

# The Interaction Point

Events and Happenings  
in the SLAC Community  
May 1993, Vol. 4, No. 5



## *Teamwork is Key*

# O'Leary Outlines New DOE Management Style

by Trevor Payne

SECRETARY OF ENERGY Hazel O'Leary chatted with the Department of Energy (DOE) family via satellite the morning of May 10. The interactive "Town Meeting," aired live to a packed house in the SLAC auditorium, is available in the library on videotape.

Trust in the DOE needs to be improved. This was O'Leary's main message. To do this she suggested that the Department would have to follow a new path, or embark upon a quality journey.

O'Leary said that the manner in which business is done will have to change, and that the most important aspect of this is better communication. For example, in order to communicate with a customer, the customer must first be identified, and in order for employees to do their job effectively, they must first have a clear idea of the job to be done. According to O'Leary, in the past these simple steps were not always taken. As a result the DOE could be a "frightening place" to work.

For the employees, knowing the job to be done is irrelevant if there is no accountability. Success in this new structure, O'Leary suggested, should be determined by customer response, and by how the employees meet the clearly defined expectations of managers. To track progress in these areas, O'Leary said that measurement is needed, something

that is perhaps unpopular but necessary for progress. Measurement will demonstrate where the Department is improving and help eliminate complacency. The DOE will be compared to the "best in the class," whether in the public or private sector, and will strive to become "best in the class" itself in all areas.

O'Leary's vision also includes a new management style that rewards managed risks and work accomplished instead of just years of service. The management network cannot follow strictly hierarchical lines, but instead will have to be dynamic and flexible—leading by principle and learning to work better as a team. According to O'Leary, such a shift toward teamwork is a key to success.

O'Leary recognizes that retraining is essential to change the way management operates. As she said: "Having rarely done it, we need some training as to how to do it." The retraining is already under way within the department with many people having already completed a 40-hour course. Fifty top



*Secretary of Energy Hazel O'Leary.*

managers will soon receive training at Motorola University, and a quality council has been established with representatives from all levels of the Department to ensure continued improvement.

O'Leary definitely represents a departure from the old school of government. Her emphasis on customer relations, flexible lateral management, business retraining, and communication will bring modern management techniques to the DOE and encourage its employees to do their best work, to improve productivity, and to value quality. Success through quality work is a seemingly intuitive concept, but perhaps too often forgotten.

# Taylor Elected to National Academy of Sciences

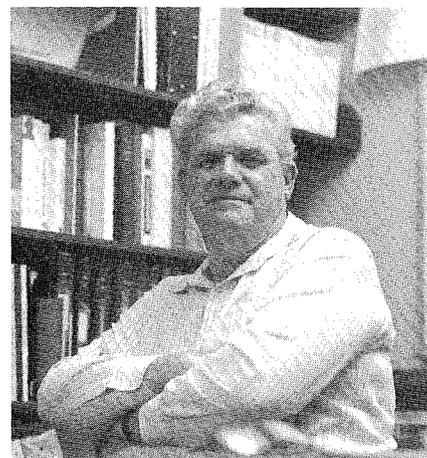
RICHARD TAYLOR was one of ten people from Stanford to be elected to the National Academy of Sciences (NAS) this year.

The NAS is a private organization of scientists and engineers that was established by Congress in 1863. The purpose of the Academy is to recognize scientists for their distinguished and continuing achievements in original research.

A total of sixty Americans and fifteen foreign associates were given the honor. Taylor, a Canadian who came to Stanford from Alberta to do his Ph.D., was elected as one of the foreign associates.

Taylor's election to the NAS is not the first recognition he has received during his thirty years at SLAC. He became a professor in 1968, and was named a professor by courtesy by the Stanford physics department in 1993. In 1990 he was awarded the Nobel Prize for his part in the discovery of the quark structure within protons and neutrons.

—Trevor Payne



# Edward Chan's Achievements Recognized

AN ALUMNUS OF THE SLAC Summer Science Program, Edward Chan, has been awarded a Dean's award by Stanford. The award was created by Thomas A. Wasow when he was Dean of Undergraduate Studies to "honor students deserving recognition for their academic endeavors [and to bring] to public attention accomplishments that may otherwise remain known only to the student and professor."

Margaret Brandeau, Edward's freshman academic advisor, spoke of his incredible academic accomplishments. Edward's GPA is an almost unheard of 4.14, and to make that statistic even more impressive he has achieved these grades in a broad range of subjects, from English to classes in his major, electrical engineering. "He is truly outstanding both in his ability and what he has done with it," Brandeau said.

As well as being an outstanding student, Edward has done some impressive independent work in the Summer Science Program at SLAC. Despite the complexity of his project, he downplays his contribution:

"People asked me to do something and that's what I did." However, Paul Corredoura, Edward's mentor at SLAC, didn't think Edward's accomplishment was so standard. Paul said Edward wrote about two thousand lines of software code to implement an adaptive mode detector for the SLC damping rings. The device separates the longitudinal motion of two bunches in the damping ring into their two eigen modes. "Basically he got it working," Corredoura said.

Edward is finishing his junior year at Stanford. He plans include a Masters degree in electrical engineering, to be followed by a job in industry.

At what he describes as a small, cozy ceremony, Edward received a certificate and the book *Genius, The Life and Times of Richard Feynman* by James Gleick. Predictably, Edward was pleased to receive the award. "I was happy and excited to get it," he said. "I was very happy."

—Trevor Payne



# SLAC PARTICIPATES AT IISSC

TECHNOLOGY TRANSFER STAFF members Jim Simpson and Patrick Lui join Michael Riordan of the Director's Office and Cathie Dager of Scientific Computing Services (l. to r.), in greeting visitors to the SLAC booth at the recent International Industrial Symposium for the Superconducting Super Collider (IISSC) held at the Hilton in San Francisco May 6-8. Many of the national laboratories had booths in the exhibit area to highlight the specific needs of the high-energy physics community.

—Nina Stolar

## Celebrate Juneteenth Soon

THE BLACK ASSOCIATION OF SLAC Employees (BASE) extends an invitation to their co-workers to help celebrate Juneteenth in the Cafe picnic area on Friday, June 18, from 3:30 to 6 PM. Tickets for the event are \$10 for adults and \$5 for children 6 to 12 years old. Children under 6 are admitted free.

Juneteenth celebrates the joy felt in the five-day period when news of the Emancipation Proclamation (signed in January, 1863) finally reached slaves in Texas and a few other southern states.

This year, BASE offers a menu of barbecued ribs, chicken, and links, accompanied by baked beans, assorted salads, and desserts.

The theme for this year's celebration is "Roots," and to commemorate the occasion a special t-shirt is available. The shirts have a black background with the logo printed in red, green, and yellow. Contact Effie Clewis at ext. 4756 for purchasing information.

The keynote speaker will be popular columnist Loretta Green. Exhibits of Black history, arts, and crafts will be on display in the auditorium breezeway. Music to stir the soul will include SLAC's own Jamie Davis, and the San Jose Emmanuel Baptist Children's Choir. Be there to help celebrate this wonderful occasion in American history.



*Effie Clewis of Publications models her inspiration—the Juneteenth t-shirt.*

## TEACHERS WORKSHOP: THE SOUND OF PHYSICS



*Richard Michaels of Bella Vista High School in Fair Oaks, demonstrates a water balloon accelerator.*

THE INTERACTION OF ART, science, and history was demonstrated to a group of high school physics teachers at a recent SLAC workshop. The meeting was part of the year-long program of the Particles and Interactions Workshop coordinated by Helen Quinn for SLAC's education outreach.

Physicist Bill Attwood described the complexity of violin construction using the laws of physics. He also revealed the secrets of the proper choice of wood from German villages. Then Max Dresden spoke on the historical context of the Standard Model, noting that much of science depends on the social acceptance of the times. The day ended with teachers demonstrating sample physics lessons from the classroom. Not content with indoor activities, Richard Michaels of Bella Vista High School in Fair Oaks, brought with him a water balloon accelerator.

Fifteen teachers from area schools attended the meeting. In addition to the activities of the day, discussions with SLAC physicists Bill Attwood, Max Dresden, Steve Shapiro, and Willy Langeveld were held.

—P.A. Moore

# BEN'S BEEN WORKING ON THE RAILROAD

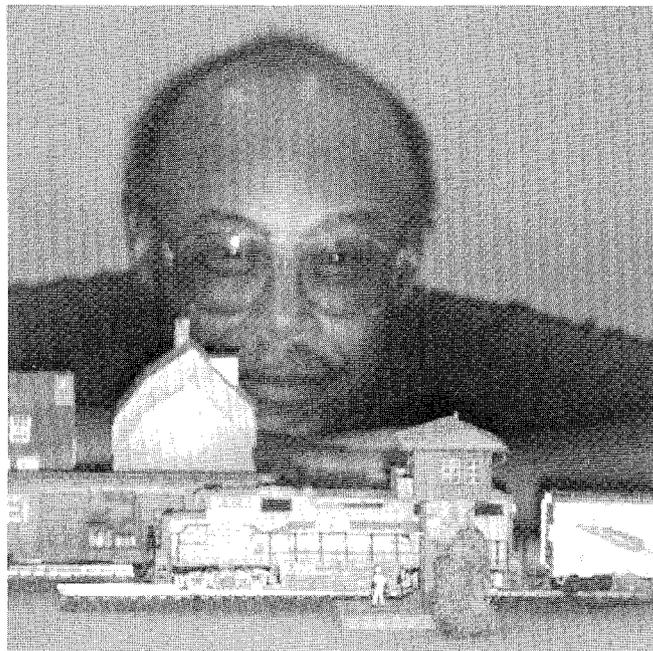
BEN SMITH'S RAILWAY ROMANCE began when he was given his first model train. He was two months old. Later, after twenty years without a train, Ben decided to build himself a railroad. So, over the past six years he has sacrificed some time, and half of his garage space, to resurrect his love affair. Over that time the layout has grown to 234 square feet. And he says his wife is actually quite happy with it, as long as he stays out of her parking space.

When Smith talks about model trains he stresses the prominence of the railroad's image in the collective mind of this country, and that, even though they have declined of late, they still have their niche. "Railroads have had a place in our society for many years," Smith said. "Without a railroad our country would not have survived." Smith expressed that the train's history is what has kept people interested, and still traveling by rail: "It is a connection. You find people traveling by rail, not because they have to, but because they want to."

To Smith a personal connection is very important in order to create an effective model scene: "If you had not had contact with the railroad, it would be very hard to model. I used to travel a lot on the railroad," Smith said. "When I was a little child I used to go to visit my grandmother on the train. I have always had a soft spot for them." A 234 square-foot and growing soft spot in fact.

Building a model railroad is far more than just laying down some track and running a few cars around in a circle. Real modeling is nothing short of an art form, and a very interactive one at that—complex, with movement and three dimensions. Smith exploits these aspects to enhance the atmosphere. To get the effect of a much larger layout, and have people focus on the entire presentation, Smith said that you can make the train disappear, go underground: "It makes people look around. When it comes out they don't see it as the same train.

Smith continued: "You don't realize what nature looks like until you try to reproduce it. And once you start reproducing nature, you really find how beautiful the simplest bush is." One of Smith's main concerns is to represent nature accurately. This concern has brought out the ingenious artisan in him.



*Ben's railroad took over six years to build, and occupies more than 234 square feet in his garage.*

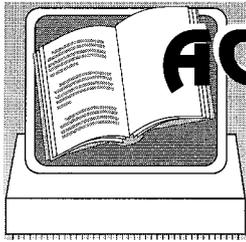
For example, to get the effect of strata on a cliff, Smith used ceiling tiles, cut them, glued them together, gouged out areas, painted them brown around the edges, and glued on green in areas for a moss-like effect. To make the train cars seem more genuine, Smith replaced the coupling devices so that the cars would unhitch like real cars. He contrived the hitches so that if two cars are slowed down over a permanent magnet placed in the switching yard, the two cars will detach from each other.

A set-up like Smith's tends to wear with time, which is a good thing. In fact, an aged look is essential. As Smith said, "A layout, when you first get it together, looks very artificial; it has to get dirty." Smith even uses a weathering black pigment to speed up the appearance of dirt. He said things look too stark otherwise. "Around a railroad," Smith commented, "nothing is clean, everything is dirty." No wonder his wife wants it out in the garage.

*—Trevor Payne*

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# ACCESS TO INFORMATION

## Computer Security and User Responsibility

MOST OF US WOULD find it difficult to work without computers in some form or other, whether they are microcomputers, workstations, or terminals accessing mainframes or servers. Computers at SLAC are government assets, property acquired under SLAC's contract with the Department of Energy, and as such are subject to controls that provide reasonable assurance that they are being properly used and protected. These controls are spelled out in SLAC's Unclassified Computer Security Plan and are administered by the Computer Protection Program Manager (CPPM) in the Business Services Division. The plan has been crafted carefully to fulfill DOE requirements and still preserve the open environment which is critical to SLAC's operation as a research institution. The emphasis of the plan is to develop a sense of responsibility among the user community through awareness rather than by imposing blanket restrictions on computer access and use.

If you access any of SLAC's networked services, you may recall that before being assigned an account, you had to sign the Computer Account Responsibilities form. That single page summarizes the essentials of SLAC's plan and should be familiar to all users. One of the important points it makes is that SLAC computers are to be used only in performance of work-related tasks. While that may sound straightforward, occasionally someone breaks the rules. This usually happens when the user is not clear about what constitutes an infraction. Users may, for instance,

be unaware that anything produced on government computers becomes the property of Stanford or the government, and efforts to profit from it without following the prescribed Technology Transfer process are not only an abuse of computer privileges but illegal.

Files resident on SLAC computers can be audited randomly, and if evidence of misuse of resources is found the CPPM is notified. Sometimes reports of apparent computer abuse come from vigilant off-site users. A number of complaints were filed by off-site users who questioned the use of government resources to post inappropriate notices to NetNews—financial schemes, personal services, etc. All transactions—e.g., e-mail, NetNews postings, attempts to access other computers—bear the identifying address "slac.stanford.edu"; they are not anonymous. Once reported, incidents have to be followed up until a resolution is found. The alleged offenders are interviewed with their supervisor to discuss the infraction and to initiate any necessary corrective action. If the inappropriate action continues, it can lead to personnel action.

Contact Rich Ledon (e-mail rledon@slac.stanford.edu, ext. 4458) for any questions about computer security, SLAC's Unclassified Computer Security Plan, or the Computer Protection Program Manager (CPPM).  
—Rich Ledon

### Online Access to Phone List

THE SLAC PHONE "white" pages are now accessible online. At the VM command line, type the command PHONLIST and select

PHONLIST DATASET from the list of options. This file—a list of people at SLAC, their phone numbers, pager numbers, location, mail stop, and group code—is placed into an XEDIT file using your XEDIT profile with all your familiar settings. You can then search the file, save it, and print it.  
—Ilse Vinson

### Wireless Telecommunication

SLAC Telecommunications supports a number of wireless communications devices and technologies that operate on radio frequencies including cellular telephones, wireless telephones (hand-held devices with a shorter range than cellular telephones), wireless intercoms, wireless radios, wireless crane controls, and, of course, paging transmitters to support pagers. Ham radios, another wireless communications device, are informally supported by SLAC for ES&H and are part of the emergency communications plan.

Plant Engineering and Security are the major users of radio. Plant Engineering uses radios to support the many plumbers, electricians, and other maintenance staff out in the field. These people and MCC use radios to communicate about urgent problems that need immediate attention and during tunnel checks prior to turning on the accelerator.

If your department needs a radio, contact David Price (e-mail wa6fulvm@slac.stanford.edu, ext. 4090). He can advise you on DOE requirements and GSA purchasing standards and put the newly acquired radio on a radio channel that minimizes interference with wireless communications operations.

To get cellular and wireless telephones, contact Mike Telang (e-mail telang@slac.stanford.edu, ext. 2254). To get and service pocket pagers, contact Iris Walker (e-mail flygurl2@slac.stanford.edu, ext. 3557).

—David Price and Ilse Vinson

# Eshoo on Women in Government



Janet Dixon, of Telecommunications & Technology Transfer, I., and Congresswoman Anna Eshoo.

THE PUBLIC is just beginning to realize that women have much to offer in our nation's political life, according to Anna Eshoo. She observed that community volunteer work is no longer valued as much as it used to be or should be. Eshoo, Congresswoman for the 12th Congressional District, spoke to Women's Interchange at SLAC members about "Women in Politics" at a private residence last October 5.

Eshoo noted that women are measured by a much longer yardstick than men are, and must work harder than men do to be taken seriously. According to Eshoo, women in Congress are thought to be capable of dealing with the traditionally viewed

"soft" issues like education, environment, and domestic issues, but not armament or

defense issues. Yet, she observed, Senator Pat Schroeder is one of the nation's leading experts on armament.

Today the public is overwhelmed by the domestic agenda and is turning to women for a fresh perspective. Women tend to focus on investment in education and environmental issues, a focus which we need in order to compete in the global economy.

Will women meet this challenge? Anna Eshoo doesn't know. She hopes that the number of women in government increases, and that the increase will allow the women's vote to have more impact.

What can you do to get involved? Boards, commissions, and campaigns always need volunteers. Don't think that you don't fit because of what you do, she advises. There is a place for everyone at the table.

—Janet Dixon

## Welcome Guests and New Employees

Arjun Berera, Theory; Jeraline Counts, Purchasing; Brian Frey, Environmental Protection & Waste Management; Kohji Hirata, Theory; Hung Huynh, Illustrations; Marie Janes, Power Conversion; Doris Jung, Environmental Protection & Waste Management; Kevin Kendall, Plant Engineering; Thomas Langer, Power Conversion; Morrison Munro, Mechanical Engineering; Tadashi Nagamine, Group B; Shyam Prabhakar, Klystron; Oleg Puzyrko, Theory; David Smay, Accelerator Theory & Special Projects; Ralph Tarter, Power Conversion.

## INS Suspends Previous Green Card Ruling

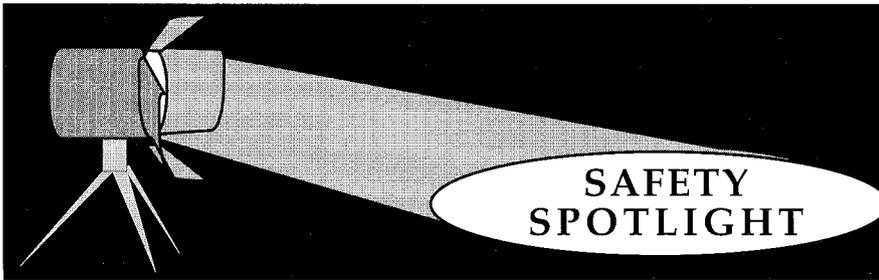
THE JANUARY 1993 ISSUE of *The Interaction Point* included information on the ruling by the INS for the replacement of all "old" green cards, i.e., those issued prior to 1977.

In response to a class action suit and to allow more time for public comment, the INS has suspended their ruling. However, the program remains in effect on a voluntary basis.

Further updates and details will follow as they become known.

—Ruth Thor Nelson





## RECYCLING AND MINIMIZING WASTE PAYS

RECYCLING AND WASTE minimization are concepts of growing interest. Not only are they ecologically sound but they make good economic sense. One example involves something we are all responsible for producing: used tires. Our landfills currently hold approximately two billion tires. Each year Americans dispose of an additional 242 million tires. To picture how much space 242 million tires consume, imagine SLAC's entire 426 acres covered with tires, stacked 65 high.

Approximately 47 million of these castaway tires are suitable for retreading, but few ever are. Numerous environmentally friendly and economical ways of recycling tires are available. Besides retreading, used tires can be recycled for fuel or used in raw materials. Tires have a high energy content. Power plants can burn used tires safely and cleanly to generate electricity. A 20-pound tire provides as much heat as 25 pounds of coal or 2.2 gallons of oil. Enough tires are scrapped annually to provide energy equiv-

alent to 550 million gallons of oil (worth approximately \$265 million). The two billion tires currently in landfills are equivalent to 4.56 billion gallons of oil. The total dollar value of all this potential fuel is approximately \$5.7 billion.

Used tires can also be recycled to fabricate other products, including paving materials, building materials, and chemicals. Depending on the process used, one ton of scrap tires can produce 60 to 120 gallons of oil, 600 to 700 pounds of charcoal, and 40 to 200 pounds of steel. The amount of gaseous fuels (such as methane) generated during recycling exceeds the energy used in the process.

The bottom line is that recycling and minimizing waste pays!

Within the next few years, laws will probably mandate recycling and waste minimization efforts regarding tires and many other products. Until then, you can help the environment by doing business with firms who already incorporate these strategies into their day-to-day business operations.

—Ray Jensen and Melinda Saltzberg

## UPDATING YOUR DOSIMETER BADGE

IF YOU NEED A NEW or replacement dosimeter badge, or need to have your old one repaired (most likely due to a broken pouch), the Dosimetry Office (Bldg. 24, Room 130) is open at the following times:

- Photos for new badges are taken Monday through Friday, on a drop-in basis from 1:30 PM to 4:15 PM, or in the morning by appointment only (call Terry Ash at ext. 4569 to make a morning appointment).

- Badge repairs are available Monday through Friday anytime between 7:30 AM and noon, and 1:30 PM to 4:15 PM on a drop-in basis. Additional necklaces and clips are also available.

Remember, badges must be worn at all times while in controlled areas. Badges must be visible and should be located on the upper torso between the neck and waist on the outside of clothing.

—Melinda Saltzberg

All meetings are held in the Orange Room, unless another location is listed. Larger meetings and conferences have a contact listed. Please notify the Public Affairs Office of any additions or changes by calling ext. 2204 or sending e-mail to NINA@SLACVM.

**June 4-5**

EPAC Meeting  
D. Fryberger/V. Flynn

**June 7, 9 AM**

SLUO Executive Committee

**June 12**

SU Commencement Tours  
Memorial Auditorium  
Campus/Bus Route

**June 13**

SU Commencement  
Campus

**June 14-18**

SLD Week

TBA

**June 18, 3:30**

Fourth Annual Juneteenth  
Celebration

Cafe Picnic Area

**June 18**

E-143 Collaboration Meeting

**June 21**

DOE On-Site Review  
M. Chang

**June 21-25**

DOE B Factory Review  
Gold/Orange Rooms

**June 21- July 2**

Physics Teachers  
Workshop  
H. Quinn/PA Moore/  
A. Erzberger

**June 21-28**

Summer Science Program  
(SSP) Orientation

J. Martinez

**June 23, 9 AM-4 PM**

SUBB Mobile Blood Drive  
Auditorium Lobby

**EVENT CALENDAR: June 1993**

# 4TH ANNUAL FITNESS DAY

THE FOURTH ANNUAL SLAC Fitness Day inspired 156 people to leave their offices for a lunch-time stroll on May 12.

This year's route, over two miles long, was not a major undertaking, nor a competition, and according to organizer Eileen Derr isn't supposed to be. The point is to just get people out to walk.

As Eileen said, "to stay fit you don't need a gym or fancy machinery, or have to be a super athlete." Small efforts, such as walking a few miles, can make a big difference in a person's health. Eileen's hope is that people who don't normally exercise will be inspired by this organized effort, see that exercise can be easy and fun, and start exercising a little on their own.

The prize for highest percentage of departmental turnout went to ES&H, and highest number of participants went to Microwave Klystron. Occupational Safety and Health, wearing a plethora of safety paraphernalia, tied for best costume with the Accounting Department, who wore bows fashioned from adding paper around their heads.

Perhaps the best prize of all, however, was enjoying the camaraderie of over 150 fellow employees, and the exercise itself.

—Trevor Payne



The Environment, Safety, and Health Division breasted the elements and crowds to come in first in the category of "percent of departmental turnout."



The Accounting Department cut through red tape for top billing in the "Best Costume" category.

## SUMMER CAMPUS COURSE LISTINGS

THE JUNE 9 ISSUE of the *Campus Report* will include the Training Opportunities supplement of summer courses. Here's how to register.

- If you *have not* used your STAP funds:

Register for one or more classes, with a combined cost of not more than \$140, by submitting a typed Staff Training Request form to Karen McClenahan, MS 11. You will be registered for these classes electronically.

- If you *have* used your STAP funds:

Register for classes by submitting a Staff Training Request form, the registration form from the supplement, and a purchase requisition to Karen McClenahan, MS 11. You will be registered for these classes through campus mail.

Need more information or assistance? Call Karen McClenahan at ext. 2265, or Hilda Korner at ext. 2203.

—Hilda Korner