting Solar Power for a Brighter Future’*

**Hosted by BP Solar  
In cooperation with  
Long Island Power Authority and  
Brookhaven National Laboratory**

**All are welcome!**

**When:** Tuesday, July 14, 3 – 8 p.m.  
**Where:** Heritage Center, North Shore Heritage Park, 633 Mt. Sinai Coram Road, Mt. Sinai, NY 11776

Information will cover: project overview; solar power, both commercial and residential; and project benefits regarding energy, environment, and economy.





Courtesy of P. Graham and H. Gregory

The Mars Society’s Flashline Mars Arctic Research Station is situated on Devon Island in the Canadian Arctic, near the 20-kilometer-wide Haughton Crater.

Talk about the opportunity of a lifetime! Former BNL employee Kristine Ferrone is now stationed on Devon Island in the Arctic Circle, to simulate being a Mars-exploring astronaut for nearly one month.

Ferrone worked in the Collider-Accelerator Department both in the Relativistic Heavy Ion Collider’s control room and NASA Space Radiation Lab (NSRL) from 2004 until 2006. While at NSRL, Ferrone researched new techniques to detect, measure, and analyze conditions that simulate the space radiation that astronauts are exposed to outside of the Earth’s atmosphere.

Earlier this week, Ferrone arrived at the Flashline Mars Arctic Research Station (FMARS) on Devon Island at the 75th parallel in Northern Canada. The largest uninhabited island on Earth, Devon Island is a cold, rocky desert with many geological features that are similar to Mars. FMARS is operated by the Mars Society, a nonprofit organization that works to further the goal of exploring and settling Mars. The

Mars Society maintains several stations around the world and has already hosted six missions at FMARS since 2002.

“I’ve been a city girl most of my life,” explained Ferrone, who currently works as a flight controller for the International Space Station with United Space Alliance in Houston, Texas. “We will be in an extremely isolated area with limited equipment and time — and I can’t wait!” she added.

Throughout the month, Ferrone and her five crew members will conduct several experiments while wearing full space suits, avoiding the polar bears (no kidding), and exploring the island and its 20-kilometer-wide Haughton Crater. “The dirt, dust, compounds, and fossils left after a meteor hit there millions of years ago make the ground similar to Mars,” explained Ferrone. “And with 24 hours of daylight almost all of July, this will be a great place to practice.”

Ferrone’s primary experiment should provide a bit of relief for her crew members throughout the mission. With



From left, Mars Society President Robert Zubrin with FMARS crew members Vernon Kramer, Brian Shiro, Stacy Cusack, Brian Enke (Mission Support), Kristine Ferrone, Joe Palaia, and Christy Garvin

a nearly completed Master’s Degree in sports medicine, Ferrone will “massage” her fellow “astronauts” using a new portable, low-power laser to prevent and reduce muscle soreness and stress injuries before and after each space walk.

Other mission experiments will include using an unmanned aerial vehicle and infrared light to locate and map naturally occurring geothermal pipes below the surface of the impact crater and searching for fossils and living bacteria that have adapted to the extreme weather conditions of the Canadian Arctic.

After the mission is com-

pleted at the end of July, Ferrone and several other FMARS crew members will head directly to the 12th annual International Mars Society Convention in Maryland to discuss some of their results and findings.

For more information on the Mars Society and the FMARS mission, go to: [www.marsociety.org](http://www.marsociety.org). And if you want to stay up-to-date with the former BNLER’s adventures on Devon Island, keep up with Ferrone on Twitter: <http://twitter.com/kristineferrone>.

Good luck to Kristine and crew!  
— Joe Gettler

## TIAA-CREF One-on-One Retirement Counseling

A TIAA-CREF consultant will visit BNL on Tuesday, July 14; Wednesday, July 22; Tuesday, July 28; and Thursday, July 30, to answer employees’ questions about their financial matters. The consultant will help you: understand the importance of protecting your assets against inflation, find the right allocation mix, learn about TIAA-CREF retirement income flexibility, and compare lifetime income vs. cash withdrawal options. For an appointment, call 1-800-732-8353.

### BERA Trips

**Billy Elliott on Broadway:** Sunday, July 19. \$125 per person. Depart from Brookhaven Center at 10:30 a.m. and leave after the show, approximately 6 p.m.

**Do-As-You-Please Trip to New York City:** Saturday, August 1. Two coaches will depart the Brookhaven Center at 9 a.m., drop you off in the Bryant Park midtown area and pick you up there at 5:30 p.m. The cost is \$10 each for adults and children over 2; babes of under 2 go free on your lap.

**Yonkers Raceway & Empire City:** Saturday, August 8. More than 5,000 slot machines, live horse racing, and more than four dining rooms. \$20 per person, for those of 18 and over only. Depart Brookhaven Center at 2 p.m. and leave Yonkers at 10 p.m.

## Vanguard Funds To Be Administered by TIAA-CREF

The Benefits Office has announced a consolidation of record keepers for Brookhaven Science Associates, LLC Retirement Plan and Brookhaven Science Associates, LLC 401(k) Plan. Effective October 1, 2009, the Vanguard funds will be administered on TIAA-CREF’s platform for both plans.

As a result of this change, participants in both TIAA-CREF and/or Vanguard will gain the following advantages and enhancements under both plans:

1. Consolidated quarterly statements for participants enrolled in both TIAA-CREF and Vanguard, instead of separate statements from each company.
2. Ease of transfer of funds from Vanguard funds to TIAA-CREF funds and vice versa via telephone or the web, instead of via a paper transaction.
3. One consolidated website with a toll-free number to access your TIAA-CREF and/or Vanguard balances and

allocate your fund balances and future contributions.

4. Active employees in Vanguard will have direct access to 401(k) loans.
5. Onsite one-on-one counseling with a licensed TIAA-CREF financial counselor and access to a new TIAA-CREF micro-site to be launched in conjunction with this consolidation.

There will be no changes to the current fund line-up under TIAA-CREF and Vanguard as a result of this consolidation. However, there will be a change in the qualified default investment alternative (QDIA) for Vanguard funds from the Vanguard Wellesley Income Fund to the TIAA-CREF Lifecycle Funds. QDIAs are the default accounts used when a participant completes an application with one of the investment companies but does not properly indicate the funds in which he or she is investing — this is most likely to happen on first signing up for the plans,

on transferring assets from one investment company to another, or on initiating an account with an investment company that the participant has not previously used. When this occurs, the participant’s contributions are placed in the QDIA fund for that investment company.

More information about this transition will be available nearer to October 1.

In addition, in a separate action, Vanguard has announced that as of August 1, 2009, they will be closing their Federal Money Market Fund to all investors for future contributions. In the upcoming weeks, Vanguard will be mailing to participants a separate communication about the Vanguard Federal Money Market Fund.

Note that this consolidation does not affect Fidelity funds. Participants utilizing the Fidelity funds will continue to receive separate quarterly statements and services through Fidelity Investments.

### CALENDAR

#### — THIS WEEKEND —

##### Sunday, 7/12

**\*Summer Sundays: Featuring CFN**  
10 a.m.-3 p.m. Berkner Hall and Center for Functional Nanomaterials. See page 4, and [http://www.bnl.gov/bnlweb/pubaf/pr/PR\\_display.asp?prID=977](http://www.bnl.gov/bnlweb/pubaf/pr/PR_display.asp?prID=977).

#### — WEEK OF 7/13 —

##### Sunday, 7/19

**\*Summer Sundays: Featuring NSLS**  
10 a.m.-3 p.m. Enjoy interactive displays at Berkner Hall and visit the featured science facility: the National Synchrotron Light Source. See pg. 4 for general program news, and also [http://www.bnl.gov/bnlweb/pubaf/pr/PR\\_display.asp?prID=977](http://www.bnl.gov/bnlweb/pubaf/pr/PR_display.asp?prID=977).

#### — WEEK OF 7/20 —

##### Tuesday, 7/21

**Sambamurti Memorial Lecture**  
3:30 p.m. Large Seminar Room, Physics, Bldg. 510. Michael Begel, Physics Department, will give the annual Sambamurti Memorial Lecture, titled “Spotlight on the Gluon.” All are invited.

**\*BNL 2009 Summer Talent Show**  
5:30 p.m. Berkner Hall. Organized by the Office of Educational Programs, this annual event surprises all comers with the extraordinary talents of students and BNL staff performers. To join in as a performer or a helper, contact Eric Jones, Ext. 4237 or [ejones@bnl.gov](mailto:ejones@bnl.gov). Or, attend the show for a fun evening. See notice, pg. 2.

##### Thursday, 7/23

**\*Adopt-a-Platoon Benefit Car Wash**  
11:30 a.m.-1:30 p.m. Firehouse. See notice below, left.

**Sunday, 7/26**

**\*Summer Sundays: Featuring Family Fun & Firehouse**  
10 a.m.-3 p.m. Enjoy interactive displays at Berkner Hall and BNL’s Science Learning Center and Firehouse. See pg. 4 and also [http://www.bnl.gov/bnlweb/pubaf/pr/PR\\_display.asp?prID=977](http://www.bnl.gov/bnlweb/pubaf/pr/PR_display.asp?prID=977).

#### — WEEK OF 7/27 —

##### Monday, 7/27

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

## Arrivals & Departures

#### — Arrivals —

Ciro D’Agostino ..... Physics  
Bethann Gilman ..... PPM  
Charles Gortakowski ..... Ops. Dir.  
Steven Klare ..... NSLS-II  
Steven W. O’Hara ..... NSLS-II  
Karen F. Paukner ..... F&S Dir.  
Kirk E. Sinclair ..... C-AD  
Larissa Y. Roupe ..... PPM  
Erik N. Rydout ..... C-AD

#### — Departures —

Donald S. Barton ..... C-AD  
Larisa Kuznetsova ..... Biology  
Matthew P. Menga ..... C-AD  
Debra L. Maceluch ..... HROM  
Tam H. Nguyen ..... Biology  
Xiongying Tu ..... Biology

## Back to School Supply Drive

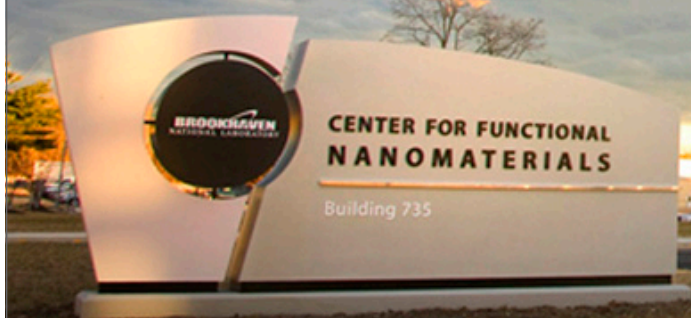
Please help support kids in need! Drop off donations, such as pencils, binders, backpacks, markers, rulers, calculators, bookcovers, pens, glue, folders, lunch boxes, loose-leaf paper, crayons, notebooks — at Bldg. 400 Rec. Office until August 14.



# 2009 Summer Sundays

This Sunday, 7/12

## Energy Solutions & The Center For Functional Nanomaterials



### Summer Sunday Tours Begin This Weekend

This summer, BNL invites you to attend a new Summer Sundays experience to explore world-class facilities, take the opportunity to speak with researchers, see a different science show each week, and catch a “View from Space” at a hands-on exhibit. Also, enjoy the “Magic of Energy” show. Summer Sundays visits are free, handicapped accessible, with no reservations needed. The BNL Cafeteria in Berkner Hall will be open 10 a.m. to 3 p.m. The main gate will be open to incoming Summer Sunday visitors 10 a.m. to 3 p.m. Visitors of age 16 and over must bring a photo ID.

This Sunday, July 12, visit the center where huge discoveries are being made at ultra-small dimensions. Learn how improved catalysts, energy-efficient boilers and solar arrays address the national and international energy challenge.

#### Learn From Experts About Super-Interesting Science

##### “Chilling Considerations Regarding Global Warming”

Presented by Stephen Schwartz: 11 a.m., 1 p.m., 3 p.m.  
Office of Educational Programs Auditorium

##### “Harvesting Solar Power for a Brighter Future”

Presented by Richard Chandler, BP Solar: Noon and 2 p.m.  
Office of Educational Programs Auditorium

##### “Nanoscience in Everyday Life”

Presented by Emilio Mendez: 11:45 a.m., 1:15 p.m., 2:45 p.m.  
Berkner Hall, Room C

#### Venture Into the “Nano Toy Zone”

Have fun playing with super-sized nano-structures while learning about nanoscience in the “Nano Toy Zone.”  
Berkner Hall, Room A, all day

#### Be Amazed by the ‘Magic of Energy’ Show

Berkner Hall Auditorium: Noon, 1:30 p.m., 3 p.m.  
Be sure to arrive early as the auditorium fills quickly!

#### Get Tips During Energy-Efficiency Demos

It may be boiling hot outside now, but is your boiler keeping you warm in the winter without burning a hole in your wallet? Learn about energy efficient boilers with BNL inventor Tom Butcher, to see how you can make a difference in your home heating bills. Outside Berkner Hall.

#### Get Involved in Hands-On Science Fun!

Velocity up; pressure down! Experience the Bernoulli Principle in action, or make your hair stand on end with a Van de Graaff generator — all in the hands-on science room in Berkner Hall, Room C, 11 a.m., 12:30 p.m., 2 p.m.

#### Catch a ‘View From Space’

Send a satellite spinning into orbit around a model Earth — or track a “Hurricane from Space.” Study incredible images of our planet captured by NASA’s Earth Observing System, and more. A “View from Space” introduces visitors to the latest, greatest Earth-observing satellites, giving an appreciation for the value of studying Earth from space. Stop by the Berkner Hall lobby any time during Summer Sundays to check out this exciting new exhibit.

#### Motor Vehicles & Supplies

02 KAWASAKI KLR 650 DUAL SPORT – 5K mi. well maint, 45+ mpg, many extras, tires under 2500 mi. \$2,750 neg. 836-1558.

01 HONDA CIVIC EX COUPE – 83K mi. 2dr, 5spd, sun/moon rf, pwr locks & windws, gd cond. \$5,500. Ext. 8403, jfung@bnl.gov.

00 FORD RANGER – 148K mi. 6 cyl, 4wd, Sport Ed, gd cond. \$3,000 neg. Robert, Ext. 4028.

WEATHERTECH LINERS – Like new! Hvy duty, grey cargo liner & rear seat floor protector for 2007 Jeep Grand Cherokee, Paid \$175, Ask \$75. Ext. 3477.

#### Furnishings & Appliances

PIANO - UPRIGHT – Gd cond. Needs tuning. \$300 neg. Can help move. Lynda & Michael, Ext. 7235, 286-1018, fitz@bnl.gov.

SOFA AND ENTERTAINMENT CENTER – sectional sofa-6pc, \$200; IKEA lg Beechwood entertainmt ctr, \$70. 831-8331.

#### Audio, Video & Computers

ROUTER – Linksys “Wireless - G Broad-band Router” Model WRT54G. \$10. Steven, Ext. 5694.

#### Sports, Hobbies & Pets

BICYCLE DOG TRAILER – rugged polyester, waterproof flrboard, zippered rr/ frt drs w mesh screen/vinyl wind cover, safety leash, Easy fold/erect. Univ. bike hitch, 20” tires, 115 lbs.max. 344-5537.

CELLO – Anton Schroetter German-made instrument, v.g. cond. & sound, hard case incl, no bow. \$3700. firm. Ext. 4475, plate@bnl.gov.

ELLIPTICAL MACHINE – Schwinn 438. Like new.... Used about 10 times... Bought for \$1,200, asking \$650. Katie, 241-1557.

WETSUIT – youth size 12, like new, pd/\$110, ask/\$55/obo. Lynda, Ext. 7235, 286-1018 or fitz@bnl.gov.

#### Tools, House & Garden

PERENNIALS – Hosta, cone flower, iris, tiger lily, shasta daisy, hydrangea. \$4/per plant. Will dig and bring to BNL. Beth, 905-8222.

#### Miscellaneous

1996 SUNLINE TRAILER – 24’, new tires, mattress, elec jack, many extras all incl, sleeps 4. Ned, 924-5187 or mabe324@yahoo.com.

2000 DUTCHMAN TRAILER – 27’white. Like New. Self contained. Sleeps 8 w/qn sz bed & kids bunks. Full fridge, stove, microwave. Stereo, more. Loc in Mid Isl. Pics avail. \$7500neg.553-9741,345-9489.

34’ ALPHA GOLD 2000 5TH WHEEL – RV in excel cond AC, 2 TV’s, many extras. Towing vehicle also available for sale. Alternate phone # 631 325-8322. Audrey, 520-444-3565.

#### Yard & Garage Sales

PATCHOGUE – Sat/Sun 7/11/12, 8a-4p. 199 Grove Ave. multi-family. Home furnishings, kids’ items, tools, clothes, kitchen ware, one-of-kind extras. Rain or shine. 294-7574.

PT JEFFERSON STA, 26 HURTIN ST. – July 25th-Rain Date July 26th. Many different items for sale and in working/excellent condition. All priced to sell. Don’t miss this one!. Donna A., Ext. 4599.

RIDGE – Sat, 7/11, 10 a.m-4 p.m. 31 Newcomb Tr., Ridge, (Lake Panamoka). No early birds, please. Something for all (baby, household, holiday, more). John, Ext. 4639 or johnvietvet@hotmail.com.

#### Car Pool

MEETS IN PLAINVIEW – looking for 4th person in well established car pool, hrs 8-4:30, Elliott, ext 2495. Ron, Ext. 6068.

#### Happenings

SHEN YUN PERFORMING ARTS – Sun. August 2, 7p.m. the performing arts center Purchase College suny <http://shenyun.us/westchester> brilliant. inspiring.glorious. George, Ext. 4033 or georgewei@bnl.gov.

#### Free

LOOKING FOR A GOOD HOME – My Aunt passed away leaving two cats, Peter is a black neutered male, and Sasha is a beautiful spayed tabby w/a white chin. Joann, Ext. 5209.

#### For Rent

WEEKI WACHI, FL – Gulf Coast Ranch, 70mi Orlando, 50mi Tampa, fly SW direct. Screen/in-grnd pool, fruit trees, SW architecture, 3BRM, 2BTH, DR, fireplace, 2x gar -photos. \$500/wk. 344-5537.

MASTIC, NY – furn, new 1 lg bdrm attach full bath high spd int, dish network, share kit util incl, nr LIRR, close to Lab/ shopping no smkg/pets 1 mo. sec. \$1,000/mo neg. 335-4907.

MIDDLE ISLAND, NY – nice 1 bdrm, l/r, full kit & bath apt, 10 min to BNL, priv. ent/drwy, clean, quiet, strictly no smkg/pet, int/phone, incl all, 1 mo sec, BNL employee only. \$800/mo. Istvan, Ext. 7020, 672-2451 or dioszegi@bnl.gov.

MIDDLE ISLAND – Prvt.1 BR apt. w/deck all appl.,a/c util.& cable incl. 3mi to Lab no smoking. \$1,400/mo. Jim, Ext. 2765 or newburgh@bnl.gov.

MIDDLE ISLAND – 1 bdrm, l/r, full kit. & bath, apt, incl. all, 10 min to BNL, pri. ent/drwy, quiet, strictly no smkg/pet, int/phone incl. 1 mo sec, BNL employee only. \$800/mo. Ext. 7020, 672-2451 or dioszegi@bnl.gov.

MILLER PLACE – studio apt in priv home, quiet fam. neigh’hood, approx 10 mi. from BNL, cable, int, heat/ elect incl, appropriate for 1 person only, no smkg/pets. \$800/mo. 428-7065 or jsgardner1234@yahoo.com.

MILLER PLACE – Colonial house in prof. residential area, cac, complete kitch, furn own bdrm, high speed internet, cable TV, all incl, avail Aug 1st, responsible, no smkg. \$700/mo. 744-8386.

MT. SINAI – sm/new 1br apt, 15 min to Lab, upscale neighborhood, kit/lr combo, stall shower, all util incl/heat/water/elec/ int/cable, gd for a single. \$1,000/mo. Chang-Yong, Ext. 7066 or cynam@bnl.gov.

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

ROCKY POINT – Cape in Rocky Point. Nice condition. Nice area. 2/3 bedrooms, full basement, full yard, walk to beach. \$1,500 per month, 1-year lease, utilities extra. \$1,500/mo. 821-6114, ‘clanotole@verizon.net.

RONKONKOMA – Studio house, full bath and kitchen, wood floors, central air, murphy bed, full size. \$1,000/mo. 467-6761.

SHIRLEY – 1rm studio for one, furn/full bath/sep ent/cable/elect, a/c, int/all incl/ 1mo sec/5min to stores/beach, LIRR/all major hways/7 min to Lab, no smkg/pets. \$550/mo. Ext. 2964.

SHIRLEY – 1 bedroom basement apartment, private entrance, no pets or smoking. suitable for one. \$725/mo. Ext. 3846.

SHOREHAM – Share house with professional. Partially furnished bedrooms, 7 miles to BNL, internet & TV all incl., no smkg/pets, single preferred. 516-380-2650 (cell) or \$650/mo. 744-3543.

SHOREHAM – Lg 1 bdrm furn apt w/appl, l/r, d/r full kit & bath, a/c, util. incl. no smkg/pets, pvt.ent/drwy, 1 mth sec, 1mth rent, 5/min to lab. \$1,150/mo. Judy, Ext. 5263, 375-7959.

SOUND BEACH – 1 Bdrm House for Rent. New Paint, W/D, w/w. 15 min to Lab. Pets ok. \$1,150/mo. John, Ext. 4028, 821-5334 or jbiemer@optonline.net.

#### For Sale

ROCKY POINT – 10 rms, 4 bdms, 3 bath, eik w/granite cntrtops, l/r w/fp & wet bar, d/r, fin bsmt, a/c, 2-car gar, 42x12’ deck, igp, gs. 0.92 acres. \$495,000 neg. 744-7052.

SO. BAYPORT – Lakefront 4bdrm, 2.5ba, den w/fp, lg rms, igp, lg redwd deck, 2car gar, 2/3acre, cul de sac. \$575,000. Helen, 472-0393.

#### In Appreciation

To Everyone at the NSLS: Thank you for the great times and for being my family for the past eight years. Your friendship, generosity, support and kindness will always be remembered. Your friend always.  
— Salvatore Zarba

**\* Jobs \* Jobs \* Jobs \* Jobs \* Jobs \* Jobs \***  
**See all of the BNL Job Opportunities for this week in the special Bulletin supplement.**

**the Bulletin**

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

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

On the Web, the Bulletin is located at <http://www.bnl.gov/bnlweb/pubaf/bulletin/default.asp>. A calendar listing scientific and technical seminars and lectures is found at [www.bnl.gov/bnlweb/pubaf/calendar.asp](http://www.bnl.gov/bnlweb/pubaf/calendar.asp).

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\* Special Two-Page Supplement \*

# Job Opportunities

## 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/](http://www.bnl.gov/HR/jobs/).

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

### OPEN RECRUITMENT – Opportunities for Lab employees and outside candidates.

\*Note: (This note applies to postdoctoral positions only.) When applying for a position, please add the contact and email address of at least three references in the Reference box located on the application page. Please note that if you have applied for multiple positions under one application, the same reference information is attached to all those positions. If you elect to use different referees for different positions, please apply to each position separately. BNL policy states that Research Associate appointments may be made to those who have received their doctoral degrees within the past five years.

**ASSISTANT CHEMIST (Lithium Battery Research Field)** – Requires a Ph.D. in physics, electrochemistry, chemical engineering or chemistry. At least two years' working experience in lithium battery research field after Ph.D. is also required. Experience in using synchrotron based x-ray diffraction and absorption techniques to study lithium battery materials is desired, as is knowledge of operating beamline facilities to do data acquisition and analysis. The ability to design new synchrotron based experiments for lithium battery research, the ability to perform Transmission Electron Microscopy (TEM) studies for lithium battery materials, and perform cyclic voltammetry (CV) on electrolyte studies for lithium batteries are also desired. Should possess good English writing and oral skills for publications and presentations. The research programs that will be assigned at BNL will use a combination of in situ x-ray diffraction (XRD) and x-ray absorption spectroscopy (XAS) at National Synchrotron Light Source (NSLS) to study the cathode and anode materials for energy storage devices such as lithium-ion batteries and supercapacitors. XAS will be used to follow the redox chemistry of the transition metal atoms during charge and discharge. XRD will be used to follow the phase changes. Soft x-ray XAS will be used to identify species at the surface of the electrodes. TEM will be used to study the interfacial properties. The CV will be used for electrochemical property studies. The effects of temperature and cycling rate will be studied. New cathode, new anode, and new electrolyte material synthesis and characterization for the energy storage devices will also be conducted in the research programs. Under the direction of X. Yang, Chemistry Department. When applying for a position, please add the contact and email address of at least three references in the Reference box located on the application page. Note that if you have applied for multiple positions under one application, the same reference information is attached to all those positions. If you elect to use different referees for different positions, apply for each position separately. Apply for Job ID #14945.

**POSTDOCTORAL RESEARCH ASSOCIATE (Atmospheric Science, Global Climate Models)** – Requires a Ph.D.



Roger Stoulenburgh

atmospheric sciences or related field and expertise in global climate models (GCMs), especially their single-column versions. Close interactions with scientists both from BNL and other participating institutions, as well as with the other positions in this area, and willingness to work in a team environment are expected. Familiarity with aerosols, clouds, turbulence, radiation transfer, ARM, and aircraft data is highly desirable. Will focus on evaluation of the performance of the single-column version (SCM) of NCAR's global climate against long-term observations from the ARM program, and the results from the other participating SCMs (e.g. GFDL and GISS). Under the direction of Y. Liu, Environmental Sciences Department. Apply for Job ID #14937. \*See Note above.

**POSTDOCTORAL RESEARCH ASSOCIATE (Atmospheric Science, WRF Model)** – Requires a Ph.D. in atmospheric sciences or related field and expertise in WRF model. Close interactions with scientists both from BNL and other participating institutions, as well as with the other positions in this area, and willingness to work in a team environment are expected. Familiarity with aerosols, clouds, turbulence, radiation transfer, ARM, and aircraft data is highly desirable. The successful candidate will primarily work on WRF model, testing parameterizations, and using the models to investigate case studies of clouds observed during field campaigns. Under the direction of Y. Liu, Environmental Sciences Department. Apply for Job ID #14938. \*See Note above.

**POSTDOCTORAL RESEARCH ASSOCIATE (Atmospheric Science, Large-Eddy-Simulation (LES Models))** – Requires a Ph.D. in atmospheric sciences or related field and expertise in large-eddy-simulation (LES) models. Close interactions with scientists both from BNL and other participating institutions, as well as with the other positions in this area, and willingness to work in a team environment are expected. Familiarity with aerosols, clouds, turbulence, radiation transfer, ARM, and aircraft data is highly desirable. Will primarily work on LES models, testing microphysical parameterizations, and using the models to investigate case studies of clouds observed during field campaigns, and to study aerosol indirect effects. Under the direction of Y. Liu, Environmental Sciences Department. Apply for Job ID #14939.

**POSTDOCTORAL RESEARCH ASSOCIATE (Atmospheric Science, Direct Numerical Simulation (DNS) Models)** – Requires a Ph.D. in atmospheric sciences or related field and expertise in direct numerical simulation (DNS) models. Close interactions with scientists both from BNL and other participating institutions, as well as with the other positions in this area, and willingness to work in a team environment are expected. Familiarity with aerosols, clouds, turbulence, radiation transfer, ARM, and aircraft data is highly desirable. Will primarily work on direct numerical simulation (DNS) models to investigate the effects of turbulent processes on cloud microphysics, and particle-turbulence interactions at scales smaller than LES grid sizes. Under the direction of Y. Liu, Environmental Sciences

Department. Apply for Job ID #14940. \*See Note above.

**POSTDOCTORAL RESEARCH ASSOCIATE (Atmospheric Science, Convection and Boundary Layer Processes)** – Requires a Ph.D. in atmospheric sciences or related fields and expertise in convection and boundary layer processes. Close interactions with scientists both from BNL and other participating institutions, as well as with the other positions in this area, and willingness to work in a team environment are expected. Familiarity with aerosols, clouds, turbulence, radiation transfer, ARM, and aircraft data is highly desirable. Will primarily work on the development of a unified parameterization for convection and boundary layer process, and seek ways to couple such a parameterization with parameterizations of cloud microphysics. Under the direction of Y. Liu, Environmental Sciences Department. Apply for Job ID #14941. \*See Note above.

**POSTDOCTORAL RESEARCH ASSOCIATE (Atmospheric Science, Parcel Models, Turbulent Entrainment-Mixing Processes)** – Requires a Ph.D. in atmospheric sciences or related fields and expertise in parcel models and turbulent entrainment-mixing processes. Close interactions with scientists both from BNL and other participating institutions, as well as with the other positions in this area, and willingness to work in a team environment are expected. Familiarity with aerosols, clouds, turbulence, radiation transfer, ARM, and aircraft data is highly desirable. Will extend the adiabatic parcel to account for turbulent entrainment-mixing processes, and use the parcel models to assist development of parameterizations and theoretical understanding of relevant processes. Under the direction of Y. Liu, Environmental Sciences Department. Apply for Job ID #14942. \*See Note above.

**POSTDOCTORAL RESEARCH ASSOCIATE (Atmospheric Science, Data Mining, Time Series, Applied Mathematics)** – Requires a Ph.D. in atmospheric sciences or related fields. Skills in data mining, time series, applied mathematics, and visualization; as well as experiences with extensive data streams is also required. Close interactions with scientists both from BNL and other participating institutions, as well as with the other positions in this area, and willingness to work in a team environment are expected. Familiarity with aerosols, clouds, turbulence, radiation transfer, ARM, and aircraft data is highly desirable. Will primarily focus on developing and using new metrics/approaches to evaluate model performance against observations. Models to be involved include climate models in both "climate mode" and "forecast mode", numerical weather prediction models, and cloud-resolving models. Data (model simulation and observation) range from 2D to 4D). Under the direction of Y. Liu, Environmental Sciences Department. Apply for Job ID #14943. \*See Note above.

**POSTDOCTORAL RESEARCH ASSOCIATE (Experimental Particle or Nuclear Physics)** – Requires a Ph.D. in physics with emphasis on experimental particle

or nuclear physics. Will participate in the activities of the group including the design of the Long Baseline Neutrino Experiment at DUSEL in South Dakota. There will also be the opportunity to participate in the commissioning and running of the Daya Bay reactor neutrino experiment that will measure the neutrino mixing parameter  $\sin^2 2\theta_{13}$ . Participation in the MINOS experiment and data analysis is also possible. Travel to DUSEL, Fermilab, Soudan MN and/or China should be expected. Will work within the electronic detector group and will have broad associations with other groups in the laboratory and throughout the world to carry out his/her function. The Electronic Detector Group in the Physics Department currently has ten physicists at various career levels with major current responsibilities in neutrino physics and a long history of research in fundamental particle physics. The appointment is expected to start on or about October 1, 2009. Under the direction of S. Kettell, Physics Department. Apply for Job ID #14944. \*See Note above.

**POSTDOCTORAL RESEARCH ASSOCIATE (Advanced Networking Technologies)** – Requires a Ph.D. in computer science, computer engineering, applied mathematics or related fields. Should have a strong research background in advanced networking technologies and distributed file systems. Should be highly skilled in programming (C, JAVA and Python) and in performance modeling, evaluations, and diagnosis. Research and development experience in cloud/grid computing, and distributed file and storage systems, such as Storage Resource Manager, Lustre, IBM GPFS, Hadoop and its distributed file systems (HDFS) are highly desirable, as is a familiarity with industrial coding standards to generate high-quality software. Should possess strong communication and writing skills, as will be expected to lead graduate students in cutting-edge research, implementation, publication, and proposal writing. The ability to work as part of a team is essential. Under the direction of D. Yu, Computational Science Center. Apply for Job ID #14946. \*See Note above.

**POSTDOCTORAL RESEARCH ASSOCIATE (RA-1) – National Synchrotron Light Source** seeks a Research Associate to participate in Ultra-fast Electron Diffraction (UED), THz and FEL experiments at the NSLS Source Development Lab (SDL), and perform both simulation and experimental investigation of electron beam optimization for UED and FEL. Requires a Ph.D. in physics or related discipline with specialty in accelerator physics and experience in accelerator simulation and operation. Familiarity with simulation codes for linacs and FELs desirable (such as PARMELA, ELEGANT, GENESIS or equivalents). Experience in laser operation is desirable. Under the direction of X.-J. Wang, National Synchrotron Light Source. Apply for Job ID #14951.

**PHYSICIST – LATTICE DESIGN (S-3, reposting)** – The National Synchrotron Light Source II Project is seeking an accelerator physicist with expertise in lattice design and nonlinear single particle dynamics. Will participate in the continuing design and optimization of the NSLS-II storage

ring lattice, and in the commissioning of the NSLS-II accelerator systems. Requires a Ph.D. degree in physics, at least five years' experience in lattice design and nonlinear single particle dynamics, expertise in development of application software and the use of complex accelerator physics design codes and experience in commissioning, operating, and carrying out machine studies on storage rings. Experience with beam based alignment of storage ring beam position monitors is desired. Reports to the Accelerator Physics Group Leader, Accelerator Systems Division. National Synchrotron Light Source II. Apply for Job ID #14734.

**ASSOCIATE DIRECTOR FOR THE CFN (M-3) – The Center for Functional Nanomaterials (CFN)** at Brookhaven National Laboratory is looking for an accomplished scientist to work with the CFN director and the other members of the management team in developing the CFN as an internationally renowned user-oriented research center. The CFN has the dual mission of 1) enabling nanoscience research by external users in its state-of-the-art facilities in materials synthesis, nanofabrication, and structural and functional characterization; and 2) carrying out its own in-house research program on energy-related themes, specifically, nanomaterials for catalysis, solar-energy conversion, and inorganic-organic hybrid devices. Primary responsibility will be the development of the CFN's external programs, namely, the users' program in all its aspects, focused collaborations with other research institutions, and outreach activities. In addition, the associate director will work with the management team in refining and implementing the CFN's strategy, and will assist the director in day-to-day operations of the Center. Will also have the opportunity to pursue research interests aligned with the energy-related themes of the CFN. Qualified candidates will have a Ph.D. in materials science, physics, chemistry, biology or related field, at least ten years of professional experience, a notable record of scientific achievements, and experience in managing user programs/facilities or outreach programs. Excellent oral and writing communication and interpersonal skills are essential. Apply for Job ID #14934.

**ELECTRICAL RESEARCH ENGINEER (P-7/P-9, reposting)** – Requires a BSEE or MSEE and a minimum of seven years of relevant experience. Requires knowledge of digital and analog circuits, and proficiency in troubleshooting systems with test equipment such as oscilloscopes and logic analyzers. PLC system design and programming experience is essential; prior experience with PLC based safety systems is desired. Troubleshooting of relay-based logic systems is a plus. Must have excellent communications skills and must be able to support a team with diverse skills and talents during all phases of construction, testing, repair and upgrade of existing equipment, and operations support. The Collider-Accelerator Department Access Controls Group is responsible for operation and upgrade of PLC based personnel safety systems for the RHIC complex of particle accelerators, and other existing and planned accelerator systems. Will work with a variety of technologies ranging from PLC systems and software, relay logic, electronic circuit design, biometrics, and gas sensor technologies. Some level of physical agility is required for field installation and testing. The level of this position will be determined by candidate's experience in the required areas. Collider-Accelerator Department. ERAP Eligible \$1,000. Apply for Job ID #14921.

**MECHANICAL RESEARCH ENGINEER II (P-7, term appointment)** – Requires a bachelor's degree in mechanical engineering with a proven track record of mechanical systems design and analysis. Must be a highly motivated individual with a minimum of seven years' progressively responsible related mechanical engineering design work experience and a sound knowledge of current mechanical engineering principles and practices with demonstrated experience in component design, geometric tolerance and dimensioning, analysis, fabrication and manufacturing practices. Requires excellent communication and technical writing skills, and experience in using design software tools such as Inventor-11, analysis tools such as ANSYS and proficiency with MS-Office and MS-Project...

(Job opportunities continued on back page)



# Job Opportunities at Brookhaven National Laboratory

Continued from front page

July 10, 2009

**MECHANICAL RESEARCH ENGINEER II (P-7, term appointment) description continued:**

...management tools. This project requires unique experimental systems component designs that are not catalog ordered or of mass production quantities and therefore requires an out-of-the-box engineering design capability and the initiative to see them through completion. Will participate as part of a research team to provide expert mechanical engineering design of system level mechanical components for the Long Baseline Neutrino Experiment detector in the Homestake mine in South Dakota. Determines needed resources, prepares specifications, takes part in design reviews, and makes presentations. Builds and evaluates prototypes and models, constructs and tests systems/equipment and proposes upgrades or improvements. Directs the design effort of designers and draftspersons, provides work procedures and directions to technicians, and serves as an advisor and expert on mechanical system design. Physics Department. Apply for Job ID #14931.

**ASSOCIATE / STAFF SURVEY & ALIGNMENT ENGINEER (P-3/P-5, reposting) –** Requires a BS degree in Geodetic or Survey Engineering and excellent computer and communication skills. Field experience with laser trackers and associated software is desired. Will participate in all survey and alignment tasks for the NSLS-II Project including: analyzing, adjusting and integrating data from survey instrumentation including total station instruments, laser trackers, mekometers and optical tooling, processing survey data, working with CAD drawings, directing the effort of a survey technician, and interacting with the scientific and engineering staffs. The level of this position will be determined by the selected candidate's experience in the required areas. National Synchrotron Light Source II. ERAP Eligible \$1000. Apply for Job ID # 14822.

**ADVANCED APPLICATIONS ENGINEER (I-7, reposting) –** Requires a bachelor's degree or equivalent experience, preferably in physics or computer science and at least five years of relevant experience. Background in physics and understanding of the principles of simulation is preferred, but will consider software engineer with a solid understanding of fundamentals of requirement specifications, coding and implementation. Understanding of the software development principles, cycles and paradigms in the field of Heavy Ion Physics, a strong background in programming using C++, FORTRAN as well as excellent communicational skills are required. Knowledge in GEANT and/or Monte-Carlo simulations and/or the development of detector response simulators is a definite advantage and experience in recent development of geometry modeling would be an asset. Responsibilities include participating in testing and problem solving activities as well as targeted code development; assisting with the planning, documentation and preparation of Monte-Carlo productions (consistent with a distributed computing model, Grid or Cloud) and data preservation; work pro-actively and closely with the designated physics-working-group representatives to define, clarify and organize simulation requests and needs and identify resource savings by identifying potential overlaps and propose contingency plans. RHIC/STAR Group/Physics Department. Apply for Job ID #14263.

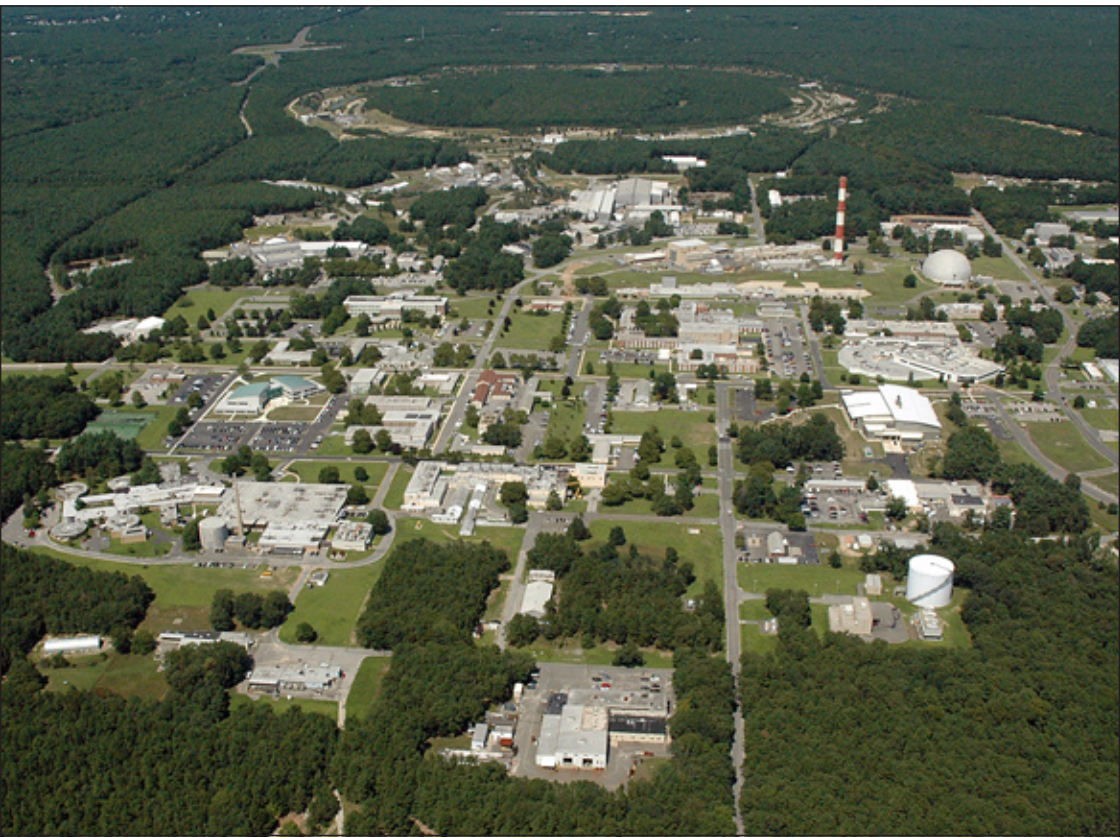
**ADVANCED TECHNOLOGY ENGINEER/SENIOR TECHNOLOGY ENGINEER (I-7/I-8, reposting) –** Responsibilities include system administration; maintaining and expanding Linux clusters, and engineering level system troubleshooting and debugging. Will act as Primary Engineer designing, implementing and supporting UNIX services at the NSLS-II. Reporting directly to the IT Manager, will play a leading role in the formulation of needs, the design and the implementation of UNIX services in support of a community of 2500 users. Currently the project provides data storage and data processing capabilities for physics simulations and accelerator design. It is expected that the candidate will use his/her creativity and expertise to further expand the scope of UNIX services and also lead the efforts to integrate the facility with the Open Science Grid operations. Requirements include a bachelor's degree, or equivalent experience in computer science or a related field, plus a minimum of five-plus years of experience in the design, coding, testing, and troubleshooting of informa-

tion systems; experience administering Windows 2003/2008 Server and Microsoft IIS; experience configuring, administering, patching, securing and performance tuning Linux platforms and clustered computing (including schedulers, resource managers and distributed file systems); ability to independently generate creative solutions to atypical problems using open source technologies in a fast-paced and dynamic environment; debugging hardware, managing RAID storage systems, knowledge of security (iptables, TCP wrappers), authentication and the following services: NFS, DNS, DHCP, NIS, LDAP, Samba, Printing, FTP and Apache, is required; ability to write shell scripts is required. Preferred requirements include the ability to use PERL or Python; experience administering MS SQL, MS Cluster, VMware or equivalent experience with Mac OS and experience with the Open Science Grid services of similar grid technologies. Will be hired at the Technology Engineer or Advanced Technology Engineer level commensurate with the amount and relevance of experience. ERAP Eligible: \$1000. National Synchrotron Light Source II. Apply for Job #14391.

**TECHNOLOGY ANALYST (I-4) –** Requires a bachelor's degree or equivalent work experience, good organization and communication skills and at least one year of experience in an information technology field. Should have experience with Microsoft Windows XP/Vista and Microsoft 2003 Server and should also be proficient in use of Microsoft Outlook, Word and Excel. Familiarity with Linux, Legato Networker, simple scripting and database recovery procedures a plus. Capability to demonstrate knowledge of TCP/IP configuration, security, permissions and resource sharing. Possess the skills for fundamental analysis and troubleshooting in a networked Windows server environment. Understand the differences between VTL, DAS, NAS and SAN and understand the basics of firewalls, databases and backup / recovery methodologies. Must be proactive and able to independently resolve problems and issues. Responsibilities include backup and recovery of 200+ Enterprise Windows Servers, ensuring completion of daily backup jobs and the timely communication of problems, continual attention to maintaining and testing backups and recoveries of entire environment, maintaining backup hardware and software currency. Duties include networker client installations for Windows Servers and Unix/Windows workstations, and working with other BNL groups and technicians, as well as software vendor support and creating and maintaining system backup and disaster recovery procedures. Requires some overtime and after-hours support. Information Technology Division. Apply for Job ID #14935.

**APPLICATIONS ANALYST (I-4) –** Requires BS degree in physics, computer science, or a related field and one-plus years of experience in real time or embedded software development as well as hardware and software integration. Must have experience with programming in C and C++ and a strong interest in working within a scientific research environment. Must have demonstrated skills in problem solving, software design, hardware/software system integration techniques and debugging of networked systems. Good communications skills a must. Experience with UNIX/Linux and VxWorks is desirable as is experience with LabView. Will develop and maintain distributed, embedded systems for accelerator control. Will work closely with hardware specialists in the system integration process and will be expected to provide support for new and existing systems. Collider-Accelerator Department. ERAP Eligible \$1,000. Apply for Job ID # 14950.

**TECHNICAL RESEARCH ASSOCIATE – INSERTION DEVICES (T-6) –** The NSLS-II Project is seeking an experienced technician to coordinate the daily operations for the Magnet Measurement Laboratory. Responsibilities include but are not limited to: troubleshooting electrical systems, installation of survey and alignment equipment and custom coils, interpreting detail assembly drawings and technical procedures, coordinating project workflow with our technical team of scientists and engineers, and directing the work efforts of other technical support personnel as needed. Requires the equivalence of a technical institute or associate's degree in mechanical or electro-mechanical technology and at least ten years' experience and expertise in the following



An aerial view of Brookhaven National Laboratory, approximately 60 miles from Manhattan in New York City.

areas: magnetic measurement coils and magnetometry, insertion devices and magnet systems, and magnetic measurement laboratory coordination. Must have in-depth knowledge of techniques used in the construction of permanent magnets, electromagnets, vacuum systems, water-cooling, cryogenics and controls and instrumentation systems and have excellent written and oral communication skills. Familiarity with advanced methods for optical survey, metrology, and precision drives and encoders is highly desired. Reports to the Group Leader, Insertion Devices, Accelerator Systems Division. National Synchrotron Light Source II. Apply for Job ID #14947.

**SR. TECHNICAL SPECIALIST – ELECTRONICS (T-3) –** This position is needed to support engineering efforts in the building of prototypes for electrical systems group. Will perform a wide variety of highly skilled and complex technical assignments such as constructing, troubleshooting and repairing electronic equipment utilizing schematics or verbal instruction, and assemble chassis using complex mechanical fabrication techniques. Must be highly motivated, able to work with a minimum of supervision and have good communication skills. Requires an AAS degree in electronic technology or equivalent, plus at least six years of relevant work experience with analog/digital electronics, computers, standard test equipment (function generators, oscilloscopes, multi-meters) and basic machine shop skills. Experience with automated test equipment used in production testing, power supply controls, knowledge of spreadsheet software and machine shop certifications and experience in construction, repair and troubleshooting of surface mount printed circuit boards is highly desirable. Reports to the Supervisor, Technical Support, Electrical Engineering, Accelerator Systems Division. National Synchrotron Light Source II. Apply for Job ID #14948.

**PRINCIPAL TECHNICIAN (TW-4) –** Requires an AAS degree in mechanical engineering technology with two years of relevant work experience or a bachelor's degree. Must be familiar with the fabrication, assembly and testing of mechanical equipment; must have excellent mechanical skills, be proficient with the use of hand tools, have knowledge of machine shop processes including milling machines, lathes, saws and grinders. Must have the ability to work from drawings, lift 30-50 lbs, read schematics and work from verbal instructions. Must be self-motivated, able to work with minimum supervision, and have good communication skills. Proficiency in Microsoft Office, basic knowledge of electronics, brazing and soldering skills is desired. Will be responsible for performing a wide variety of highly skilled technical assignments in

support of the engineering, scientific and technical staff, under general technical direction. Job duties include the fabrication and assembly of hardware, precision measurement, troubleshooting, repair and maintenance of NSLS mechanical components and systems. National Synchrotron Light Source ERAP Eligible \$500. Apply for Job ID #14936.

**SR. TECHNICIAN -ELECTRONICS (TW-3)–** This position will support the engineering efforts in the building of prototype power supplies which are being redesigned to be two channel power supplies. Will construct, troubleshoot, and repair electronic equipment utilizing schematics, verbal instructions, and assemble chassis using basic mechanical fabrication techniques. Must be self motivated, able to work with a minimum of supervision, and have good communication skills. Requires an AAS Degree in electronic engineering technology or a technical school graduate with relevant field experience with analog/digital electronics, computers and standard test equipment (function generators, oscilloscopes, multi-meters) and basic machine shop skills. Experience with automated test equipment used in production testing and power supply controls, knowledge of spreadsheet software and experience in construction, repair and troubleshooting of surface mount printed circuit boards is highly desirable. Reports to the Supervisor, Technical Support, Electrical Engineering Group. National Synchrotron Light Source II. Apply to Job ID #14949.

**PHYSICAL THERAPIST ASSISTANT (A-2)–** Requires completion of a two-year college program for physical therapist assistants from a registered Physical Therapy Assistant Program. Minimum four years of directly related work experience, preferably in a comparable outpatient setting. Valid professional licensure in the State of New York and re-registration every three years is required. Must demonstrate the ability to interact successfully with all employees receiving treatment at the BNL job site. Strong communication and organizational skills is essential. Under the on-site supervision of a licensed physical therapist implements treatment plans set for employees in an outpatient orthopedic setting. Other job requirements will include support activities such as scheduling patient visits using computer based scheduling software, faxing initial evaluations by ordering physicians, maintaining charts, cleaning rehabilitation equipment and guiding patients through their activities. Performs other related duties as required. Human Resources & Occupational Medicine Division. Apply for Job ID #14910.

**PUBLIC AFFAIRS REPRESENTATIVE (A-4) –** Requires a bachelor's degree, master's preferred, in education, science, or technology; formal or informal teaching experience; and a background

in science. Must be detail oriented and able to follow through on all projects in a timely manner. Strong interpersonal, communication, organizational, and problem-solving skills are necessary. Must work well in diverse group settings. Requires working knowledge of MS Word, Outlook, PowerPoint and Smart boards. Responsibilities include using inquiry methods to develop and teach hands-on science programs/labs for elementary, middle, and high school students as well as teachers' professional-development workshops, while focusing on BNL-related research. These informal education programs will be taught at Brookhaven's Science Learning Center facilities and in Long Island school districts. Office of Educational Programs/Community, Education, Government & Public Affairs. Apply for Job #14952.

**LICENSING ASSOCIATE (A-9) –** Requires an MBA with a strong scientific background in the physical sciences or electronics (minimum BS in physics or electrical engineering), preferably an advanced degree and ten years of related experience in a R&D and/or commercialization setting and experience with commercialization, licensing, intellectual property and contracts. Excellent analytical, market research, negotiating, and communication skills are also required. Will be responsible for continuous interaction with research staff to identify research capabilities and interests and new inventions; conducting market evaluations of invention disclosures; evaluating pathways for commercialization; developing business analyses for potential technology commercialization projects with industry and/or start-ups; potential licensees for intellectual properties; and for negotiating the intellectual property license agreements covering technologies and identification of. Ability to quickly communicate complex issues clearly and succinctly is necessary. Experience with Microsoft Office applications and computer search experience with database systems needed. Strong priority setting skills required. Must be able to work in a team environment. This position requires U.S. Citizenship. Office of Intellectual Property & Sponsored Research. Apply for Job #14933.

**CUSTODIAN –** Temporary (LG-1, reposting) – Under general supervision, performs general cleaning and house-keeping duties in all Laboratory buildings. Site Services Division. Apply for Job ID #14845.

**SR. STATIONARY ENGINEER (LG-11) –** Under minimum supervision, operates, maintains and repairs and heat generation equipment, facilities, and auxiliary and related equipment. Requires shift work and may be required to assign, direct, or check the work of other personnel in connection with assigned responsibilities. Energy & Utilities Division. Apply for Job ID #14930.

For the most current list of job opportunities at Brookhaven National Laboratory, go to

[www.bnl.gov/HR/jobs/](http://www.bnl.gov/HR/jobs/)

**the Bulletin**

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