

Technology Transfer Efforts Earn Three Awards From FLC

Cruising down the Potomac River on the *Spirit of Washington* last Tuesday, BNL'ers were on board to receive awards for their technology transfer efforts from the Federal Laboratory Consortium (FLC).

Chemist Suresh Srivastava and Research Engineer Dmitri Stephani each earned a 1988 Special Award for Excellence in Technology Transfer, and William Marcuse, the Lab's Consortium representative, was named FLC Representative of the Year.

This brings BNL's total of FLC Special Awards to five, since the Consortium established the award in 1985.

FLC was established in 1974 to facilitate the transfer of federally owned technology to state and local governments and to industry. The Consortium is a national network of technology transfer representatives from about 600 federal labs, having access to most unclassified federally sponsored research.

Srivastava, who is Head of the Radionuclide and Radiopharmaceutical Research Group, Medical Department, was cited "For unusual initiative in introducing the red blood cell kit to industrial sponsors and convincing them to commercialize it for use in millions of clinical examinations annually."

Srivastava's kit readily labels red blood cells with technetium-99m, which are then used in diagnostic

nuclear medicine for imaging vital organs. Over two million such diagnostic studies are performed annually worldwide. For developing this kit, Srivastava had won an I-R 100 award in 1986.

Knowing that his kit could be useful clinically, Srivastava searched for a pharmaceutical company to produce it. In 1986, his initiative resulted in an exclusive license for the kit being granted to Mallinckrodt. This company expects to market the product early in 1989, with the first year's market value to be \$3-5 million.

FLC cited Stephani, Instrumentation Division, "For creativity in inventing hybrid preamplifiers and uncommon initiative in promoting commercialization through assisting manufacturers to produce, advertise and market thousands of units annually."

Stephani's hybrid preamplifiers are used in nuclear radiation detectors. These five electronic devices increase the amplitude of very small electrical charge impulses produced from the interaction of nuclear radiation and matter, so that the signal can then be processed.

After winning I-R 100 awards for two of these devices in 1985 and 1986, Stephani received many requests worldwide and thus realized their commercial potential. He approached REL-LABS to market the devices and



Roger Stoutenburg

Federal Laboratory Consortium award winners: (from left) Suresh Srivastava, William Marcuse and Dmitri Stephani.

then assisted them in getting the product from the factory into the marketplace. At present, REL-LABS and Centalab are selling tens of thousands of these devices each year, with the market growing at a rate of around five percent per year.

FLC named Marcuse, Head of BNL's Office of Research & Technology Applications (ORTA), their Representative of the Year for his role in assisting with the initiative to transfer x-ray lithography and synchrotron radiation technology for the commercial manufacture of high speed computer chips.

After an initiative was begun at the National Synchrotron Light Source (NSLS), the NSLS, with ORTA's assistance, sponsored a series of X-Ray Lithography Source conferences open to the computer chip industry. As a result, NSLS machine physicists and computer chip manufacturers came up with the specifications for a compact synchrotron dedicated to x-ray

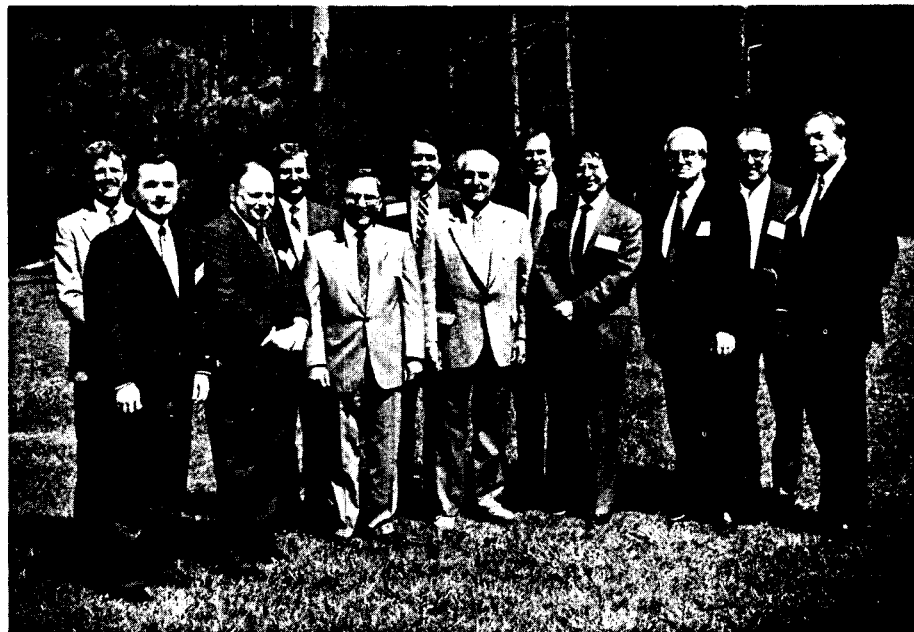
lithographic production of microchips, the technology for which will be transferred to industry.

This initiative spearheads a current national effort to ensure U.S. capabilities to produce advanced semiconductors for military and civilian purposes, and to bolster U.S. competitiveness in the computer chip market worldwide.

To Your Health

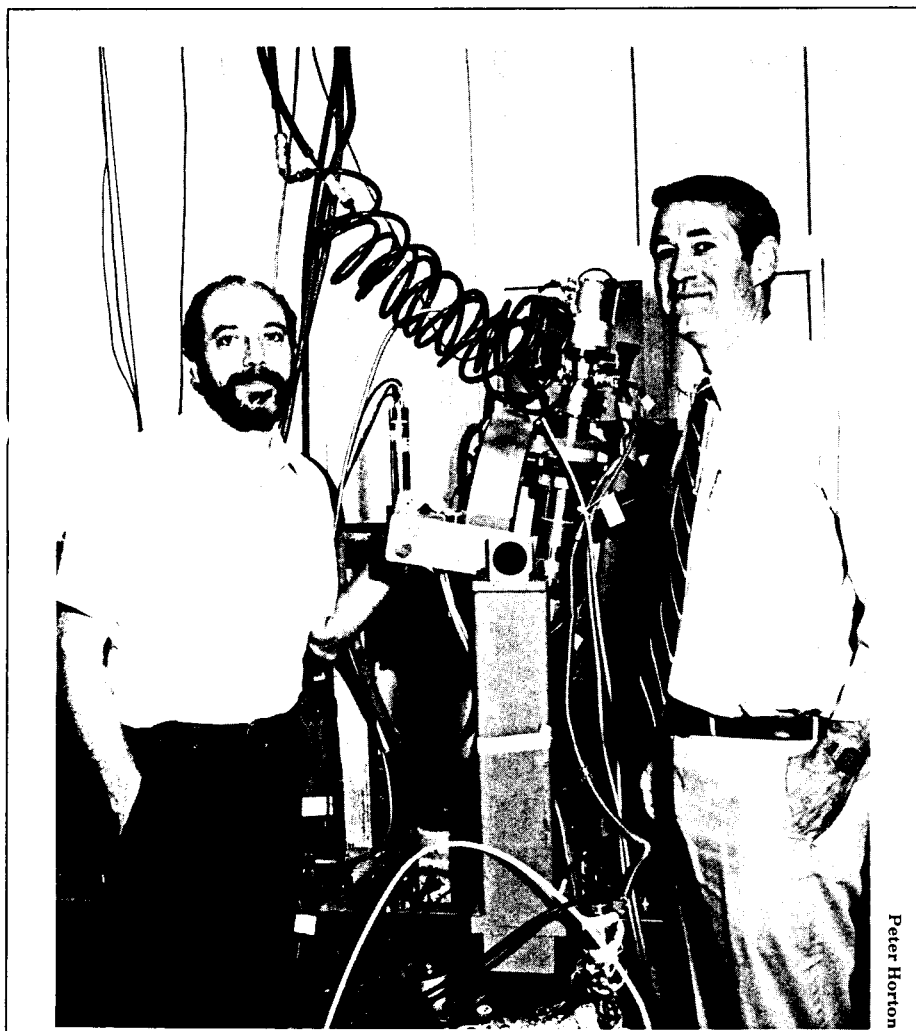
Lyme disease, its prevention and cure, will be the topic discussed today at noon in Berkner Hall. The speaker is Raymond Dattwyler, the physician who heads the Lyme Disease Clinic at the University Hospital, State University of New York at Stony Brook. The talk is sponsored by the Health Promotion Program of the Occupational Medicine Clinic, and all are invited to attend.

LIA Learns About the Lab



Peter Horton

The Long Island Association (LIA) is the region's largest business and civic group. In addition to chamber of commerce-type activities, LIA involves itself in issues such as the environment, energy and water quality, which affect the general Long Island community. To learn about the part of the Long Island community that is BNL, eleven LIA members visited the Lab in early May. After receiving an overview of Lab activities from BNL Director Nicholas Samios (fourth from right), the group took a tour that brought them to Bldg. 902, where superconducting magnet research and development is conducted; PETT VI; and the National Synchrotron Light Source.



Peter Horton

Robert Birgeneau, Paul Horn To Receive Warren Award

The American Crystallographic Association (ACA) will present its 1988 Warren Award to Guest Senior Physicist Robert Birgeneau (right), Massachusetts Institute of Technology (MIT), and Guest Scientist Paul Horn (left), International Business Machines (IBM), at the ACA's annual meeting in June.

Horn and Birgeneau are being cited for their work on a series of experiments on diffraction from two-dimensional systems, in which they used BNL's National Synchrotron Light Source (NSLS). Here, they are standing at the IBM/MIT beam line at the NSLS. They will start on a new series of experiments when the x-ray ring at the NSLS comes up this summer.

The ACA presents the Warren Award every three years. In 1973, the recipients were BNL Senior Physicists John Axe and Gen Shirane, Physics Department.

Reports Available

The following reports are now available to the Laboratory staff and to affiliates of the DOE, AUI and NRC. Others may purchase the reports from the National Technical Information Service, U.S. Dept. of Commerce, 5285 Port Royal Rd., Springfield, VA 22161. Staff members should call the designated contact at the extension listed.

NUREG/CR-4715
BNL-NUREG-52017

Contact: A. Fort, Ext. 2114

An Aging Assessment of Relays and Circuit Breakers and System Interactions. G.J. Toman et al.

BNL-52078

Contact: Ext. 2223

Solidification of Problem Wastes. Annual Progress Report, Oct. 1985 - Sept. 1986. E.M. Franz et al.

BNL-52080

Contact: S. Zuhoski, Ext. 3359

Advanced Condensing Heat Exchangers. Annual Report, Phase A. G.H. Strickford et al.

BNL-52085

Contact: G. Searles, Ext. 4464

Assumptions, Uncertainties, and Limitations in the Predictive Capabilities of Models for Sensitization in 304 Stainless Steels. D.G. Schweitzer et al.

NUREG/CR-4981
BNL-NUREG-52092

Contact: G. Searles, Ext. 4464

A Safety Assessment of the Use of Graphite in Nuclear Reactors Licensed by the U.S. NRC. D.G. Schweitzer et al.

NUREG/CR-4985

BNL-NUREG-52095

Contact: A. Fort, Ext. 2114

Indian Point 2 Reactor Coolant Pump Seal Evaluations. M. Subudhi et al.

ANS Meeting

Kenneth Rogers, Commissioner of the U.S. Nuclear Regulatory Commission, will be the speaker at the May dinner meeting of the Long Island Section of the American Nuclear Society (ANS), on Tuesday, May 24, at the Bavarian Inn, Lake Ronkonkoma. His topic will be "Nuclear Reactor Regulation: Looking Ahead."

Rogers will be introduced by Walter Kato, Chairman of BNL's Department of Nuclear Energy, at 8 p.m., following cocktails at 6 p.m. and a buffet dinner at 7 p.m.

For reservations at \$14.50 per person for L.I. Section members and spouses and \$16 for other attendees, call Amalia Ruggiero, Ext. 7517.

New Chief Problem Solver



Peter Horton

Problem solvers — that's what you could call the members of the Employee Relations Committee (ERC) each time they help a non-bargaining, non-scientific employee with a work-related problem that the employee could not resolve with the supervisor.

When the chairmanship of the ERC was recently vacated, Laboratory Director Nicholas Samios asked Michael Zguris to fill it. As chairman, Zguris is responsible for overseeing the ERC's commitment to hearing all sides of an issue and resolving all problems within 30 days. A committee member since 1986, Zguris can be reached at the ERC's special number, Ext. 4005.

A Wish Comes True — LILCO Pays the Bill

When you pay your electric bill, do you ever wish it were the other way around — that LILCO were paying you? That's what happened earlier this month to BNL, when LILCO sent the Lab a rebate check for \$10,000.

BNL earned the rebate by reducing the Lab's electrical energy expenditures for lighting, while maintaining safe and comfortable lighting levels. This was done as part of LILCO's "Dollars & Sense" energy rebate program for businesses, through BNL's Miscellaneous Lighting Modifications Project.

The project was conceived by the Energy Management Group of Plant Engineering (PE), funded under the Department of Energy's In-House Energy Management Program and is being designed and coordinated by PE's Electrical Engineering Group.

The lighting that was modified to earn this rebate includes the 11,089 fluorescent lamps in Buildings 510 and 515. By replacing standard 40-watt lamps with 34-watt lamps that produce about the same light output, the Lab reduced energy consumption 15%.

In addition, 4,703 of the standard electromagnetic ballasts that provide the proper voltage and current to start and operate the fluorescent lamps were replaced with electronic ballasts. The new ballasts use about 35% less energy, run more quietly and last longer.

At a savings of \$80,000 per year, plus the rebate, the \$207,555 cost of this work will be paid back in less than three years.

But this is not the whole project. The Lab expects to realize even more savings, and perhaps another rebate, when similar lamps and ballasts are installed in other buildings and ultrasonic motion sensors are installed in the tunnel for the proposed Relativistic Heavy Ion Collider. These devices automatically sense whether rooms are occupied and turn lights on or off accordingly. When this part of the project is completed next year, at a total cost of \$538,000, it will begin saving BNL \$190,000 a year, for another payback period of less than three years.

IBEW Meeting

Local 2230 will hold its regular monthly meeting on Monday, May 23, at 6 p.m., in the Knights of Columbus Hall, Railroad Avenue, Patchogue. On the agenda will be regular business, committee reports and the president's report.



Roger Stoutenburg

Alfred Mahlmann (second from right), Manager of Plant Engineering (PE) accepts the \$10,000 rebate check from Mark Culp of PE's Energy Management Group. Also on hand are John DiNicola (right), Supervisor of PE's Electrical Engineering Group, and Construction Inspector William Kerns, who holds a 34-watt fluorescent lamp and an electronic ballast like those replaced in Buildings 510 and 515 to earn this rebate.

Getting Computers to Respond in English

When you ask your computer a question, does it respond in English?

"Getting Computers to Respond in English," will be the topic addressed by Kathleen McKeown, Associate Professor of Computer Science at Columbia University, on Thursday, May 26, at 3:30 p.m., in the Applied Mathematics Seminar Room, Bldg. 515. The lecture is sponsored by Brookhaven Women in Science and the Applied Mathematics Department, and all are invited to attend.



A field in computer science, language generation aims to program computers so that they respond to their users' input in everyday language that makes sense.

Computers can produce language whether their users interact with them or not. Computers can generate answers to users' questions typed in everyday language, such as when

running a tutorial program. Or they can regularly produce descriptions of their stored information, such as by compiling an evening summary of stock market activity.

In both cases, a language generation system must decide what the computer is to say and how to say it — but its programmer must first have made such decisions. Many factors — such as who will be using the system — influence and constrain these decisions, so language generation researchers must first identify these factors and represent them computationally.

In her talk, McKeown will discuss the influences and constraints on language generation systems with regard to two different applications: an expert system that advises students about course selection and a question-answering system that describes physical objects.

Kathleen McKeown joined the Columbia University faculty as Assistant Professor in 1982; she was promoted to Associate Professor in 1987. In addition to directing the

In Memoriam

Julius Milau, who retired in May 1981 as a Project Engineer in the Department of Applied Science (DAS), died on May 11. He was 66 years old.

Milau had been at BNL for more than 25 years, having started in November 1955, as a Junior Technical Specialist in the Department of Nuclear Energy.

He was a resident of Port Jefferson. He is survived by his wife Dorothy and his two sons, Michael and Kenneth, all of Port Jefferson; and his mother Claire, of the Bronx.

Nursery School

The Upton Nursery School is now accepting enrollment of three- and four-year-old children for the 1988-89 school year. The school, a cooperative preschool held on site in the Recreation Building, is open to families of BNL employees and their relatives.

For more information, call Marypat Takacs, 727-3218, or Marietta Veligdan, 878-6098.

research of six Ph.D. graduate students, McKeown conducts her own research under a National Science Foundation Young Investigator Award, 1985-90.

She received her M.S. and Ph.D. in Computer and Information Science from the University of Pennsylvania in 1979 and 1982, respectively. While researching the generation of natural language text as her Ph.D. topic, McKeown was twice awarded an IBM Research Fellowship, and she received an award for an outstanding doctoral dissertation from the American Society of Information Science, 1983.

The daughter of Marilyn McKeown, Physics, Kathleen McKeown received an Associated Universities, Inc., scholarship, which she used for study at Brown University, where she was granted her A.B. in Comparative Literature in 1976.

Before the lecture, a luncheon will be held in honor of the speaker at noon, at the Brookhaven Center, at a cost of \$6.25 per person. All those interested in attending, please call the Cafeteria, Ext. 3541, to make your reservations.

Note to Diners

On Saturday, May 21, the Cafeteria will be closed due to the Science Fair. The snack bar service normally provided at the Cafeteria will be available from 9 a.m. to 2 p.m. at the Brookhaven Center.

Theater Group

The Theater Group will meet on Monday, May 23, at 8 p.m., in the North Room of the Brookhaven Center. The program will be a reading of *Angel Street*. All are cordially invited.

Softball

Games for week of May 9

- League I**
 Light Source 17 - Cutting Edge 6
 Blue Jays 10 - Ravens 5
 Bandits 19 - Sudden Impact 3
 Phoubars 7 - Cool 'n Gang 3
- League II**
 Dirty Sox 6 - Moles 4
 Titans 9 - Medical 8
 Phase Out 4 - AMD Bombers 2
- League III**
 Farm Team 15 - The Source 6
 Foul-Ups 13 - Kidz-R-U's 8
 Snakebites 18 - Survivors 7
- League IV**
 Spacekads 15 - Sandboxers 7
 Seventh Inning Stretch 7 -
 Mudville Sluggers 5
 Turkeys 24 - The Far Side 21
 Who Cares 23 - Underalls 22

Cooking Exchange

For the final meeting before the summer break, members of the Cooking Exchange will demonstrate desert specialties, on Wednesday, May 25, from 12:30 to 2:30 p.m., in the Recreation Building. If you have a sweet tooth, be sure to come and taste the delicious desserts.

Brookhaven employees and their families may attend the meeting and sample the different dishes after watching the demonstration. There is a \$2 fee per adult, which is used to help defray the cost of the ingredients. Babysitting is provided at 50¢ per child.

They Biked the Five Boroughs



Roger Stoutenburg

Can you imagine riding 36 miles through all five of New York City's boroughs, without any cars with which to compete? These BNL'ers could — and did, on Sunday, May 1, when they participated in the 12th annual Five Boro Bike Tour. Along with approximately 22,000 other cyclists, they left Battery Park in Lower Manhattan at about 8:30 a.m., pedaling over bridges and through the Bronx, Queens and Brooklyn, until they ended their ride in Staten Island at about 1 p.m.

Looking forward to next year are: (rear, from left) Don David, Carrie Grimshaw, Richard Garrett, John Dubendorff, Susan Pepper, Larry Fareria and Michele Rabatin; (front, from left) Menno Oversluizen, Chris Buckley, Alastair MacDowell and Nancy Lazarz. Not present for the picture were Richard Greene, Michael and Karen Knotek, and Jack Lazarz.

AACC Dinner Dance

The Afro-American Culture Club (AACC) will hold its annual Installation/Dwight C. Brown Memorial Scholarship Award Dinner Dance on Saturday, June 4, in the Brookhaven Center from 7:30 p.m. to 2 a.m.

The ticket price of \$25 includes a cocktail hour from 7:30 to 8:30, dinner and music by ET.

For ticket information, contact Mary Durham, Ext. 7143; April Donegain, Ext. 2459; Fran Ligon, Ext. 3709; Bruce Penn, Ext. 7213; or Deidre Seymore, Ext. 5037.

Social Club Trips

Both the rafting trip and the Cruise to Nowhere have been cancelled, due to lack of interest.

The Mystery Trip on September 3 is filling up, but reservations are still available. The three-day trip costs \$219 per person, two to a room, or \$215 per person, three to a room.

The Las Vegas/Honolulu/San Francisco tour beginning October 18 has 12 people with confirmed reservations, so if you were hesitating to sign up because there might not be enough other people, don't wait. Reservations for this 12-day trip are available at \$1,425 per person, two to a room, or \$1,396 per person, three to a room.

For more information, call Doris Terry, Ext. 2228.

Bowling

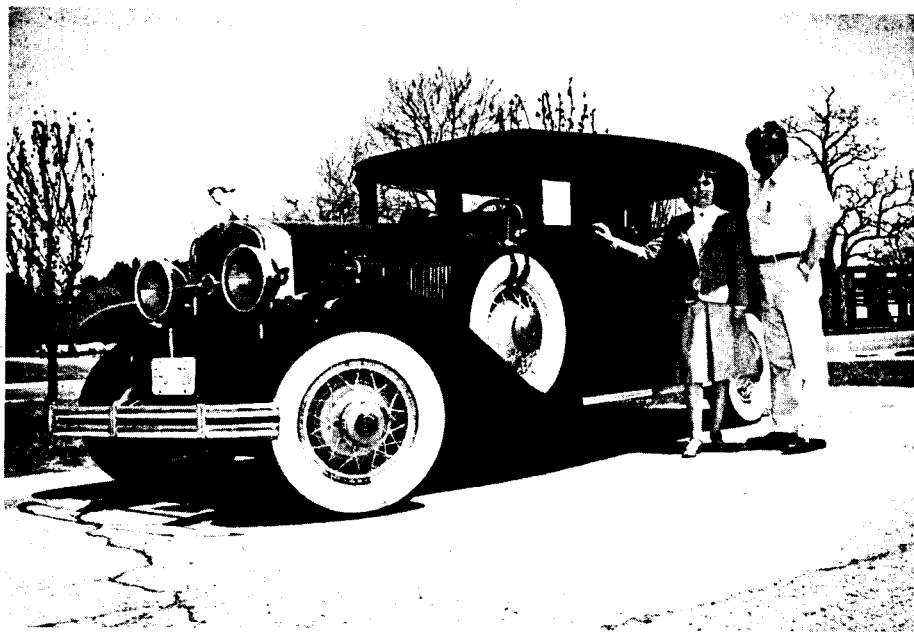
Red/Green League

The Sandbaggers are the league champions. High games were bowled by K. Asselta 223, E. Meier 213, K. Riker 208, C. Bohnenblusch 204, H. Dawson 202.

Purple League

Four of a Kind are the league champions. High games were bowled by Ed Meier 219, Bob Jones 214, Sharon Smith 200.

Antique & Classic Car Show Every Wednesday



Peter Horton

This 1930 LaSalle, owned by Cheryl Conrad and Doug Pope, is one of the cars you're likely to see if you visit the parking lot across from Berkner Hall, any Wednesday at lunchtime. That's when the members of the BERA Antique & Classic Motoring Club will gather regularly with their well-kept automobiles, and all are invited to stop by to see them.

Speakers Bureau

Anthony Baltz (Phys.), Gerd Dimmler (Instr.), Gelinas Junior High School Science Fair, Science Fair Judges, January 12 & 13.

Cosmore Sylvester (NSLS), **Abass Wessen** (PE), Minorities in Engineering and Applied Science at State University of New York at Stony Brook, Careers in Engineering at BNL, February 3.

John Hennessey (PE), **William Sells** (S&EP), BOCES/Brookhaven Learning Center Career Awareness Day, Careers in Plant Engineering, February 3.

Donald Gardner (Phys.) Suffolk County Boy Scouts Career Awareness Day at Connetquot High School, Careers in Mechanical Engineering at BNL, February 4.

William Marcuse (DO), Route 110 ACTION, Technology Transfer at BNL, February 9.

Marsha Kipperman (Pers.), Career Day at Riverhead High School, Careers at BNL, February 10.

Robert Thomas (Chem.), Bellport High School Step Program, Minorities in Science, February 22.

Michael Rowe (DAS), East Moriches Union Free District School, How Scientists Do Science, February 24.

Otto White (S&EP), Minorities in Engineering and Applied Science at State University of New York at Stony Brook, Careers at BNL, February 24.

Ronald Longacre (Phys.), Shoreham Wading River High School, The Creative Process in Science, March 9.

Victor Gutierrez (DO), REAP Group at Herrick Public Schools, Energy Efficiency and Solar Energy, March 28.

K.C. Wu (ADD), ASME Student Group at State University of New York at Stony Brook, Careers in Mechanical Engineering at BNL, March 29.

Leslie Fishbone (DNE), State University of New York at Stony Brook, International Safeguards, March 29.

Peter Cameron (AGS), Biofeedback in the Left/Right Hemisphere of the Brain; **Gerry Morgan** (ADD), Applied Superconductivity; **James Powell** (DNE), Antimatter; **Meyer Steinberg** (DAS), How to Solve the World's Problems by Turning Gold Into Lead, Island Convention VII; Science Fiction/Science Fact at State University of New York at Stony Brook, April 16.

William McGahern (AGS), Career Awareness Exploring Program at Ronkonkoma Junior High School, Careers in Engineering, April 21.

Victor Gutierrez (DO), Scientist of the Month Program at Forest Lake School, Solar Energy, April 29.



Peter Horton

One Suggestion Is Worth \$470

John Usher, a Nuclear Engineer in the Department of Nuclear Energy, was recently presented with \$470, for his suggestion to recycle toner cartridges used in laser printers. By replacing this stock item with cartridges that come with four refills, like the one Usher is inserting here, the Laboratory will save \$4,700 annually.

Original, cost-saving suggestions for the Lab are always welcome and employees who submit new ideas will receive a "thank you" mug from the Employee Suggestion Program.

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