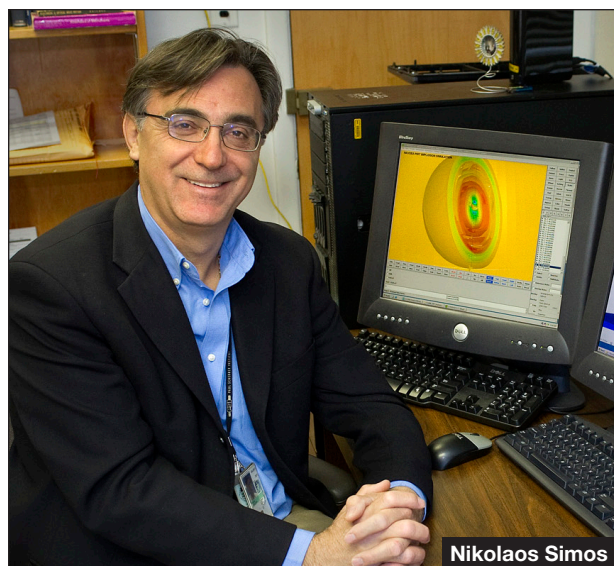


Dennis Danseglio



Chien-Ih Pai

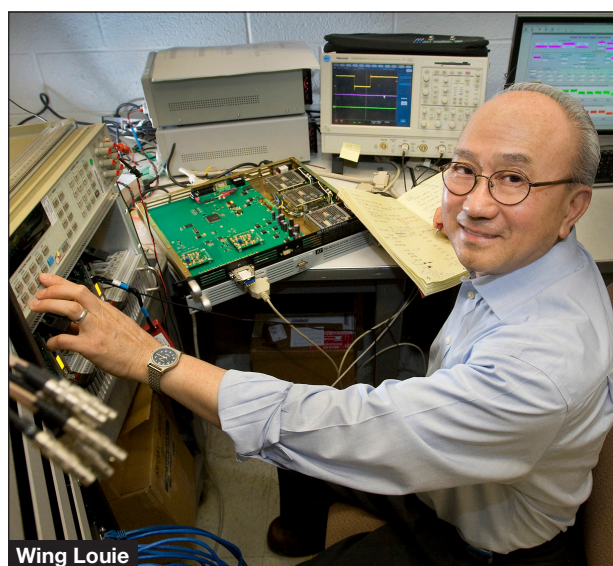
THE 2011 ENGINEERING AWARD WINNERS



Nikolaos Simos



Thomas Joos



Wing Louie

BNL's Engineering Awards for 2011 were presented by Lab Deputy Director for Operations Mike Bebon to the five winners — Dennis Danseglio, Modernization Project Office; Thomas Joos, Photon Sci-

ences Directorate; Wing Louie, Photon Sciences Directorate; Chien-Ih Pai, Collider Accelerator Department; and Nikolaos Simos, Photon Sciences Directorate and Energy Sciences & Technology Department — at

the annual Employee Recognition Award Ceremony held in Berkner Hall on Friday, June 17. The awards, consisting of a plaque and \$10,000 each, are given to recognize distinguished contributions to the

Laboratory's mission in each of three broad areas of work, and are the highest accolades given by Brookhaven to its employees. The 16 awards were first announced in The Bulletin of June 24; the six Science & Tech-

nology Award winners and five Brookhaven Award winners were featured in the Bulletins of July 22 and 29, respectively. The contributions of the five Engineering Award winners follow below, left.

Dennis Danseglio, Modernization Project Office

During his 18-year tenure at BNL, Dennis Danseglio, a lead electrical engineer and project manager in the Modernization Project Office, has worked on projects totaling more than \$300 million in construction costs, completing each project on time and within budget.

Among his many outstanding achievements was his management of the 11,100-square-foot Computer Data Center expansion. The project involved expanding the east side of Bldg. 515 to house computers and storage systems See *Dennis Danseglio* on p. 2

Thomas Joos, Photon Sciences Directorate

Thomas Joos, Lead Civil/Structural Engineer for the National Synchrotron Light Source II (NSLS-II) Project, is recognized for his exceptional engineering abilities in solving unique, complicated structural challenges at Brookhaven Lab — often under intense regulatory scrutiny and difficult time restraints.

As the lead structural engineer for the construction of BNL's Center for Functional Nanomaterials (CFN) and future NSLS-II, Joos has solved challenges far See *Thomas Joos* on p. 2

Wing Louie, Photon Sciences Directorate

Wing Louie, a senior project engineer in Photon Sciences, was recognized for his outstanding contributions in developing hardware designs that have played a vital role in ensuring the smooth functioning of the Relativistic Heavy Ion Collider (RHIC) and the National Synchrotron Light Source II (NSLS-II).

Louie designed the quench detection system for RHIC's approximately 1,700 superconducting magnets. The system can determine if a magnet loses current See *Wing Louie* on p. 3

Chien-Ih Pai, Collider Accelerator Department

Chien-Ih Pai, a senior research engineer in the Collider Accelerator Department (C-AD), was recognized for his many years of outstanding engineering contributions to the Alternating Gradient Synchrotron (AGS) and Relativistic Heavy Ion Collider (RHIC) operations as well as C-AD experimental programs. Pai has been the lead project engineer and an engineering design analyst on many high-level projects, and his expertise and dedication has ensured that even new and unique See *Chien-Ih Pai* on p. 2

Nikolaos Simos, Photon Sciences Directorate and Energy Sciences & Technology Department

Brookhaven scientist Nikolaos Simos is recognized for his outstanding engineering contributions in the study and design of future world-leading accelerators such as the National Synchrotron Light Source II (NSLS-II).

Simos' engineering acumen has provided an analytical basis for what in the past may have been left to conventional practices or rules of thumb. With the paramount See *Nikolaos Simos* on



Students in the 2011 NASA Space Radiation Summer School outside the space radiobiology lab at BNL

Getting the Lead Out: NASA Summer School Teaches Challenges of Space Radiobiology

The problem: there's a lot of radiation in space.

The other problem: lead spaceships don't fly.

In the future, if NASA plans a trip to Mars or builds a space station on the moon, the astronauts on these missions (or more specifically, the radiation-vulnerable cells of the astronauts) will benefit from research done at BNL's NASA Space Radiation Lab (NSRL). The astronauts of the future may also benefit from research conducted by past and present Brookhaven summer students during the annual NASA-BNL Space Radiation Summer School (NSRSS).

Every summer since 2004, about 15 graduate students, postdocs, and professionals in molecular biology, genetics, and physics gather at the Lab for three weeks to learn about the evolving problems and technologies in the field of space radiobiology. The students, who come

from all over the world, learn about the methods scientists use to assess how space radiation affects living cells, in hopes that what they learn at BNL will inspire them to pursue research objectives in space radiobiology and related fields.

According to NSRL physicist Adam Rusek, "While the common thread throughout the course is astronauts in space, many of our students are interested in topics like the relationship between radiation and cancer — including, for instance, how different kinds of radiation can both create and destroy cancer cells. So many of our students will go on to surface somewhere else, and use what they learned in this program for other research."

The NASA program is co-sponsored by BNL, Loma Linda University Medical Center, and the Universities Space Research Association (a nonprofit organi-

zation of over 100 institutions with graduate programs in space-related science and engineering).

Located in the Booster accelerator of the Relativistic Heavy Ion Collider (RHIC) at BNL, the NSRL is the only research facility in the country capable of producing beams of heavy ionizing particles that abound in space, so it's the only lab where NASA scientists can simulate the caustic environment of protracted space travel.

"Radiation above all is what limits the durations of missions in space," said Dudley Goodhead, emeritus director of the Medical Research Council Radiation and Genome Stability Unit in England, who was scientific co-director of this year's program with his wife Linda (the retired head of the Science Department at Headington School, Oxford).

Goodhead continued, "We know there are serious risks but we don't know how big they are,...

See *Radiobiology School* on p. 2

Three’s a Charm!

Physicist Lisa Whitehead collaborates on three experiments

Question: What do the Daya Bay Reactor Neutrino Experiment, MINOS (Main Injector Neutrino Oscillation Search), and LBNE (Long Baseline Neutrino Experiment) projects all have in common?

Answer: BNL scientist Lisa Whitehead.

According to Milind Diwan, a group leader in BNL’s Physics Department, all three of these experiments are “cutting edge” and are closely associated.

“Although there are some differences in design, data collection, and monitoring, all three experiments are studying a type of well-known but elusive particle — neutrinos,” said Diwan.

Whitehead has contributed to the development of Daya Bay, based in China, and conducted crucial studies of the potential physics performance of LBNE and been a key leader in analysis for MINOS, both based at Fermilab. “Lisa’s work has been shared with many of the scientists working on these projects around the world,” added Diwan.

Diwan said that when Whitehead first arrived at the Lab, her quiet demeanor kept him guessing. He wondered if she would actually deliver her work on time. “She never let me down. She not only delivered on time, but it was always high-quality work,” he said.

So, if you ask this quiet, hard-working scientist what she will remember most when she departs BNL in the near future to accept a faculty position at the University of Houston, she will tell you that her experience at Brookhaven has been very positive.

“I feel lucky to have had the opportunity to begin my career



Lisa Whitehead and Milind Diwan

by working with so many talented people,” said Whitehead. “I am especially grateful to Milind and our entire team for the time and effort they spent mentoring me. I am also appreciative of the staff members of the Lab’s Diversity Office for their support and for being the first to welcome me to the Laboratory.”

Whitehead, who originally hails from Tennessee, received her Ph.D. in physics from Stony Brook University (SBU) in 2007. That same year, she joined BNL.

Chang Kee Jung, Whitehead’s Ph.D. advisor at SBU, recommended that Diwan consider hiring Whitehead. “I must remember to thank Professor Jung for that great idea,” said Diwan. “Lisa has been an asset to our team and a pleasure to work with. We wish her a happy future.”

Whitehead says that although she is leaving BNL to embark on a new career, she looks forward to continued collaboration on the Daya Bay experiment and other BNL-associated projects.

— Jane Koropsak

Radiobiology School from p. 1

...because radiation like the kind you get from a nuclear weapon is very different from the radiation you receive over a long time in space. So the focus of the NSRL and the summer program is to figure out where the risks lie and how they might be diverted — especially with pharmaceuticals, since shielding can only go so far in protecting the body from galactic cosmic rays (heavy ions with high energy) and solar rays.”

Guest professors at the NASA summer school included leading scientists in the field, professors, and even former astronauts.

“This year, Mike Barratt came in to give a talk on what it was like to live aboard the International Space Station for over a hundred days,” said Goodhead. “Since Barratt is also a medical doctor, he could explain in detail some of the biological effects astronauts past and present experience during and after missions.”

Joshua Brown-Clay, a grad student from Georgetown University, said, “There are no other programs like this for space radiation biology, and it’s very intense. We have seven hours of workshops and lectures a day — all of which require a lot of energy and thought — then we go home and finish the work from that day and study for the next.”

Students also conducted a series of small experiments at the NSRL and wrote a mock research proposal at the end of the course to help them learn about how creative, interesting research is accepted and conducted in the space radiobiology field. Many students go on to develop the exercise into real grant proposals.

“I got three great research ideas just in the last week of the program,” said Ashley Purgason, a student working at the Johnson Space Center in Houston. “And most of those ideas arose from seeing how all the material in the course flows together week after week. Even at NASA, you can’t get the kind of exposure you get here, after hearing all those talks from experts around the world, doing activities, and sharing ideas with other student-colleagues from different fields and academic backgrounds.”

“Several of our ex-students are now getting grants from NASA,” said Francis Cucinotta, an instructor in the summer program and chief scientist at the NASA Space Radiation Program in Houston. “It’s a unique opportunity to get to learn in a multidisciplinary environment like this, and the program is getting more competitive by the year.”

For more information, go to : <http://spaceradiation.usra.edu>.

— Emily Ruppel

In Memoriam: Michael Marx

Michael Marx, long-time BNL and Stony Brook University (SBU) physicist and SBU’s Associate Vice President for Brookhaven National Laboratory Affairs, died on August 2.

Since 2008, when he assumed the role of liaison between SBU and BNL, Marx put numerous programs in place to strengthen the relationship between the two institutions. His achievements included arranging for BNL staff to receive the same benefits as Stony Brook staff when using SBU facilities; enhancing communications between the Lab and SBU, resulting in more visibility for both; and, most recently, working on a joint BNL-SBU Center for Accelerator Science and Education and several other strategic initiatives still in development.

BNL Director Sam Aronson commented on Marx, “His dedication to the SBU/BNL partnership knew no bounds, and he brought a wellspring of ideas to the discussion. He was a valued friend to the Lab community and will be missed.”

“He had a love for science, which was evident when I worked with him at Brookhaven,” said Deputy Chair of BNL’s Physics Department Howard Gordon. “He was particularly dedicated as an ambassador for both the Laboratory and Stony Brook University, forging new connections between the two institutions.”

Another colleague at BNL, Associate Chair for High Energy Physics Laurence Littenberg, said, “Mike was a most valued friend and collaborator. He had a rare combination of insight, imaginativeness, and



Roger Stouvenburgh

resourcefulness, and was a pleasure to work with. His loss leaves a big hole personally and professionally.”

After earning a B.S. in physics from City College of New York in 1967 and a Ph.D. in physics from the Massachusetts Institute of Technology in 1974 while performing his thesis research at BNL, Marx joined the BNL staff as an assistant physicist in 1975. He worked on numerous physics experiments, including kaon-decay experiments and neutrino studies.

He joined the SBU faculty in 1980, but he continued to collaborate closely with scientists at BNL and other physics institutions on numerous projects. He was deputy spokesperson and co-initiator of the groundbreaking DZero experiment at Fermi National Accelerator Laboratory that was successful in finding the top quark and achieving other significant physics results. He also developed an experimental program for the Superconducting Super Collider Laboratory before the funding for the project was cancelled in 1993.

In 1994, Marx became SBU’s

Chien-Ih Pai from p. 1

...components work the first time and continue to work reliably.

Pai joined the AGS Mechanical Engineering team in 1988 to work on the g-2 experiment, which required extreme stability in the magnetic field of a huge superconducting storage ring magnet — still the world’s largest. He met the extraordinary challenges of that project and provided outstanding engineering and design support for BNL’s role in the Spallation Neutron Source at Oak Ridge National Laboratory and the ATLAS detector at CERN, Switzerland.

Other highlights include his designing the high speed magnets for dumping the beam out

Dennis Danseglio from p. 1

...needed to analyze data from detectors at the Relativistic Heavy Ion Collider (RHIC) and other major experiments around the world.

Danseglio also engineered and managed the installation of the ventilation system in the RHIC tunnel and the 13.8-kilovolt electrical overhead distribution line around the RHIC ring.

To improve the safety of the Lab’s electrical systems, Danseglio engineered and installed site-wide ground monitoring systems throughout the BNL complex in an effort to detect dangerous voltage buildup. He standardized fabrication and installation methods, saving the \$1.3 million project \$650,000.

Currently, Danseglio is working on a \$22 million site-wide

of RHIC and the high-voltage pulse-forming networks controlling the beam pulses vital for RHIC experiments. He was responsible for the design of the tuner assembly and the tooling for the assembly of the first superconducting radio frequency (RF) cavity to be built at BNL with support from an outside contractor. He is now the lead engineer responsible for the engineering and design of the first RF cavity to be solely designed by BNL.

Pai’s engineering achievements and analysis excellence, combined with his consistent support for safe operations have greatly contributed to the reliable and safe operation of many of BNL’s critical systems.

— Liz Seubert

telephone system installation project to meet the future demands of BNL’s infrastructure expansion and Blueprint initiative. In addition, he will be managing the design and construction of the \$70 million, 90,000-square-foot Interdisciplinary Science Building (ISB) – Phase II, located just west of ISB-I, pending DOE approval.

A New York State-licensed professional engineer and project management professional, Danseglio earned a B.E. in electrical engineering from Maritime College in 1985, and worked in engineering positions for the Long Island Lighting Company and the ABB Group in Melville, NY, before joining BNL in 1993 as a project engineer. He rose to his current position in 2007.

— Diane Greenberg

Associate Dean, Physical Sciences & Mathematics, and, from 1996 to 2000, he was also the Deputy Project Director of the PHENIX Experiment during the construction phase of the Lab’s Relativistic Heavy Ion Collider. From 2001 to 2005, Marx was project manager of the KOPIO Experiment at BNL, part of the Rare Symmetry Violating Processes Project (RSVP). Although RSVP was cancelled in 2005, a continuing legacy is the MARIA-CHI (Mixed Apparatus for Radar Investigation of Cosmic Rays of High Ionization) Teaching Center at SBU, which Marx developed with BNL’s Helio Takai. The center unites physics teachers, students, and scientists to explore cosmic ray physics using advanced computing tools.

From 2006 to 2008, Marx was SBU’s Associate Dean for Operations & Budget, College of Arts & Sciences, before taking on the full-time position as the liaison between BNL and SBU. Marx was a Fellow of the American Physical Society.

Marx’s survivors include his wife, Lynn Liebert Marx; children Vincent, Teresa, Clara, Rachel, Miriam, and Richard; and his sister, Susan Tabin.

A memorial scholarship has been established in Michael Marx’s name. It will help to support Stony Brook physics graduate students who elect to conduct their research at BNL. Donations can be made payable to the Stony Brook Foundation and mailed to: Michael Marx Memorial Fund c/o Brian Woods, 488 Administration Building, Stony Brook University, Stony Brook, NY 11790.

— Diane Greenberg

Thomas Joos from p. 1

...beyond those normally encountered by a professional engineer. Structural performance is integral for such facilities where scientists work at the nanoscale — measured in billionths of a meter. To protect research in these facilities from vibrations caused by nearby traffic and shifting as grounds freeze and thaw, Joos coordinated structural designs using innovative vibration isolation techniques and vibration-damping concrete. Engineers installing instruments at the CFN noted that the structure was the most stable environment they ever saw.

Recognized for his technical knowhow, thorough analytical skills, and the rigor required to assure the safety and viability of projects, Joos has not only been involved in the Laboratory’s large facilities that are built from the ground up. He also developed modifications for existing buildings on site to support new research facilities, including a former gymnasium that now houses an electron microscopy laboratory and another building with a powerful magnetic resonance imaging facility.

Joos earned a bachelor of science in civil and environmental engineering at Cornell University. He worked for the Long Island Lighting Company’s Engineering & Design Division (Nuclear) and the Town of North Hempstead’s Department of Public Works before joining BNL in 1989.

— Joe Gettler

Wing Louie from p. 1
...and shifts from superconducting to “normal.” This transition leads to dysfunction that can harm the magnet. Louie’s system shuts down the power supplies to protect the magnets from damage.

Louie also designed the RHIC timing resolver system, which pinpoints the failure of the power supply hardware that is spread out along the 2.5-mile collider tunnel and in-service buildings. The system allows operators to determine the cause of a malfunction quickly and precisely to minimize RHIC’s downtime.

The NSLS-II superconducting magnets require very precise and stable currents to operate correctly, and Louie designed a power supply control system that meets all of the challenging requirements for the synchrotron. He also added remote diagnostic and tracking features that monitor the power supply performance. Currently, Louie is preparing for the system’s integration at the NSLS-II.

Wing received bachelor’s and master’s degrees in electrical engineering from the City College of New York in 1976 and 1979, respectively. Before joining BNL in 1992 as a project engineer, Louie worked on various engineering projects at several Long Island companies, including Unisys, Periphonics Corporation (now part of Nortel) and Northrop Grumman.

— Diane Greenberg

Nikolaos Simos from p. 1

...goal of analyzing materials as small as one nanometer — a billionth of a meter — at NSLS-II, Simos used his exceptional creativity to lead a multi-year effort combining extensive field studies and measurements with sophisticated analytical models to guide design of the future facility and protect its storage ring and experimental floor from ground vibrations, winds, and temperatures fluctuations. These analyses are considered state-of-the-art by numerous external review committees and he has been asked to provide advice for other next-generation light source facilities at Cornell University and in Australia, Brazil, Japan, and Korea.

Simos’ other research includes investigating how materials are weakened by radiation in high-power accelerators, next-generation fission and fusion reactors, shocks from high velocity impacts and implosions, and proton beam experiments. He also works to assess the vulnerabilities of nuclear facilities and other critical infrastructure relating to extreme events such as earthquakes. Simos is currently leading experiments for the Long Baseline Neutrino Experiment at Fermilab and the Large Hadron Collider at CERN, and he is an advisor for projects including the Facility for Rare Isotopes (FRIB) at Michigan State University, the High Radiation of Materials (HiRadMat) facility at CERN, and the future X-ray Free Electron Laser (XFEL) in Korea.

Simos earned a Ph.D. in mechanical engineering and he completed post-doctoral research in earthquake engineering before arriving at BNL in 1989.

— Joe Gettler



Lab Director Sam Aronson (right) joins the Competitiveness Improvement Process leaders Deputy Lab Director for Operations Mike Bebon (middle, second from right) and Associate Lab Director for Basic Energy Sciences Jim Misewich (middle, third from right), and members of the pilot teams, who are: (back, from left) Grace Webster, Bonnie Miller, Kathleen Nasta, Susan White DePace, John Tranquada, Shirley Kendall, Susan Perino, Sabine Kessler, Anna Sweet, Stasia Ann Scocca, and Joanna Hall; (middle, from left) Shantilata Subudhi, Donna Jean Chiossone, John Hill, Marie Hobson, Peter Ferrara, Raymond Duffield, John Collins, and Tom Schlagel; (front, from left) Frank D’Agostino Jr., John Flannigan, Joe Labas, Michael Canavan, and Todd Corsa. Not pictured: Len Butera, Marion Heimerle, Brant Johnson, Kenneth Koebel, Ann Lamberti, and Yousef Makdisi.

From Blueprint Project to Permanent Lab Process: Competitiveness Improvement Process Is Well Under Way

The Blueprint aims to position the Lab to achieve its goals by improving how it does business and how it manages its support programs. Now nearly two years into this 10-year plan, Lab leadership looks to turn portions of Blueprint activity into permanent features of the Lab’s operational structure. Case in point: the Competitiveness Improvement Process (CIP).

As a part of the Blueprint, CIP had a strict deadline, milestone achievements, and a limited scope in three pilot projects. The goal, though, was not to tackle just three projects but to institutionalize CIP methods, which use the business-efficiency methods of Lean Six Sigma, a strategy for managing businesses, to analyze cross-functional business processes, identify waste, and define more effective procedures.

CIP Ongoing Effort

Now, CIP will be an ongoing effort at the Lab, housed in the Quality Management Office and administered by a team of Lean Six Sigma specialists, led by Stasia Ann Scocca and Joe Labas.

As Labas sees it, the Lab has an opportunity to make itself more attractive to investment and research opportunities by creating efficient and effective business processes. CIP Project teams are deployed to look at these repetitive processes. Each team takes on a cross-functional process at the Lab, something that touches and relies on many different directorates, business groups, and often both the science and operations sides of the Lab.

That’s a defining characteristic of a CIP Project — it focuses on a process that has a broad impact.

“Each of us engages in a continuous improvement effort in our jobs,” Labas said. “But institution-

alizing the process, looking at the Lab’s business processes in a holistic, cross-functional way doesn’t happen naturally.”

While any organization is constantly trying to improve, that effort often happens on a small scale, Labas explained. One business group may find an immediate improvement for what it does day to day, he said, but the organization overall may not benefit.

“In fact, what sometimes allows a small group to simplify its local process may cause the rest of the Lab to be less efficient and less effective,” he said. “That’s why, with CIP, we take a high-level look at how we do things.”

Team Success

CIP brings people together from across the Lab’s science, technology, operations, and support areas to form teams. It also ensures customers of the process are involved. Each team has one of the Lab’s leaders as a sponsor, someone such as Associate Laboratory Director for Basic Energy Sciences Jim Misewich, who provides institutional guidance and support.

In the pilot phase of the program, launched in late 2009, three teams were created to improve the Guest User process, the Immigration Services-Visa process, and the Routine (Small) Purchasing process.

Each team has been able to claim a good measure of success. The Guest User Team has shortened the lead time needed to approve visiting users from an average of 12 days, to seven. The Immigration Services Team implemented a standardized system for tracking visas that eliminates variability in the application and renewal process, resulting in a reduction in lead time for visa

applications by more than 50 percent. And the team that tackled Routine (Small) Purchasing found a way to avoid a half million dollars in costs.

“By institutionalizing the program, we’re able to sustain it,” said Roy Lebel, Quality Management Office Manager. “We’ve made continual improvement a permanent part of the business process here and we will develop a holistic view of how we do business.”

Look on SBMS (Standards-Based Management System) to see the program description for “Continual Improvement of Repetitive Business Processes.”

The entire program looks to Deputy Director for Operations Mike Bebon as well as Misewich for its leadership.

“This program got off to a good start because of support from the Lab’s leaders,” Lebel said. “We have a long way to go, but I’m encouraged by the program’s early results — and by the in-house talent we’re developing to sustain the effort.”

Senior management supported Lebel’s group in administering a Lean Six Sigma course on site during work hours. The program just graduated its first 10 Lean Six Sigma “Green Belts” who will be available to deploy to new projects.

Two of the three pilot projects, Immigration Services and Guests & Visitors, are continuing. And three new projects are under way, focusing on the Beneficial Occupancy Readiness Evaluation Process, the Hiring/On-boarding Process, and the Proposals Process.

— Will Safer

BLUEPRINT

Brookhaven National Laboratory’s plan for growth and development
<http://lintranet.bnl.gov/blueprint/>

Stticking It to the News

In the U.S., walking sticks, stick insects, or stick bugs, as they are variously called, are mainly found in the southeast. They are herbivorous, masters of camouflage (spot the one in the grass in this on-site photo below), and, when suitably located, show excellent taste in newspapers.



CALENDAR

— THIS WEEKEND —

Sunday, 8/14

***Summer Sunday: Atom Smashing**
10 a.m.-3 p.m. Visit the Relativistic Heavy Ion Collider. Stump a physicist, meet “Einstein Alive,” attend talk on Dark Energy. Free and open to the public. Visitors of 16 and older must carry a photo ID. See p.4.

— WEEK OF 8/15 —

Wednesday, 8/17

Info on Fairfield Inn-Medford
11:30 a.m.-2 p.m. Berkner Hall lobby. Learn about the many amenities, special rates, and business services for BNL guests offered by the Fairfield Inn-Medford. Representatives will be present to explain the hotel’s advantages.

— WEEK OF 8/21 —

Wednesday, 8/24

BSA Noon Recital
Noon. Berkner Hall. Vocalist and Broadway star Melissa Errico will sing. Sponsored by Brookhaven Science Associates, the concert is free and open to the public. Visitors of 16 and older must carry a photo ID.

— WEEK OF 8/29 —

Monday, 8/29

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.

BERA Trips

Get tickets at **BERA Store**, Berkner Hall, weekdays, 9 a.m.-3 p.m. See also www.bnl.gov/bera/.

Tue. 9/6. US Open, Flushing. Men’s Round/Women’s Quarterfinal, \$70. Dep. 8:30 a.m.

Sat. 9/10. Cabela’s, Hamburg, PA. \$20. Sports, outdoors shopping. Dep. 7 a.m.

Sat. 10/1. BIG E State Fair, W. Springfield, Mass. \$30 includes all but Midway carnival of rides and games, \$20. Early start.

Sun. 10/2/ NASCAR Sprint Cup. Dover, Delaware. 40 tickets, \$100/ea. Dep. 5 a.m.

Pool Open and Free, 8/29 – 9/2

Pack your swimsuit and a towel. The swimming pool (Bldg. 478) will be open for children and their parents to swim for free from 2 until 5 p.m. from August 29 to September 2. Parents must remain at the pool with their children.



Lee Michel of BNL and Major Jody Lupo of the New York National Guard's 24th Civil Support Team on training day at Brookhaven Lab

Radiological Assistance Program Drill "RAP" Up

With helicopters, soldiers, emergency vehicles, and a fictitious dirty bomb on site July 27, Brookhaven Lab looked more like the set for a new blockbuster action movie than a place where scientists are studying the origins of the universe and working on the nation's energy challenges.

That morning, the New York National Guard's 24th Civil Support Team (CST) for Weapons of Mass Destruction traveled by air and expressway from Fort Hamilton in Brooklyn to BNL for a training drill conducted by the Radiological Assistance Program (RAP) that also included members of the DOE-Brookhaven Site Office, the Nonproliferation & National Security Department, Police and Fire and Rescue groups, the Office of Emergency Management, and Suffolk County Police Department Emergency Services.

The scripted situation for the drill involved a simulated dirty bomb containing radioactive contaminants exploding in an area southeast of BNL's National Synchrotron Light Source II construction site. In the hours afterward, participants assessed the situation, characterized the radioactive materials from the "blast" and then responded using plume models and other tools.

"We hope that we won't ever have to actually use what we practice, but with that being said, this drill went extremely well and everyone involved got something out of it," said Lee Michel, training and outreach coordinator for Brookhaven's RAP team.

"The real strength in these drills is bringing together multiple agencies to rehearse how we would execute in a real situation," said Major Jody Lupo of CST. "Our unit wouldn't be anywhere near where it is today without the support we receive from the people at DOE and Brookhaven."

The Brookhaven RAP team, which is responsible for the region that stretches from Maryland and the western border of Pennsylvania all the way up to Maine, will work with CST teams from Connecticut and Pennsylvania in the coming months. — Joe Gettler

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/. To apply for a position, go to www.bnl.gov and select "Search Job List." For more information, call Ext. 2882.

Motor Vehicles & Supplies

08 LOAD TRAIL DUMP TRAILER – 1K mi. hlds 6 yds, w/wood sides, 10 yds, dual axel, ramps to dr bobcat into body. \$4,700 neg. 312-6796.

04 HONDA CIVIC – 82K mi. 2 door Coupe w/ spoiler. Fully loaded/ gd cond. Blue/beige interior. \$6,800. John, 516-661-6732.

04 CHEVY TRACKER – 59K mi. a/t, silver, 4wd p/w, p/l, a/c, CD/Satellite w/MP3 input r/rack excel cond. \$8,200. Ext. 7488.

02 CHEVY CAMARO – 37K mi. convertible, 35 Anniv Ed, Z28, V8, loaded, mint, blue w/ tan soft top, pic. \$10,800 neg. 275-0694.

00 MAZDA MIATA – 76K mi. Silver LS, Leather Bose etc. \$6,200 neg. Paul, Ext. 7178, 807-4933 or sampson@bnl.gov.

99 FORD ESCORT WAGON – 142K mi. orig owner, runs well. v/gd cond. \$3,000. Eli, Ext. 7179.

97 CHEVY CAMARO – 3.4 6 cyl, A/T, not running well, gd parts car, new w/shield, rad, batt, frnt clip just paintd wht. \$1,000 neg. 286-8523.

81 HONDA CB750 CUSOM – 19.8K mi. lks gd, runs well, w/shield, rr/rack, inclcs bike cover & manual, \$1,950 neg. 741-9169.

69 VW BEETLE – 0 mi. Many new parts & extras, e.g. 3 engines, 2 trannys. Will sell all or part out or trade. \$2,000. 816-3554.

F-150 BRUSH GUARD BRAND NEW – still wrapped. \$100. Jeffrey, 816-3554.

LAND ROVER DISCOVERY BRUSH GUARD – blk, decent cond. minor scrtchs, \$75/obo, u-pic-up, pics avail. tabowman@bnl.gov.

Furnishings & Appliances

BLONDE WOOD DESK – email for a picture. \$75. Eileen, 284-3956 or eptsmls@aol.com.

CHILDREN'S TWIN BED – metal frame, boxpring, mattress, oak headbrd, excel cond, \$125. 344-2637 or nolan@bnl.gov.

DINING ROOM SET – Briana buffet & table, w/pads, 4 chrs nat col w/blk backs. 42 x 78 x 32,18"leaf. \$500, motivated. 284-3956.

DRYER – General Electric Dryer, 4 years old. Call for details, \$100. 949-6753.

FUTON FRAME – blk metal frame, wood arms, decent cond, \$75/obo, u-pic-up, email for photos. tabowman@bnl.gov.

KITCHEN TABLE & CHAIRS – light Maple table w/leaf and 4 spindle back chairs, 60"x 36", excel cond, \$300. 678-3299.

PING-PONG TABLE – gd cond, \$20, u-pic-up. Ext. 5049 or fu@bnl.gov.

STEREO CABINET – Black heavy duty audio component cabinet w/glass dr, excel cond/\$100. 678-3299, dgbdou@gmail.com.

WINDOW AC – Amana, 6500 Btu, \$100. Steve, Ext. 7593.

Audio, Video & Computers

19" HDTV – Sharp, 720p LCD, used, like new, 16:9 ATSC/NTSC/QAM tuner, blk w/ bottom low profile spkrs, hdphone jack, HDMI input, \$175. jshah@bnl.gov.

PANASONIC CAMERA – Model DMC-FH20, 14 Mp HD 720 movies, Black body, like new w/box, cable, 2GB card, 28mm wide angle, 8X optical zoom, \$135/neg. 344-4290.

Sports, Hobbies & Pets

DIAMONDBACK HYBRID BICYCLE – Men's, '09, 20" frame sz, excel cond, comfortable, \$200/neg. Ext. 8031, hollowec@bnl.gov.

FISHING – Shimano Super Ultra lt FX2550 5.5'; 2 pc w/Daiwa Megaforce +Reel/ \$50 combo, Shimano-Quickfire Graphite C Spec 6.5' 2 pc w/Abugarcia cardinal #553 hi spd retrieve reel combo/\$50. 786-6363.

METS RAFFLE TICKETS – Warriors Baseball Fundraiser. Win 4 field level tickets w/access to Acela, Caesars and Promenade Clubs, \$2/ea or 6 for \$10, 2 chances to win per ticket. Maria, Ext. 4961.

Tools, House & Garden

E Z UP TENT CANOPY – 10x10 w/sides & roller bag, used 1 time, \$300. 603-2350.

Sunday, 8/14: Last of This Year's Summer Sundays

Featuring RHIC — BNL's Relativistic Heavy Ion Collider

At the Relativistic Heavy Ion Collider (RHIC), physicists study what the universe may have looked like in the first few moments after its creation.

On this Sunday, August 14, you'll be able to **walk into the tunnel** that houses RHIC's twin accelerators and see where ion beams travel near the speed of light. You'll visit **PHENIX** and **STAR**, two detector experiments **each bigger than a house**, and learn about the conditions that existed in the universe a microsecond after the **Big Bang**.

This year, you will also see **live cosmic-ray** event displays at **AnDy**, RHIC's newest experiment.

Get a Bus Ticket in Berkner Room B

To visit the RHIC facility, you need a bus ticket, which you get when you attend a RHIC overview in Berkner Room "B." Overviews are presented every 20 minutes; the last facility visit begins at 3 p.m.

In addition, you can enjoy the **"Einstein Alive" Show**, which is held in Berkner Hall auditorium at noon, 1:30 p.m., and 3 p.m.

All this **fascinating stuff** is **free!** No reservations are needed. All activities are offered on a first-come, first-served basis. **The Lab gates are open 10 a.m. to 3 p.m.**; visitors age 16 and over must bring a photo ID.

'Don't Miss This' Items Include: 'Stump the Physicist'

Do you have questions about basic energy, physics or RHIC? Ask a physicist in Berkner Hall Room "A," 11:45 a.m., 1:15 p.m., 2:45 p.m.

Science Talks, 11:30 a.m., 2 p.m.

Learn about the **"Cosmic Tug of War: How Dark Energy is Affecting the Evolution of the Universe."** This talk will be presented twice, at 11:30 a.m. and 2 p.m. in the auditorium of the Science Education Center near Berkner Hall. Zhaoming Ma, who is an astronomy phenomenologist in the BNL Physics Department's Astrophysics & Cosmology Group, will

LEAF BLOWER – Black & Decker Leaf Hog Elect leaf blower/vacuum/mulcher, lightly used \$40/neg. Lisa, lwhitehead@bnl.gov.

PATIO TABLESET – white, 84x42, glass top tbl, 6 sling chrs, wh.w/blue stripe, 1 chr w/ slight rip, gd cond, \$100, pics. jcitro@bnl.gov.

ROTTED WOOD REPAIR – 2 pints of Liquid Wood epoxy, stronger than orig <http://www.abatron.com> plus Qt cleaner \$40. Ext. 4925.

SEARS 10" RADIAL OVER ARM SAW – Extra blades, vac. attachmt, cabint w/drawers, ask \$150. Richard, Ext. 5684, 872-5074.

SLIDING GLASS PATIO DOORS – pair, 36Wx68H, wood trim interior, \$50/obo. Karl, Ext. 3116.

WEED TRIMMER – Black and Decker 18V cordless trimmer and edger, lightly used, \$50/neg. Lisa, lwhitehead@bnl.gov.

Miscellaneous

AUDI & VW SERVICE – Certified VW tech w/7 yrs dealer exper. All types repair, maint to eng diag, 484-9888, wfielitz@gmail.com.

BABY JUMPEROO – Fisher Price rainforest, excel, ask/\$30; ylou@bnl.gov.

DUNKIN DONUTS – 10 coupons for free medium hot coffee \$5. Heather, Ext. 4138.

MEDELA BREAST PUMP – double pump w/all accessories, \$160. 475-1297.

THULE 846 QUEST CARGO BAG – attaches to all vhicl r/racks, fits in own sack to store, Sears, never used, ask/\$60. 786-6363.

Wanted

BOXTOPS & CAMPBELL'S UPSCS – Please send to Bldg. 911A. Ext 5894.

INVERSION TABLE – to help w/chronic neck pain. glitter5187@hotmail.com.



Stony Brook University's Barbara Jacak at the PHENIX Detector



BNLer Paul Sorenson at the STAR Detector

explain **what "dark energy" means** and the new ways that are being developed to measure it. Ma is a member of an exciting new experiment that is searching for more evidence of dark energy: **the Dark Energy Survey**. The heart of the experiment is **a \$35-million digital camera, which will be mounted on a telescope in Chile** and, beginning this fall, will snap images of the sky every 17 seconds over the next five years.

Hop Aboard the Bio-Bus!

What is a carbon-neutral laboratory? Visit the one on wheels that will be parked outside the Science Education Center all day.

POOL LADDER – reqd for 18' rnd agp, pref w/safety feature, ladder can be placed upright after use, will pay fair price. 475-1297.

POTTERY WHEEL – seek elect, professional grade, workg cond pottery wheel Brent or Shimpo models pref. tabowman@bnl.gov.

ROCK CLIMBING PARTNER – for inor climbing & light trad. I have sev. yrs of outdr experience, wd like to return to climbing after a year off. Christina, cswinson@bnl.gov.

TWIN BED & SMALL A/C UNIT – clean, inexpensive, for new apt. 516-740-8418.

Happenings

SHEN YUN PRESENTATION – The Renaissance of Chinese Culture presentation, Tues, Aug 23, 7-9pm Sachem Public Lib, 150 Holbrook Rd, Holbrook, adult room, free, all are welcome. George, Ext. 4033.

For Rent

BRKHAVEN/BELLPORT – 3 bdrm 50's ranch, 1 br = shared office, hwd flrs, new b/r, furn heat areas, deck, bckyrd, cbl/ int, wtr, heat incl, not elect; 1 mo rent + sec. \$900/mo. coachperryjv2@aol.com.

CENTER MORICHES – wtrfront 4 bdrm, 2 full bath, eik, dock, f/p, yr round, utils not incl. \$2,000/mo. 261-7908.

MANORVILLE – lg studio in estate home, 3 acres, priv, quiet, 1st fl, bright, airy, kitchenette, full ba, pvt ent/prkg, 5 min to BNL, incl utils & DirecTv. \$850/mo. Rick, Ext. 3005, 874-9639 or rbuono@bnl.gov.

MASTIC – 3 bdrm house w/2 Fbath, formal l/r, d/r, f/p, fully equip new eik, new carpeting, quiet n'hood, 7 min to BNL, walkj to McDs, CVS, Kohl's, etc. no smkg/pets, 1/mo Sec. \$2,100/mo neg. 335-4907.

RIDGE – clean, spacious 4 rm apt, 4 mi to BNL gate, sep. outside ent, off st prkg, all util incl cable/int/heat/elec, Prof single person, no smkrs/pets, flexible lease, Aug 15. \$1,000/mo. Gary, 516-885-9113.

RIDGE – 1 BR apt, kitchenette, LR, min-utes to Lab. \$975. Lynne, Ext. 5165.

ROCKY POINT – 1 B/R upper unit, Rocky Pt co-ops, no smkg/pets, must meet board approval, \$1050/mo + utils (LIPA/Cable), heat incl. Pics avail. \$1,050/mo. 516-527-4902.

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, 3/bdrm 2/bath, d/r, f/p, 2gar, see review.oktane.net/House-Tour. \$400/wk. or \$129,000. 344-5537.

For Sale

CALVERTON – Move Right In, cape w/2bdrm, 2bath, kitch,d/r, lrg l/r w/ vaulted ceilings, quiet neighborhd w/views of Swan Lake and just mins away from all. \$299,000 neg. Debbie, 831-0152.

RIVERHEAD – 4 bdrm hse, 1.5 bath, 1/3 acre, igp, shed, full bsmt, nr everything. \$300,000 neg. Thomas, Ext. 8473, 284-3023.

SELDEN – CO-OP 1 bdrm, lg l/r, full kitch, d/r w/ hwdw flrs, full ba, lots storage, priv patio/entr, cac, 2nd flr unit, many extras, 10 min to BNL, diamond cond. \$105,000. 516-769-5370 or verriest@yahoo.com.

SHOREHAM – 3 bdrm, 1.5/ba Colonial on cul de sac, updated kit w/stainless appli, updated bath, den, f/p, lg deck, new wd shed, SWRSD, low taxes, 10 min to Lab. \$369,000 neg. Andrea, Ext. 3347, 744-8793.