

## Sixteen BNLers Awarded Major Recognition Prizes

The 2011 Employee Recognition Awards were presented to 16 BNLers at a ceremony and reception held at Berkner Hall on Friday, June 17. Lab Director Sam Aronson warmly congratulated the award recipients and also the rest of the Lab, recognizing support for the extraor-

dinary efforts of the winners. He also noted the simultaneous excellence across the Lab, and particularly thanked those who made this occasion possible and such a success, including the nominators of candidates, members of the committees who selected the winners, and

Human Resources & Occupational Medicine Division's Robert Kelly and Mary McGrath.

The winners, will their awards, are pictured below; each winner and his or her contributions will be featured over the coming weeks in future Bulletins.

With Deputy Lab Director for Science & Technology Doon Gibbs (back, right) are Science & Technology Award winners: (back, from left) Vladimir Litvinenko, Collider Accelerator Department; and Oleg Gang, Center for Functional Nanomaterials; (front from left) David Diamond, Nuclear Science & Technology Department; Sally Dawson, Physics Department; and Animesh Jain, Superconducting Magnet Division. Not present: José Rodriguez, Chemistry Department.



With Deputy Lab Director for Operations Mike Bebon (back left) are Engineering Award winners: (back, from left) Thomas Joos, Photon Sciences Directorate; and Dennis Danseglio, Modernization Project Office; (front, from left) Wing Louie, Photon Sciences; Chien-Ih Pai, Collider Accelerator Department; and Nikolaos Simos, Nuclear Science & Technology Department.

With BNL Director Sam Aronson (back, right) are Brookhaven Award winners: (back from left) Scott Seberg, Collider Accelerator Department; and Paul Ribaud, Photon Sciences Directorate; (front, from left) Dennis Ryan, Radiological Control Division; Cathleen Lavelle, Photon Sciences; and Noel Blackburn, Community, Education, Government and Public Affairs Directorate.



## New Results From LHC Experiments Presented at Quark Matter 2011 Conference

The following article is taken from a news release distributed by CERN, the European laboratory for particle physics, about results presented on May 23 at the 2011 Quark Matter conference by three of the Large Hadron Collider's (LHC) experimental collaborations. The ALICE, ATLAS, and CMS collaborations study lead ion collisions at the LHC to learn more about a very hot, dense matter known as quark-gluon plasma — the properties of which were first measured at the Relativistic Heavy Ion Collider (RHIC) at BNL. Brookhaven scientists and engineers contributed significantly to a key part of the ATLAS detector system, known as the liquid argon calorimeter.

In addition, BNL physicist Peter Steinberg serves as the co-convenor for the ATLAS heavy ion physics group, which is exploring "jet-quenching" — a phenomenon first observed at RHIC in 2003. For the full article, see [http://www.bnl.gov/bnlweb/pubaf/pr/PR\\_display.asp?prID=1285](http://www.bnl.gov/bnlweb/pubaf/pr/PR_display.asp?prID=1285).

The three experiments that study lead ion collisions at the Large Hadron Collider (LHC) all presented their latest results on May 23 at the annual Quark Matter conference, held this year in Annecy, France. The results are based on analysis of data collected during the last two weeks of the 2010 LHC run, when the LHC switched from

protons to lead ions. All experiments report highly subtle measurements, bringing heavy-ion physics into a new era of high precision studies.

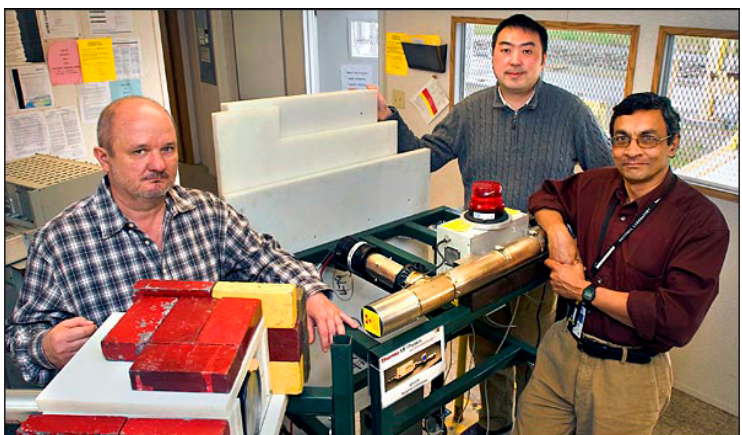
In its infancy, just microseconds after the Big Bang, the universe consisted of a plasma of quarks and gluons (QGP), the fundamental building blocks of matter. By colliding heavy ions, physicists can turn back time and recreate the conditions that existed back then, allowing us to understand the evolution of the early universe.

The LHC heavy-ion program builds on experiments conducted over a decade ago at...

See *LHC Results* on p. 2



Roger Stoutenburgh D4780611



Roger Stoutenburgh D1250511

With the neutron generator and alpha particle detector are: (from left) Istvan Dioszegi, BNL Nonproliferation & National Security Department; Yu Zhou, Stony Brook University; and Sudeep Mitra, BNL Environmental Sciences Department.

## Sheep to Explosives

### BNL Researchers Work to Develop a Field-Deployable Instrument Using Neutrons To Identify Live Explosives

What do sheep in New Zealand have in common with unexploded ammunition on U.S. military firing ranges? Both have been the target of BNL's Sudeep Mitra's research into technology using neutron time-of-flight to determine the composition of various materials.

The Department of Defense (DOD) recently awarded a three-year grant to Mitra and his colleagues at BNL and Stony Brook University (SBU) to develop a field-deployable instrument that will help identify unexploded ordnance (UXO) at its more than 1,600 firing ranges in the U.S. The instrument would use Associated Particle Neutron Time-Of-Flight technique (APnTOF) to measure the ratios of carbon, nitrogen and oxygen in objects left on the firing ranges.

The technology is not new to Mitra. He used it some 20 years ago to help ranchers in New Zealand track the progress of genetic manipulations to breed sheep with more meat and less fat without slaughtering the animals. And this same technology may one day lead to advances in the detection of breast cancer in humans.

### Thousands of Pieces of Unexploded Ammunition

One of the major problems facing the DOD is dealing with unearthened UXO at past or present military facilities or munitions testing grounds. The APnTOF technique can be used to examine the object *in situ* and, based on its chemical composition and ratio of specific elements,

determine whether it is a dangerous UXO.

"At the firing ranges where the U.S. military trains, they fire a lot of different kinds of ammunition," Mitra said. "Ten percent of them don't explode as expected, and although they have color codes for different ammunition, they quickly rust and the color codes disappear.

"In practicing, quite often they don't use high explosives in the fillers of these rockets or bullets," he said. "But you don't know if it's high explosive or if it's just a practice round. If it is suspicious, they have to call in technicians to blow it up in place at \$600 for each piece."

### Determining Material Composition

Carbon, nitrogen and oxygen are the main elements present in high explosives, as well as in sheep and other common objects. Mitra's technique uses an electronically collimated tagged neutron beam from a novel compact, portable field-deployable 14.1 MeV neutron-generator system to simultaneously provide 3-D imaging of objects and their elemental composition.

Mitra said the technology's main advantage over its predecessor technique is its suppression of the unrelated background signal by imposing conditions on the data-acquisition system.

"We will undertake experiments to demonstrate the APnTOF's efficacy under various field conditions for both..."

See *Sheep to Explosives* on p. 2



### CALENDAR

OF LABORATORY EVENTS

- The BERA Store in Berkner Hall is open weekdays from 9 a.m. to 3 p.m. For more information on BERA events, contact Andrea Dehler, Ext. 3347, or Christine Carter, Ext. 2873.

— REGULARLY —

**Weekdays: Free English for Speakers Of Other Languages Classes**  
Beginner, Intermed., Adv. classes, various times. All welcome. Learn English, make friends. See <http://www.bnl.gov/esol/schedule.asp> for schedule. Jen Lynch, Ext. 4894.

**Mondays & Thursdays: Kickboxing**  
\$5 per class. 12:15–1:15 p.m. in the gym (Bldg. 461). \$5 per class. Ext. 2873.

**Mon., Tues., Thurs., & Fri.: Tai Chi**  
Noon–1 p.m., B’haven Cntr (Bldg. 30), N. Rm. Adam Rusek, Ext. 5830, [rusek@bnl.gov](mailto:rusek@bnl.gov).

**Tues.: Hospitality Welcome Coffee**  
On hold until September.

**Tuesdays: Zumba**  
On hold until September.

**Tuesdays: Knitting Class**  
On hold until September.

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

**Tuesdays & Thursdays: Aerobic Fitness**  
On hold until September.

**Tues., Wed., & Thurs.: Rec Hall Activities**  
5:30–9:30 p.m. in Bldg. 317. General activities, TV, ping pong, chess, games, socializing. Christine Carter, Ext. 5090.

**Tuesday & Thursday: Aqua Aerobics**  
On hold until September.

**Wednesdays: Ballroom Dance**  
On hold until September.

**Wednesdays: Pilates**  
On hold until September.

**Wednesdays: Play Group**  
On hold until September.

**Wednesdays: Yoga**  
Noon–1 p.m., B’haven Center (Bldg. 30). 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**  
5 p.m., Brookhaven Center. First Thurs. of month. Andy Mingino, Ext. 5786.

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

**Thursdays: Postdoc Social Night**  
6:30 p.m. ASAP Lounge (Bldg. 462). [www.bnl.gov/asap](http://www.bnl.gov/asap).

**Thursday: Judo Class**  
7:30 p.m. Gym (Bldg. 461). Tom Baldwin, Ext. 4556.

**Fridays: Family Swim Night**  
5–8 p.m. Pool (Bldg. 478). \$5/family. Ext. 2873.

*LHC Results from p. 1*

...CERN’s Super Proton Synchrotron (SPS) accelerator, which saw hints that the plasma could be created and studied in the laboratory. Then, in 1999, the baton passed to the Relativistic Heavy-Ion Collider (RHIC) at BNL, which firmly established that QGP could be created on a miniscule scale. This year’s Quark Matter conference was the first in the series to feature results from the LHC.

Results from the ALICE experiment have provided evidence that the matter created in lead ion collisions is the densest ever observed, over 100,000 times hotter than the interior of the sun and denser than neutron stars. These conditions allow the properties of the plasma to be studied with unprecedented detail. ALICE has confirmed the RHIC experiments’ finding that QGP behaves almost like an ideal fluid with minimal viscosity. ALICE’s presentation also discussed the behavior of energetic particles in the QGP medium.

The ATLAS collaboration has performed a comprehensive study of heavy-ion collisions. The experiment’s analysis includes global properties, such as the number and distributions of charged particles emerging from the plasma, which elucidate the collision dynamics and trans-

# Here Comes the Sun...and Lots of Solar Panels

## LI Solar Farm construction shifts into high gear on site at BNL

A rainy and dreary spring has not put a damper on efforts to construct what will be the largest solar photovoltaic power plant in the eastern United States, now taking shape in the eastern portion of the BNL site. Just about six months after site preparation work began last November, the Long Island Solar Farm is now more than halfway complete. The 200-acre, 32-megawatt solar project — a collaboration between BP Solar, the Long Island Power Authority, and DOE (which provided the land for the project) — is on track to start providing power to Long Island residents later this fall. It will generate enough renewable energy to power approximately 4,500 homes, and help NY State meet its clean energy and carbon reduction goals.

To date, workers have mounted nearly 90,000 of the 164,000 solar panels that will make up the array, and have installed 11,500 of the 13,000 piles and 4,600 of the 6,800 racks that will hold the panels in place and tilt them toward the sun. Right now, more than 200 workers swarm the site, adding thousands of panels each day and installing the power inverters and cabling that will carry electricity from the panels to the electric grid.

“Our local crews have made



Roger Shoulenburgh b0210611

Racks in place to hold thousands of solar panels at the LI Solar Farm at BNL

great progress after a challenging winter season,” said Pete Resler, Manager of Global Communications & External Affairs for BP Solar. “Soon, Long Island and Brookhaven Lab will showcase the bright future of American renewable energy.”

Even as the construction progresses, BNL scientists continue to develop their own research agenda for the large array and a planned smaller one. The large array will incorporate advanced monitoring equipment that will allow researchers to monitor, in real time, how much power the array is generating in relation to the amount of cloud cover pres-

ent — giving them the ability to look at the impact of microscale elements like individual clouds on the array’s output.

Researchers are also developing the ability to predict, up to 30 minutes in advance, the output of the large array based on observation, tracking, and evaluation of cloud conditions. This technique, known as “now-casting,” uses optical imaging of the clouds and sophisticated software to identify shapes, track movements, and evaluate the optical density of the clouds — that is, how much light is filtered by clouds overhead. This type of near-term forecasting will help

utilities anticipate changes — such as dips in solar-generated power at times of cloud cover — and make adjustments before they occur to maintain constant power on the grid.

“There’s not a lot of data available on how arrays of this size will function in the changeable weather of the northeastern United States,” said Pat Looney, Chair of the Lab’s Sustainable Energy Department. “We have a unique opportunity here to determine how these types of factors might impact our ability to smoothly integrate renewables into the grid.”

Research at the smaller array, while still under discussion, will likely include testing of new inverter and power supply technologies, as well as advanced energy storage devices that will enable power generated during peak output times to be stored for use during times of greatest demand — when the sun may not be shining.

“The smaller research array will serve as a collaborative platform for the Laboratory,” said Looney. “It’s an opportunity for us to work with businesses in New York — especially here on Long Island — as well as with university partners here and across the country to design, build, and test new solar-related technologies.” — Peter Genzer

**TIAA-CREF One-on-One Retirement Counseling**

A TIAA-CREF consultant will visit BNL on July 8 and 28; on August 1, 4, 18, and 23; and September 7, 8, 12, 19, and 27 to answer employees’ questions about their financial matters. For an appointment, please call 1-800-732-8353 or go online at [www.tiaa-cref.org/bnl](http://www.tiaa-cref.org/bnl) and select “set up a meeting.”

*Sheep to Explosives from p. 1*

...characterizing munitions types from their elemental composition, and also discriminating hazardous UXO from non-hazardous items among the clutter,” he said. “Finally, a portable version will be developed and tested in the field.”

The collaboration between different BNL directorates and SBU brings together a unique combination of expertise. Mitra, the project principal investigator, works in the Environmental Sciences Department within the Environmental & Life Sciences Directorate. Istvan Dioszegi of BNL’s Nonproliferation & National Security Department in the Global and Regional Solutions Directorate, uses techniques to detect neutrons, while Yu Zhou, an SBU

assistant professor of robotics, will develop decision-making algorithms for UXO identification using the gamma ray spectra of different materials. BNL’s Instrumentation Division and microelectronics group will help develop the compact field-deployable signal processing system.

**Studying Sheep in New Zealand**

Mitra had used the technique in the 1990s. “The idea has been there for the last 40 years from nuclear physics experiments,” he said. “We were one of the first to apply it using a compact neutron generator when I used it to determine the body composition of sheep in New Zealand (NZ) in terms of protein, fat and water. In NZ, their meat is a very big ex-

port item and they put the sheep through different genetic manipulations so they can get more meat and less fat. But they had to slaughter a lot of these animals to do a chemical analysis,” he said.

“So we proposed this non-destructive technique so we could follow the sheep as it grows. Again the important thing is the ratio of carbon, oxygen and nitrogen. Protein very characteristically contains nitrogen.”

Mitra said the system can be easily modified for applications in homeland security, non-proliferation, and carbon-sequestration. Another potential application could be for early diagnosis of breast cancer. — Kay Cordtz

For more information on this story, go to [www.bnl.gov/today/story.asp?ITEM\\_NO=2356](http://www.bnl.gov/today/story.asp?ITEM_NO=2356).

# Safety Day Crossword Puzzle Solutions

The Bulletin of May 27 contained a crossword puzzle that could be submitted for a chance to win prizes during Safety Day at BNL on June 8. The answers to the puzzle are listed below. See the Safety Day website for more tips, as well as photos and videos from the day: [www.bnl.gov/safetyday/](http://www.bnl.gov/safetyday/).

**Across**

2 Liquid nitrogen can cause an **OXYGEN** deficiency.

5 Spread **ICE MELT** outside in the winter to prevent slipping.

8 A type of personal protective equipment (PPE) used to control exposure to noise: **EARPLUGS**

10 When you hear an **INTERMITTENT** site alarm, evacuate the BNL site using the most direct route, or as instructed by emergency response personnel.

11 An **EXOTHERMIC** reaction releases energy in the form of heat or light.

13 A **WORK PERMIT** is used to establish work controls necessary for mitigating hazards during planned work.

15 A **SUBSTITUTION** is used to control workplace stressors so PPE does not have to be worn

19 A major engineering control used in labs: **HOOD**

20 **CHRONIC** poisoning is prolonged or repeated exposures of a duration measured in days, months, or years. Example: lead poisoning

21 A class of chemicals that can cause an allergic reaction: **SENSITIZERS**

23 A ground fault interrupter must be **TESTED** before use.

24 **OSHA** is a government agency responsible for workplace safety

**Down**

1 **SAFETY GLASSES** are PPE required for entry into a chemical laboratory.

3 Employees should contact a health and safety representative for an **ERGONOMIC** evaluation, if suffering from any musculoskeletal disorder such as pain in the arms, wrist, neck, etc.

4 Common exposure for a chemical hazard: **INHALATION**

6 This may result when mixing organic compounds with piranha etch solution: **EXPLOSION**.

7 You must wear this PPE — a **HELMET** — when riding a bicycle at BNL.

9 All electrical equipment at BNL must be approved by **UNDERWRITERS**, a nationally recognized testing lab.

12 **PYROPHORIC** chemicals will ignite spontaneously with air at a temperature of 130 degrees Fahrenheit or below.

14 **CORROSIVES** — substances that cause visible destruction or irreversible alteration in tissue at the point of contact. Example: sulfuric acid

16 **IRRITANTS** are materials that cause inflammation as well as reddening and swelling of the eyes, skin, nose, and respiratory system. Example: ammonia

17 This is the speed limit in miles per hour on site unless otherwise posted: **THIRTY**.

18 **LOCKOUT/TAGOUT**: a specific practice and procedure that protects workers from injuries due to the unexpected energization or start up of machinery and equipment or the release of energy during operations

22 An information document prepared by the manufacturer or importer of hazardous chemicals. It provides safety and health-related information: **MSDS**



# BNLers Recognized for Perfect Attendance

Laboratory Director Sam Aronson, with Robert Kelly of the Human Resources and Occupational Medicine Division, congratulated 46 BNL employees on their excellent records of “Perfect Attendance” during 2010 at a ceremony held in Berkner Hall on April 25. Each winner received a check for \$200 less tax, a certificate, and a T-shirt printed with the number of years of perfect attendance the winner had achieved. The annual event is held by BNL in recognition of the commitment and service provided by full-time employees on the technical and clerical schedules who used no sick leave during the previous calendar year.

The Perfect Attendance award was first given in 1992, when full-time employees on the technical and clerical schedules were recognized for having used no sick leave during 1991. In 1995, these employees and those from the Paper, Allied-Industrial, Chemical & Energy Workers International were joined in eligibility for the award by BNL employees represented by the International Brotherhood of Electrical Workers. In 1998, members of the Suffolk County Security Police Association in the Safeguards & Security Division also became eligible for the prize.

This year, as previously, many awardees had achieved multiple



Roger Stoudenbough 06270411

Photographed with Laboratory Director Sam Aronson (front, left) during the 2010 Perfect Attendance celebration on April 25 at Berkner Hall are many of the 46 Perfect Attendance Award winners of 2010. The winners are listed below alphabetically in their departments/divisions with the number of years they have won this perfect attendance prize after their name. **Biology Department:** Phyllis Tinsley-Smith, 19; **Collider Accelerator Department:** John Pomaro, 1; Joel Vasquez, 1; **Community, Education, Government & Public Affairs:** Cornelius Jackson, 16; Terry Jones, 3; Alex Reben, 16; and Joseph Rubino, 5; **Energy & Utilities Division:** Richard Lutz, 16; **Laboratory Protection Division:** John Davies, 1; George Bostick, 3; Richard Miraglia, 6; and Richard Sanniola, 1; **Physics Department:** Kevin Casella, 3; **Procurement & Property Management Division:** Wayne Cummings, 3; Dhruba Ghimiray, 14; Michael Pedersen, 3; and Shelby Williams, 16; **Site Resources Division:** Michael Bagley 1; Eugene Barrow, 6; Howard Bell, Jr., 5; Wayne Boyd, 4; Eric Bullock, 2; Nicholas Capazzola, 1; Daniel Cardona, Jr., 1; Thomas Crews, 13; Michael Daddi, 1; Robert Danowski, 2; Daniel Feeley, 1; Ralph Giordano, Jr., 9; Darren Harris, 9; Ruth Harris, 8; Keith Jackson, 3; Charles Langhorne, 1; Carol Mason, 4; Lisa Metz, 11; Carol Robinson, 3; Randolph Seibel, 14; Robert Skeeter, 1; John Sullivan, 1; Johnnie Turner, Jr., 7; and Jeannette Vera, 4; **Staff Services Division:** Shirley Ayers, 4; Ralph Garappolo, 1; Bryan Hanlon, 11; Frances Smith, 3; and Brenda Turner, 4.

years of perfect attendance: 13 won for the first time, two for the second time, eight for the third, five for the fourth, two for the fifth time, two for the sixth time, one for the seventh time, one for the eighth time, and two for the ninth time. Lisa Metz and

Brian Hanlon won for the eleventh time; Thomas Crews won for the thirteenth time; Dhruba Ghimiray and Randolph Seibel won for the fourteenth time; Cornelius Jackson, Richard Lutz, Alex Reben, and Shelby Williams for the sixteenth time — and

Phyllis Tinsley-Smith, BNL's A-one top of the bill all-star, won for the nineteenth time. Employees who became eligible for the prize after its inception have often served BNL with additional years of perfect attendance that are on record elsewhere.



Roger Stoudenbough 00070611

## Check Out BNL's Judo/Jujitsu Crew

By day, Tom Baldwin manages teams of plumbers, electricians, and other craft workers as general supervisor for the Site Resources Division at BNL. But for years, as the sun sets and shadows emerge, Baldwin can be found with several other BNLers preparing to fend off the forces of evil as they practice martial arts in the Lab's gymnasium. The crew continues to train on site and the entire Lab community is invited to join them each week.

"I grew up on the Green Hornet and the old Kung Fu television show, but martial arts have really become a pursuit of mental and physical excellence for me," said Baldwin, who first began coordinating martial art classes at the Lab in 2003. "I want to bring that pursuit to work and to the people here."

With help from the Brookhaven Employees' Recreation Association (BERA) and BNL electricians/ujitsu instructors Jim Crawford and Omar Lee, Baldwin has coordinated classes on site ever since.

"When we started out, we borrowed training mats from the police group. Once we had enough interest, BERA made the

Above: Members practice their judo techniques and how to fall safely on the mats in BNL's gym.  
Below: BNL's Tom Baldwin

The entire Lab community — including guests and summer interns — is invited to train on Thursday evenings from 7:30 to 8:45 in the gym (Bldg. 478).



R.S. 00060611

rest happen with space to train, mats, and spreading the word," Baldwin said.

Now, Baldwin coordinates Thursday evening classes for BNLers, guests and summer students. Crawford and Lee continue to teach jujitsu and other martial arts and Sensei (the Japanese word for "teacher"). Clifford Wolff and Bob Geick come from off site to teach judo.

Andrew Chrzanowski is a Lab custodian who has trained with Wolff and Geick for years. When he heard that Baldwin, Crawford, and Lee were looking for a new instructor to rekindle interest in martial arts training on site, he introduced them to his teachers. Wolff is a fourth-degree black belt and has trained in judo since 1943 and Geick is a second-

degree black belt who has trained for more than 35 years. Judo is a martial art that was developed in Japan in the late nineteenth century. The name "Judo" translates to "gentle way" and the style is mostly known for its throwing and wrestling techniques.

The styles that Crawford and Lee teach are rooted in jujitsu, a Japanese martial art that was developed in the 17th century, and they focus on ground-fighting class, which is similar to wrestling.

"The styles we do here involve joint manipulation, not weapons, so you can control a situation without really injuring someone," explained Crawford. "It doesn't have to do with size or strength — it takes practice."

"I enjoy the camaraderie.

I'm a custodian here and I'm training on the same mat with physicists," said Chrzanowski. He's not the only person to be excited about the opportunity to train at BNL.

"We're working with the elite and should train accordingly," Wolff said.

With close to 60 years of experience, Wolff knows the importance of safety and said that he has never needed a bandage or ice pack after training.

"Safety has to be above everything else," he said.

Geick noted, "The people of Brookhaven seem to catch on to the scientific concepts of judo — using fulcrums and leverage for minimum effort and maximum efficiency instead of brute strength — much quicker."

"Now we've got what we need, including awesome teachers," said Baldwin.

The entire Lab community is invited to train in the martial arts classes on site each Thursday. The group meets from 7:30 to 8:45 p.m. in the gym (Bldg. 478).

For more information, contact Baldwin, Ext. 4556.

— Joe Gettler

### CALENDAR

Today, Friday, 6/24

#### BSA Distinguished Lecture

3 p.m. Berkner Hall. Olli Heinonen, Harvard University, will talk on "North Korea, Iran, and Syria — Lessons Learned from IAEA Inspections." A panel discussion on current issues will follow, 4-5:15 p.m. All are welcome to this free event, open to the public. Visitors to the Lab of 16 and older must carry a photo ID.

#### Sat.-Sun., 6/25-26

##### \*Amateur Radio Club Field Day

2 p.m. Sat. until 2 p.m. Sun. Gazebo near ball fields. All the Lab community is welcome at the BERA Amateur Radio Club's exercise in communications. See p.4.

### — WEEK OF 6/27 —

#### Monday, 6/27

##### 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.

#### Wednesday 6/29

##### \*BSA Noon Recital: Pianofest

Noon. Berkner Hall. Star pianists will perform. All are welcome to this free public event, sponsored by Brookhaven Science Associates. Visitors to the Lab of 16 and older must carry a photo ID. See notice below.

### — WEEK OF 7/4 —

#### Monday, 7/4

##### Independence Day

Lab closed. Enjoy the day!

#### Tuesday, 7/5

##### Floating Holiday, Lab Closed

No Bulletin this week.

### — WEEK OF 7/11 —

#### Monday, 7/11

##### Talk: DOE Response to Releases From Power Plant in Japan

3:30 p.m. Berkner Hall. Steve Musolino, Nonproliferation & National Security Department, will talk on "The DOE Response to Radiological Releases from the Fukushima Dai-ichi Nuclear Power Plant." All are welcome.

### Arrivals & Departures

#### — Arrivals —

Gustavo Nobre..... NS&T.  
Xiaoyu Wang.....Sust. En. Tech.

#### — Departures —

Christine Melbiheess..... Bus. Ops.



#### BSA Noon Recital: 6/29

Participants in Pianofest, a summer workshop held in the Hamptons, will be showcased in a recital on Wednesday, June 29, at noon in Berkner Hall. Sponsored by Brookhaven Science Associates, the company that manages the Lab, the concert is free and open to the public. All visitors to the Lab age 16 and over must bring a photo I.D.



## Classified Advertisements

Current job openings and a statement of job placement policy at BNL are available on the homepage at [www.bnl.gov/HR/careers/](http://www.bnl.gov/HR/careers/). To apply for a position, go to [www.bnl.gov](http://www.bnl.gov) and select "Search Job List." For more information, call Ext. 2882.

### Motor Vehicles

10 ACURA TSX – 5.5K mi. mint, silver palladium metallic w/blk lthr, runs on reg, v/ low mi, orig owner. \$24,800 neg. 264-2421.  
04 HONDA CR-V – 121.5K mi. 2.4L I4 VTEC eng, AWD, 4 whl ABS, p/w, p/dr rem strt, htd drivr st. \$7,900 neg. Ext. 7277.  
04 MERCURY SABLE LS – 93K mi. gd cond, a/t, a/c, s/roof, abs, tractn contr, leather, p/s, p/l, p/w. \$5,750 neg. 807-1969.  
03 MERCEDES BENZ C230 – 45K mi. a/t, 6/cd changer, new brakes/tires, excel cond. \$14,900 neg. 882-0840.  
02 SUBARU LAGACY – 32.6K mi. awd, a/c, c/c, am/fm, CD & cass. player, clean, gd cond. \$8,695 neg. David, 286-8229.  
01 HONDA CIVIC EX COUPE – 89.1K mi. 5-sp'd, a/c, p/w/l/mrs, m/roof, CD player, ABS, 32/37mpg. \$5,000. James, Ext. 8403.  
00 MAZDA MIATA – 76K mi. Silver LS. \$6,500 neg. Paul, Ext. 7178.  
99 HONDA ODYSSEY – 165K mi. 7-pass minivan, gold, a/c, a/t, new trsm/110K mi, new rad, \$3,900 neg. Ext. 4795, 745-8633.  
99 FORD ESCORT WAGON – 142K mi. runs well, orig owner. \$4,000 neg. Ext. 7179.  
97 FORD EXPEDITION EDDIE BAUER – 180K mi. clean, remote rtart, white exterior, 6CD Plyr, tan leathr, \$3,900. 767-0527.  
92 MERCEDES 300 SL CONV – 112K mi. new tires, runs well, w/nice shaped hard top. \$5,100 neg. 875-9426.  
82 YAMAHA – XJ750J MC low mi, XJ750J MC, 10.8K mi, new tires/batt, direct dr, runs well, 45-55/ mpg, ask/\$1200. 642-7240.  
GREG WELD RIMS/TIRES – 4/brand new Good Year Wrangler HP, P275 60 R20, 8 Lug, ask/\$2500. Jeff, 655-7991.  
TRACTOR TIRES – Kenda Super Turf, 18x8.5-8, used 1 season, like-new tread, tubeless/\$10. Travis, shrey@bnl.gov.

### Boats

6' JET SKI 1999 POLARS – not running, no spark, ski in great shape comes w/ stand. \$800 neg. Michael, Ext. 4548.  
SAILBOAT – Pearson, '75, 26'; '05, 9.9 Yamaha elect motor, low usage, in water at Port Jeff Mooring, \$4K. 642-7240.

### Tools, House & Garden

HAMMOCK PAWLEY'S ISLAND ROPE – 48" w, new cond/\$40; umbrella, patio, 62"/dia, R,B,Y stripes, concrete base/\$65. 281-2767.  
PATIO UMBRELLA & STAND – red floral 7' diam, some fade w/crank/tilt/black cast-iron std, \$25/ea. Ext. 2733, 395-6784.  
PERENNIALS – Hosta, Iris, Cone Flower, Liatris, Hydrangea, will deliver to BNL. Beth, 905-8222.  
POOL DE FILTER/1.5HP PUMP – Pump 2 yrs old, filter 10yrs, hooked up and running now, come see. \$100 firm. Stephen, Ext. 2575.  
ROBOT LAWNMOWER – Friendly Robotics RL850. \$1500+ new - ask \$500. Ext. 3970.

### Furnishings & Appliances

ARMOIRE – like new, light wood, w/drawers, 40"W x 21"D x 68"H. pics avail, \$400. 935-3777 or lotusexp@yahoo.com.  
CRIB – wood, ivory w/gold trim, classic look, incs, mattress, fitted sheet, bumper, skirt, storage, drawer, gd cond, \$93. 929-4446.  
DESK – grey 45"W x 30"D, 2 drawers on left side/1 ffor files, \$50/obo, photos avail. 821-2507 or gacks51@hotmail.com.  
DINING RM SET – Briaana bfft/table 4/chs, all tbl pads, 42x78x32W 18" leaf; nat. colr w/ blk seats, ch backs, \$1200/neg. 284-3956.  
DINNER SET – Pfaltzgraff, Ocean Breeze for 8/ask/\$75; Mikasa Spring Crocus fine china set for 8/no tea cups, ask/\$75, Ext. 3924.  
GAS STOVE – Amer. Hearth, 25,000 Btu grn prceln nat gas stve, mdl VC2500. Iron-blower, rem therm. \$249. 878-8283.  
KITCHEN TABLE & CHAIRS – light maple w/leaf & 4 spindleback ch, 60x36, excel cond, \$300. 678-3299 or dgordon@bnl.gov.  
OUTDOOR BAR SET – 3 pc set w/bar & 2/stools, pics avail, ask/\$60/obo. Wendy, Ext. 3924 or wwilliams@bnl.gov.  
PORTABLE AIR CONDITIONER – Edgestar AP14001HS, 14,000 Btu-top of line, \$350. Frances, Ext. 4901 or capasso@bnl.gov.  
RAITAN FURNITURE, TABLES – couch & glass-top coffee table, excel cond. \$195. Lt col. glass-top tbl, 4 ch w/cushns. 878-0354.  
REFRIGERATOR – Kenmore, 18.2 cu ft, top freezer, white, no icemaker/\$100. Heather, Ext. 3071 or hartmann@bnl.gov.  
SHARP WINDOW AIR CONDITIONER – En. Star 8000/Btu, ask/\$100. kurian@bnl.gov.  
TABLE – w/4chairs, wood, porcelain top w/2 slide-out 10" leaves, 31"h, 22"w, 40"L, gd cond, \$100. Nancy, 281-2767.

### Audio, Video & Computers

CAMCORDER CANNON – 20 memorex disc, used once, have receipt, orig price for all/\$380; ask/\$150. Eileen, 284-3956.  
DVD PLAYER – Philips DVP3962/37, Progressive Scan, 1080i Upconversion, HDMI and Remote/\$25. Gary, Ext. 7779.  
IPAD – 64 gig WiFi + 3G, mint cond, factory reset w/orig cables/charger/\$600. Renee, Ext. 8278.

KENWOOD HOME STEREO SYSTEM – Components incl receiver, CD Player, tuner, dual cass deck & 2 spkrs, \$100. 678-3299.  
NINTENDO DSI XL – Burgundy, barely used, incl Brain Age games, in orig box, factory reset, \$160. Renee, Ext. 8278.  
TUBE TV'S – 36" RCA/\$40, 13"/RCA \$10. Mark, Ext. 3970 or mwahlert@bnl.gov.  
UNLOCKED MOTOROLA W375 – phone w/ internl FM, orig box/65. nnambiar@bnl.gov.  
USB DVD RW DRIVE – nr new, Sony DRX-840U 20x External Dual-Layer DVD Burner/Reader/\$40. Gary, Ext. 7779.

### Sports, Hobbies & Pets

GOLF CLUBS – Driver, 3&5 wood, 4 hybrid, all rt hand, 1 & 2 yrs old, Touredge & ping. \$100/all. Ext. 3124 or kjones@bnl.gov.  
NORDITRACK – 1/yr old, gently used, like new, b/o. 744-8386.  
POLARIS 360 POOL CLEANER – for igp, bought 2010, excel cond, only needs new filter bag, \$150, pic avail. 516-241-4598.  
SNOWBOARD & BOOTS – Airwalk 155 w/ bindings. Revolver size 11 men's boots. \$50/all. Ext. 3970 or mwahlert@bnl.gov.  
SPEEDBOATS – 2/hi-perform RC ShockWave 55 Super Sport: 1/new in box, ask/\$850; other under 2/hrs use, ask/\$700. 655-7991.  
TREADMILL – Sears Proform 745CS, excel cond, folds to store/\$250. 678-3299.

### Miscellaneous

AUDI & VW REPAIR – Certified VW tech w/7 yrs dealer exper. All types of repairs, maintenance to eng diag. 484-9888.  
BABY'S ITEMS – Bumbo seat w/play-tray/20/grn, baby gym/\$5/pink; free-standing swing/\$5/blue; Aneta, Ext. 7394..  
BABY'S ITEMS – Walker \$10, Graco Travel System Stroller Set \$75. Rachel, Ext. 3500.  
BOOTS – Western, leather wmn's sz6.5-7.5, various prices, Nancy, 281-2767.  
KITCHEN ART – Coffee theme items for decorating: sm framed pics, metal cafe wall decor. \$35/all. Pics Avail. Wendy, Ext. 3924.  
MAD MAGAZINES & BOOKS – Hundreds of MMags 1960-1980 incl rare bks from 50's, other mad collectibles,. Jesse, Ext. 2122.

### Happenings

BREATHTAKING DANCES – Shen Yun Arts Show, Lincoln Cntr, 6/23-26, Brilliant, Inspiring, Glorious. shenyunperformingarts.org George, Ext. 4033.  
CRUISE – 7 Day Caribbean Carnival Cruise, Apr 15, 2012: St Thomas, Barbados, St Lucia, St Kitts, St Maarten w/1-fun day at sea. \$846.72 dbl occup balc. Kim, Ext. 2896, 399-3098 or khayes@bnl.gov.

### Wanted

CHILD CAR SEAT – urgently needed for 4-5 yr old boy, will pay. xzuebin@bnl.gov.  
COMIC BOOKS WANTED – paying cash for comics pre 1975 & select modage age comics, Jesse, Ext. 2122, jmontalto@bnl.gov.

### Lost

BICYCLE – Black Mongoose Pro w/helmet. It was inside the Chemistry Bldg (555). If someone is using it now, please return it. Do Hyun, 344-4393 or dohkim@bnl.gov.

### For Rent or Sale

WEEKI WACHEE, FL – priv Ranch on Gulf, 70m Orlando, 45m Tampa, nr beach, tennis, park, fly Islip direct igp in lanai, fruit trees, SW architecture, 3bdm, 2ba, d/r, f/p, 2gar, see review.oktane.net/HouseTour/. \$450/wk. or \$129,000 neg. 344-5537.

### For Rent

CENTEREACH – looking for female roommate to share 3 bdrm apt at Centereach, apt is shared w/2 StonyBrook students,. \$1,725/mo. Yixiong, yixyang@bnl.gov.  
EASTPORT – lg 3 bdrm, 2 bath hse, l/r, family rm, 2 car gar, deck, nice yd, excel n'borhd, looking for a longterm tenant. \$1,800/mo. Ext. 7116, 325-0928, rayc@bnl.gov.  
FARMINGVILLE – furn rm in lg hse, share bath, l/r, d/r, kitch larger upstairs rm/\$575, incl, elec/ cable/ phone/ wifi. \$500/mo. Ben, 513-8275 or benonium@gmail.com.  
MANORVILLE – Winter Rental, (Oct-May, 7-mos max)in Silver Pond, off exit 69/LIE, 2 bdrm, 2 bath, l/r-d/r comb, eik, util not incl, no smkg/pets. \$1,200/mo. 878-8442.  
MASTIC – new 1 bdrm apt, full bath, fully equip new eik, new carpeting/paint, priv ent, 8 min to BNL, walk to shop, utils incl, no smkg/pets, 1/mo sec. \$900/mo neg. 335-4907.  
MEDFORD – Call re Hse Swap: 4-bdrm hse, 15 mins to BNL, for 3-4 bdrms hse in Nassau Cty, yearly lease, Nr lirr (eg. Hicksville, Westbury), \$2,500/mo neg. Nina, Ext. 5894.  
MIDDLE ISLAND – lg rm, 10 mins to Lab, basic cable & wireless int incl, full priv b/r, shared kitch, can transport to and from the lab. \$650/mo neg. William, 484-9888.  
MIDDLE ISLAND – lg rm w/int, shared kitch, lake view w/balcony, a/c & more, no smkg/pet, 12 mins to Lab, avail now, \$650/mo neg. 540-204-0035 or szhao@bnl.gov.  
MIDDLE ISLAND – new 1 bdrm apt, l/r, eik; sep 2nd flr w/sep ent, util incl, priv prkg, nr WMart/King K., max 2 pple, 8 mins to BNL, avail July 20. \$850/mo. Ext. 2271, 219-2846.  
RIDGE – share fully furn sm bdrm w/land-lord, rm w/A/C, cable, HDTV, wireless, no pets, move in w/sec, incs all util, avail now. \$650/mo. Kurt, 516-319-9548.  
SHIRLEY – lr 1 b/r bsmt apt, suitable for one, close to beaches/parks/freeways/lirr/lab, all incl, 1/mo rent + 2/mo sec. \$750/mo. Ext. 3846.

## BNL Amateur Radio Club Field Day, 6/25-26

The BERA Amateur Radio Club will host its annual Field Day Exercise on June 25-26 at the BNL Gazebo, for 24 hours, from 2 p.m. on Saturday 25 until 2 p.m. Sunday 26.

In times of disaster or emergency, sometimes the only means of communication is through wireless radio. Each year, Amateur Radio clubs worldwide attempt to make contact with as many other stations as possible under rugged field conditions (battery and generator operation, Morse code, and minimal power radios).

All are welcome to visit the gazebo area to view the club's emergency operation configuration. Refreshments will be available. This is a fun event, geared toward educating those who would like to know more about this intriguing hobby. See also [www.bnl.gov/bera/activities/arc/](http://www.bnl.gov/bera/activities/arc/).

## Register Your Child, Grandchild for BNL's Three-Day Summer Science Program

BNL employees may register their children for the 2011 Summer Science Explorations Program, which is a free offering from the Science Learning Center (SLC). The three-day summer camp will be held Tuesday through Thursday, 8:30-11:30 a.m., for students entering grades 4 through 6. During the first two days of camp, students will investigate energy transfer through hands-on activities. On the third day, camp culminates at Weaver Pond for a day of environmental exploration.

This educational program centers on research conducted at the Lab. In addition to SLC science educators, the children are mentored by pre-service teacher interns. The weeks of July 12-14 and August 16-18 have been reserved for the children of the BNL community. Space is limited, so register your child/grandchild early by contacting the Science Learning Center office (Ext. 4495). Students must attend all three days and the parents of participating children are welcome to attend.

SHOREHAM – share hse w/professional, lg, furn b/r, cable, int, no smkg/pets, 8 mi to BNL, avail now. \$675/mo. 578-0108 or gg19582003@gmail.com.

### For Sale

AMITYVILLE VILLAGE – Waterfront, deep water canal, 3 bdrm, 2 bath, 6/rm ranch, 50'x100' lot, oil heat. \$375,000. 472-9034.  
E. PATCHOGUE – S. Country Shores, 3 bdrm, 4 ba, 2 f/p, forml d/r, eik, fin. bsmt, 216' of bulkhead on Mud Creek, 5 boats, ig/ sprk, lg deck. \$659,000 neg. 516-819-5200.  
RONKONKOMA – 5 bdrm, 3.5 ba, ig/ spkrls, new fence, forml l/r & d/r, eik w/stnless steel appli, cherry hrdwd flrs, cust drs, new master ba. \$399,900 neg. Ext. 3008.  
S. SETAUKET – Pristine 3 bdrm, 1 ba ranch, 3Village SD, CAC, new kitch, ba, w/d, windows, siding, drway & roof, patio, priv yd, igs. \$318,505 neg. awund@bnl.gov.  
SHOREHAM – 3 bdrm, 1 1/2 ba Colonial on cul de sac. Updatd kit, stnless applis, new w/d, updt'd ba, fam. rm w/fpl, deck, shed. 10 min. to Lab. SWR SD. \$369,000. 278-9798.

### In Appreciation

Thank you to all my friends and coworkers for all your kind words and generosity when my mom passed away.

— Robert Lapine

### On-site Service Station to Take Vacation All Week of July 4

The on-site service station will be closed Monday, July 4, through Friday, July 8, re-opening on Monday, July 11. To make an appointment to service your vehicle, from oil changes to New York State inspections to diagnosis and repairs, call Ext. 4034.



Roger Stoutenburgh 02030511

## Sounding an Alarm for Northeastern Bats

Lab Photographer Roger Stoutenburgh recorded this daytime sighting of a bat — bats being the only group of mammals that can truly fly.

Said BNL Cultural and Natural Resources Manager, Tim Green of the Environmental Protection Division, "Great photo. At this time, bats are having a very difficult time in the Northeast and most of eastern North America due to a fungal infection, white-nose syndrome. It has caused the decline of most bat populations at the rate of between 60 to 90 percent depending on the species. Two of our interns are conducting acoustical surveys for bats along four 20-plus mile routes through central Suffolk County in cooperation with the New York State Department of Environmental Conservation (NYSDEC). We are trying to assess what bats are present and which ones are more abundant. We will also conduct some limited static surveys around the BNL site to see what we have here. We were both fortunate and unfortunate to document the first state record of a Long-eared bat on Long Island and the first documented Long Island case of white-nose syndrome earlier this spring. We hope to add significantly to the NYSDEC's knowledge of bats in New York. However, the outlook for bats is currently not good. We hope that outlook changes." — Liz Seubert

## Preventing Heat Exhaustion

Anyone working outside at BNL this summer needs to be aware of a serious health concern: heat-related illness.

"BNL has a program devoted to monitoring for heat and cold stress," said Bob Selvey, Industrial Hygiene Program Manager. "Every day, employees who work outside need to take the weather conditions into account as part of their work planning. As we get to the hot days of summer, we need to be wary of heat stress."

To help keep employees informed of adverse high temperature conditions, BNL tracks the Heat Stress Index at: <http://www.bnl.gov/esh/shsd/ih/exec/heat.asp>. Part of the Heat Stress Alert System is a program that sends out email notifications advising workers of real-time data on the safe level of exertion for the current weather condition. Information on being registered in this program is found at: [www.bnl.gov/esh/shsd/Programs/Program\\_Area\\_Heat\\_Stress\\_join.asp](http://www.bnl.gov/esh/shsd/Programs/Program_Area_Heat_Stress_join.asp).

"Supervisors need to provide accurate instructions, make sure everyone is properly trained, and be sure everyone working outside knows how to spot the signs of heat stress and strain in a coworker," Selvey explained. "We've prepared a section on the BNL website for workers and supervisors to learn all about heat stress and we have a web-based training class: Heat Stress Prevention (TQ-HEATSTRESS). But since it's hard to check a website while you're working outdoors, it's important to review this information now, before the work on a hot day begins."

Here are some tips from the heat stress section of the site:

- During hot weather, drink approximately one cup of reasonably cool (50-60F) water or sports drink every 20 minutes.
- Follow the work-rest limitation that prevents excessive heat gains by workers in hazardous conditions.
- Encourage coworker observation to detect signs and symptoms of heat strain in others.

Selvey also noted that the Occupational Safety & Health Administration (OSHA) has a campaign to help workers better understand the dangers of heat stress and how to avoid heat injury.

"The OSHA campaign is right on target with its heat stress prevention message: water, rest, and shade," Selvey said. "Supervisors can print out a poster ([www.osha.gov/SLTC/heatillness/3431\\_wksiteposter\\_en.pdf](http://www.osha.gov/SLTC/heatillness/3431_wksiteposter_en.pdf)) that explains the warning signs of heat-related illness and the quick action you need to take to help someone who becomes ill."

Selvey also recommended that supervisors and workers use the BNL Heat Stress Assessment Flow Chart ([www.bnl.gov/esh/shsd/PDF/heatadd\\_flow.pdf](http://www.bnl.gov/esh/shsd/PDF/heatadd_flow.pdf)) to better understand the steps they need to take when planning a job.

"Also, just because you're working indoors doesn't mean you're immune from heat-related illness," Selvey said. "Some buildings, rooms, and tight spaces around the Lab can become very hot on spring and summer days."

He also noted that mentors should remind summer students at the Lab to take precautions when they engage in outdoor activity.

"They need to be aware of more than just the ticks or wildlife,"

Selvey said. "They need to be aware of the heat."

Any employee with questions can email Selvey, [selvey@bnl.gov](mailto:selvey@bnl.gov).

## At the BERA Store in Berkner, Join a Trip

**Sat. July 16.** NYC "Do as You Please" trip. Bus dropoff near Statue of Liberty vicinity. Leave BNL 7:30 a.m., leave NYC 5 p.m. \$20/person.  
**Sat., July 23. Walking Tour of Greenwich Village,** NYC. Leave BNL 8 a.m., leave NYC 5 p.m. \$25/person includes bus, 2-hour walk, tips. Have lunch, shop, sightsee on your own after the tour.