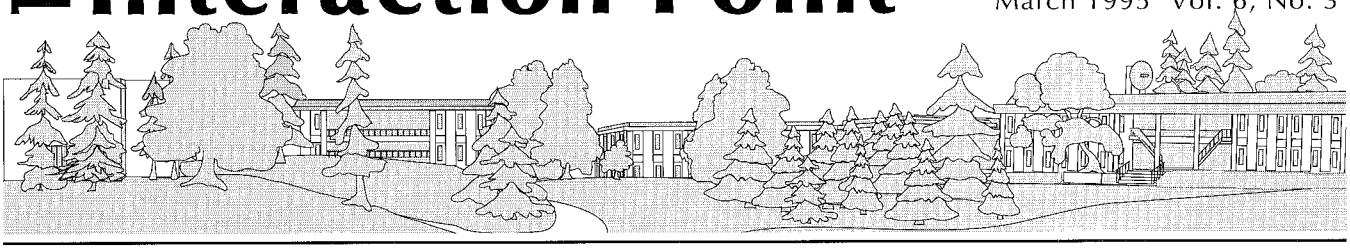
The Interaction Point

Events and Happenings
in the SLAC Community
March 1995 Vol. 6, No. 3



# Plating Shop Wins Excellence Award

**by Ann McKillop**

THE COVETED "1994 Industrial and Hazardous Waste Facility of the Year" award was presented to the SLAC Plating Shop and its associated Rinse Water Treatment Plant (RWTP) on February 7. This award is granted by the local branch of the California Water Pollution Control Association and is intended to recognize facilities for their outstanding achievement in the area of wastewater management.

In his acceptance speech, Ali Farvid, the Plating Shop Supervisor, said, "This award belongs to all of SLAC." Ali and George Laxson, the RWTP Supervisor, stressed the cooperation that played a key role in earning SLAC the award. Ali and George worked with the SLAC administration to obtain funding. Plant Engineer Jim Ogg and the Environmental Protection and Waste Management Department staff helped to design and build the wastewater reduction system, and to evaluate other waste minimization measures and regulatory issues. Finally, the Plating Shop and RWTP staff successfully implemented the reduction measures.

The Plating Shop performs surface finishing on metal parts used for accelerator maintenance and research projects. Plating Shop staff dip accelerator parts in a series of baths containing cleaning, plating, and rinsing solutions. They carefully monitor the rinsing process to prevent cross contamination, and use an automatic control to adjust the concentration of metals and other compounds in each rinse tank.

Hope Johnson

*Norm Domingo (center), Industrial Wastewater Inspector from the South Bayside System Authority, presents the award to George Laxson (left), Rinse Water Treatment Plant Supervisor (left), and Ali Farvid, Plating Shop Supervisor (right).*

Rinse water from the plating process contains heavy metals and cannot be directly released into the environment. Ali proudly points out the innovative system of underground pipes that carries this water from the Plating Shop to the RWTP. The pipes help to segregate the rinse water according to the type of chemicals the water contains. Each pipe leads to a holding tank where George monitors the pH of the water and precipitates the heavy metals into sludge. The water can then be safely released into the sanitary sewer system. Drying the remaining sludge completes the treatment and reduces the volume that must be shipped to a waste-handling facility. Shipping and disposal of waste sludge is expensive, so taking steps to reduce waste volume is very important.

After carrying out these and many other efficient measures, the Plating Shop and the RWTP were able to reduce chemical costs by 50%, waste sludge volume by 70%, and water volume use by 46% (860,000 gallons), from 1990 through 1992. In fact, the two facilities have implemented the measures so successfully that other SLAC departments have asked for suggestions on processing and minimizing their own waste.

For the future, Ali envisions the Plating Shop and the RWTP working as a closed-loop system with zero discharge, whereby most of the rinse water will be continuously recycled. Recycling will reduce waste generation and disposal costs even further. Congratulations to all!

# SLAC Educator recognized

P.A. MOORE, SLAC's Education Coordinator, was elected chair of the Science Education Academy of the Bay Area (SEABA) at a recent meeting. SEABA is an association of 60 organizations providing high-quality science programs, professional development and resources to teachers in the 10-county Bay Area. Other members include Livermore, Berkeley and Sandia National Labs, science museums, school districts, and other informal science education providers. Membership in the organization is by nomination and requires recognition of specific quality standards in science education. SEABA's mission is to act as a voice for science reform.

Moore, who has a doctorate in education, has been at SLAC for two years. Her responsibilities include coordinating workshops for teachers, overseeing equipment donations to schools, serving as the representative for education programs to the DOE, and serving as SLAC's point of contact for women's issues for DOE. She has been a member of the SEABA executive committee for the past year and has served on the editorial subcommittee for the SEABA Journal, an annual publication which describes science resources in the area and offers a member directory. Similar information is offered on-line and the print journal offers specific instructions to teachers on how to access the Internet.

When asked her agenda for SEABA as the new chair, Moore states that she "wants to move the association into a more active position with specific science reform efforts throughout the state. We have a powerful combination of resources and we can use our voice to effect positive change in the schools." SEABA is housed at Far West Regional Lab in San Francisco.

*P.A. Moore*

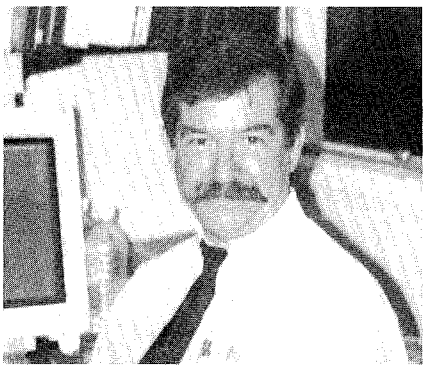
# Menlo Park via Tombstone, Chernobyl

HAVING TAUGHT the fundamentals of journalism for the last two years to aspiring Woodward's and Bernstein's, Jon Rosell, SLAC's new Public Information Officer, came on board March 17.

The former journalism professor brings a diverse background to his new position.

"My daughters call me a modern day Renaissance Man, "says Rosell. His background includes time as a reporter, editor and publisher, including having edited the *Tombstone Epitaph* in Tombstone, Arizona across the street from the OK Corral, and some 15 years in the Air Force where he oversaw intelligence operations and commanded Titan II ICBM complexes.

"It was on a 2 AM shift in the silo that I found myself reading C ration boxes," he said. "At that point I went back to school, finished my Masters and switched into public affairs work. It was this background in nuclear weapons and public affairs that took me to Lawrence Livermore National Laboratory. My time there covered the massive demonstrations in the late 1980s and the Chernobyl Nuclear Accident."



*Jon Rosell*

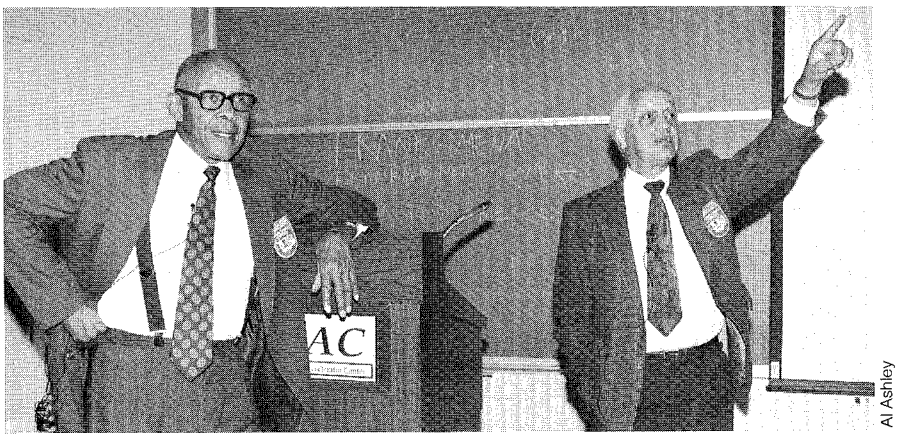
"The world's press camped out at the Lab because it had the Atmospheric Release Advisory Capability Center. The center had been designed to test the nuclear winter theory, but when the Three Mile Island nuclear accident came along it was found to work very well in a real time situation. Here they had a much larger area, 2000 miles by 2000 miles as compared to 20 miles by 20 miles, but the system worked quite well. To this day I still get calls from reporters around the world that I met during Chernobyl."

After being recruited away from the Lab by Litton Industries, Rosell went on to work for United Technologies and Chemical Waste Management before being recruited on a crash basis to teach the journalism sequence at the University of the Pacific.

"The Communications Department needed someone in a hurry," said Rosell, "the former journalism instructor had quit with two weeks' notice.

"I had always said that when I retired that I would like to teach communications. Well, I found out that I love to teach, but I'm not ready to retire. So here I am at SLAC."

# Tuskegee Airmen land at SLAC




Al Ashley

COLONEL WILLIAM CAMPBELL, left, and Leslie Williams of the Tuskegee Airmen were guest speakers at SLAC as part of the Black Association of SLAC Employees' Black History Month program. Colonel Campbell was the first Black American to fly a combat mission for the US Army Air Force during World War II. Campbell and Williams spoke to a packed auditorium. Their presentation, which included a video and displays of historical material, served to educate, inform, and enlighten the audience about the role of the Tuskegee Airmen in World War II.

*—Al Ashley*

***Communication,*** *continued from page 8*

Information Desk (Marjorie Smart, ext. 3344). Arrangements must be made by the LBL colleagues for use of the conference room and services at LBL.

## Desktop Video

The world is arriving at your desktop as multimedia technology rapidly evolves. Currently, SLAC is experimenting with desktop video conferencing using the Internet multicast backbone (Mbone) as the transmission path and workstations as the "desktop." For more information on the desktop video experiment in the Computer Center, contact Charlie Granieri (ext. 2844).

*—Janet Dixon-Dickens and Nina Stolar*

## April Health Break

Dr. Gordon Ray, MD, Palo Alto Medical Foundation, Radiation Therapy Department presents "Risks, Early Detection, and Treatment of Breast and Prostate Cancer." Both men and women are welcome! Topics include: risk factors and statistics; various treatments (radiation vs. surgery); prevention behaviors: importance of breast and testicular self examination, mammogram, and PSA (prostate-specific antigen) examination. The lecture takes place April 25, 12–1 pm, in the Training Center, Quad A/B. *—Sylvia Ong*

## Lock and Tag Photos

Lock and Tag photos will now be issued by the Safety, Health, and Assurance (SHA)Department staff in Building 24, Room 225. Call Sandra (ext. 4322) or Sharon (ext. 4533) for more information.

# Sixth annual REXX Symposium

THE SIXTH ANNUAL Rexx Symposium will be hosted by SLAC on May 1–3. Meet and exchange ideas with Rexx programmers, implementers of commercial and free interpreters, standards committee members, and REXX Language Association members. Presentations are planned for Object Rexx for OS/2, Windows, AIX, VM, and intelligent agents; application portabilility and migration; REXX-aware applications; and REXX in Unix.

Mike Cowlishaw, the originator of REXX, is the keynote speaker. This year's expanded program includes tutorials for the beginner, intermediate, and experienced REXXprogrammer. This is a participatory conference so bring your software and ideas to share.

You are also invited to attend the meetings of the REXX Language Association the evening of May 1, and the ANSI Standards X3J18 Committee, April 29–30. There is no charge for any of these events. For more information contact Cathie Dager, Symposium Founder and Chair, at **cathie@slac.stanford .edu** or ext. 2904.

Registration is required. Send your name, SLAC address, e-mail address, telephone number and fax number by e-mail (preferred) or SLAC mail to **mjcrume@slac .stanford.edu** or Mary Crume, MS 97, or fax 926-3329.

*—Cathie Dager*

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## EVENT CALENDAR: April 1995

All meetings are held in the Orange Rooms, unless another location is listed. Larger meetings and conferences have a contact listed. Please notify the Public Affairs Office of any updates (nina@slac.stanford.edu).

**April 1, 8:30–3:30**
Science Teachers Workshop
H. Quinn, P.A. Moore

**April 10–14**
SLD Week (TBA)

**April 11–12**
DOE Program Review

**April 18–19**
DOE Electronic Industry Asso Workshop
G. Caryotakis, K. McMillen
Auditorium

**April 18–21**
APS General Meeting
Washington, DC

**April 20–21**
BaBar Technical Board
TBA

**April 24, 7:00 PM**
OS/2 Users Meeting
Auditorium

**April 25–27**
DOE BaBar Review
V. Luth, T. Boysen

**April 27**
Take Your Daughter to Work Day
WIS/E. Eldridge-Diaz, C. Spencer, et al.
Auditorium

**April 28–29**
SPC Meeting

**April 29**
IEEE Microwave Short Course
Auditorium

# Visitor Center in the Works

Walter Stolar

*Recent storms did not stop the groundbreaking ceremonies for the Visitor Center. From left are Nina Stolar, Adele Panofsky, Pief Panofsky, and Glenn Tenney.*

AFTER A DECADE OF PLANNING AND WAITING, construction began in late February on a Visitor Center adjacent to the Auditorium. The new center will serve as a "mini science museum" giving visitors and staff a glimpse of the activities currently conducted here.

Now that the facility is being readied, the exhibit area is in the planning stages. Exhibit organizers hope to provide visitors with a direct connection to the "real stuff" of working at a national laboratory. Possible display items include technical hardware such as a klystron tube, accelerator and detector components, a TV monitor showing beam-control information, a computer display of actual SLD events, and a mock SSRL beam-line display using light rather than x-rays. Posters, historical photographs, and short explanations will augment the displays.

The Visitor Center was approved in concept in 1989. Funding was approved in fiscal year 1992, but has only recently been made available from the FY92 General Physical Plant budget—designated by DOE for general construction projects and not to be used for other purposes.

The center will house a variety of exhibits covering everything from accelerator technology to current scientific research—from high-energy physics experiments to synchrotron sources for materials research and applied sciences.

The center will also house the skeleton of an ancient marine mammal, the Paleoparadoxia excavated on the SLAC site during initial construction in the early 1960s. This creature has been reconstructed over many years through the tireless effort of Adele Panofsky (see article on p. 5).

The success of the Visitor Center rests on it becoming a living part of the lab. The initial proposal for the display area will reflect the time and resources available to have an opening within a very short time. Over the life of the center, it will evolve to include technical innovations and current scientific efforts. If you have ideas or suggestions concerning potential exhibits contact one of the committee members charged with planning the exhibits. Committee members include Gordon Bowden, Hobie DeStaebler, Thomas Humphries (Staff Physicist at San Francisco's Exploratorium Museum), P.A. Moore, Joseph Perl, Ingrid Pickering, Helen Quinn, Marc Ross, and Nina Stolar.

The center should act as a self-guided mini tour of SLAC and its achievements. The new addition will be small, but the exhibits that fill it have the potential to be very exciting indeed.

*—Jill Mhyre*

*Hands-on, open houses to be features*

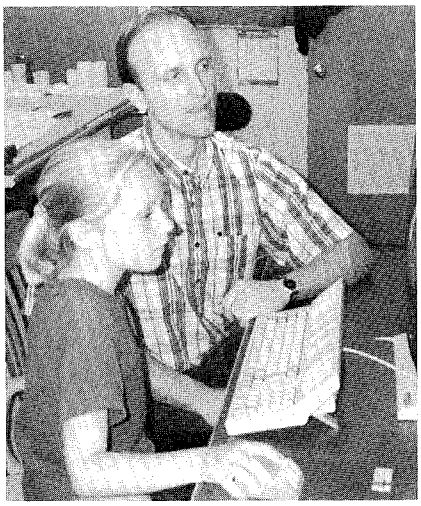
# Take Our Daughters to Work—April 27

"TAKE OUR DAUGHTERS to Work Day," planned for April 27, is a special event in which participants go with their parents to work instead of going to school for one day. The program grew from a word-of-mouth campaign three years ago by the Ms. Foundation to include over four million girls worldwide last year. SLAC's event, sponsored by the Women's Interchange at SLAC, is designed to introduce young women to SLAC and to help them expand their career aspirations. The program is intended to encourage, inspire, and introduce adolescent girls to the workplace. It will give them a chance to experience various careers firsthand by accompanying their mom or dad to her or his job.

Who is invited? Girls ages 9 through 15. Why girls? Research reveals that adolescent girls generally have less exposure to and awareness of career options than adolescent boys.

Visiting a parent's work place will increase a girl's awareness of some of the options that will be open to her in the future. That should help her to make informed career choices.

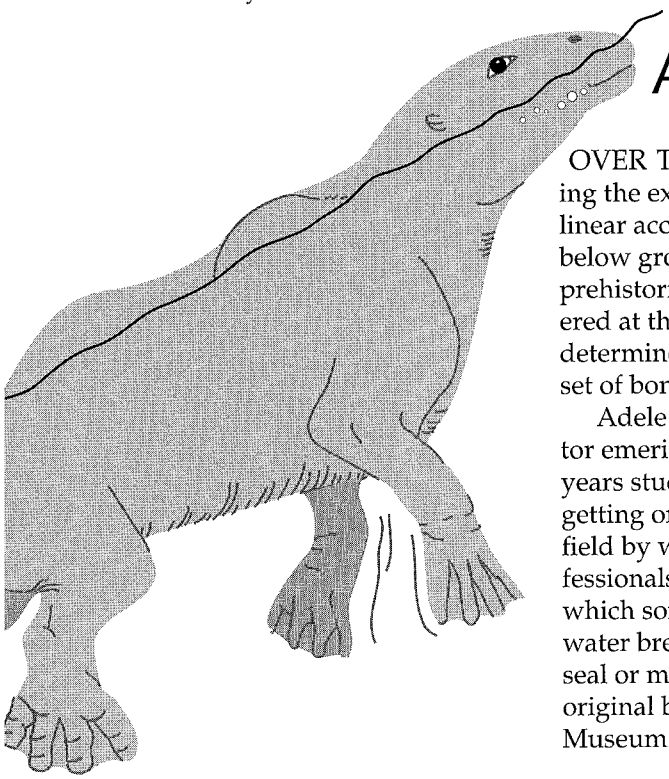
What will they do at SLAC? The day will be very busy. The girls will be taken to the auditorium by 8:30 AM to be welcomed to SLAC and then split into groups that will alternately take a tour of SLAC and participate in hands-on workshops. They will then reconvene to eat their bag lunch. We are asking the girls to bring their own lunch this year. After lunch, parents will pick the girls up and show them the parent's work area. There the girls will see the kind of work their parent does, and in many cases they will have an opportunity to work alongside their parent. In addition, several departments are holding open house between 2 and 3 PM. Those open houses will be announced and a map provided in the registration information that will be sent to the departments.



*Kendra Palrang with her father Mike in his office last year on Take Our Daughters to Work Day.*

If you have questions or want to volunteer help for that day, call Evelyn Eldridge-Diaz, ext. 4128, or e-mail **evelyn@slac.stanford.edu.**

—*Melinda Saltzberg*



# A Creature in the Works

OVER THREE decades ago during the excavation effort for the linear accelerator twenty-five feet below ground, the remains of a prehistoric creature were uncovered at the SLAC site. These were determined to be a fairly complete set of bones of a *Paleoparadoxia.*

Adele Panofsky (wife of Director emeritus Pief Panofsky) spent years studying Paleontology and getting on the job training in this field by working with many professionals to assemble the creature, which somewhat resembles a water breathing mammal such as a seal or maybe a hypopatamus. The original bones were donated to the Museum of Paleontology at UC, Berkeley. In exchange, castings were returned to the laboratory for assembly on site for an exhibit.

In an unused part of CCR (the old control room for the linac), Adele has worked tirelessly to reconstruct this creature. Using everything on hand from the most advanced technology available at Stanford University (ask about the time the creature had a cat scan) to the current techniques in Paleontology and modeling, Adele has developed an interdisciplinary coalition to complete the project.

— *Nina Stolar*

# Mentoring: What is it? Who does it?

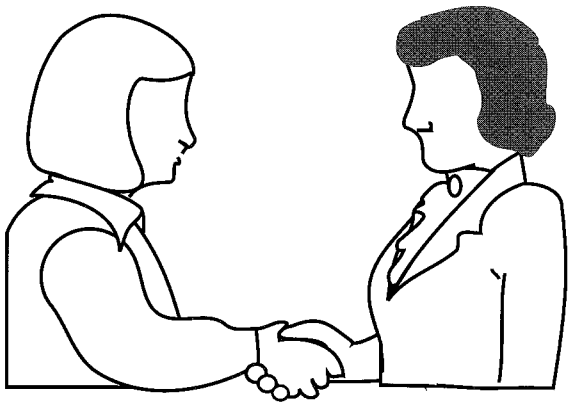
IN JANUARY P.A. Moore spoke about mentoring to a noon forum sponsored by the Women's Interchange at SLAC. As the Point of Contact to the DOE for the SLAC education programs, P.A. Moore attends annual DOE reviews on women's programs in the labs. Mentoring is one of the strategies mentioned by the DOE to increase women's opportunities in DOE-sponsored labs and to build diversity in the workforce.

She argued that mentoring already takes place informally, and by discussing the relationship between mentor and protégé, she intended to draw the audience's attention to the process.

Moore compared the mentor to a coach—someone who is available on an ongoing basis to answer questions and provide support, honest advice, and "inside" information about the work environment. This brings the protégé up to speed with activities in the work place and facilitates increased self esteem, more realistic career expectations, and an expanded network which all tend to help the protégé become more productive.

But the relationship works two ways. In exchange, the protégé provides the mentor with increased perspective, gratification, and an expanded network. Like the mentor, the protégé invests time, energy, honest communication, and respect. Moreover, the protégé usually has the added responsibility to "make the first move to show seriousness and commitment." Some mentoring relationships are initiated by the mentor, but traditionally it is the protégé who solicits the help of the mentor.

When seeking, initiating, and developing a mentoring relationship, it is important for both mentor and protégé to be aware of their biases. Everyone has a set of preconceptions about things such as speech patterns, rate of speech, body size, and body language, and



the way these traits relate to qualities like intelligence, ability, friendliness and willingness to help. The mentoring relationship works best when both people realize these biases and actively set them aside.

Moore also pointed out that the same person can act as a mentor in one relationship and as a protégé in another. By working with multiple people at multiple levels, individuals can create a network that ties a number of people together.

While recognizing that informal mentoring and mutual assistance already take place at SLAC, Moore looked to the audience to suggest ways to formalize the mentoring process. The audience suggested compiling a list of willing mentors for potential protégés, presenting the benefits of mentoring to key managers, and administering surveys through the *Interaction Point* or e-mail to study the extent to which mentoring takes place already.

One important suggestion was to provide new employee mentoring, which would include a formal orientation to research, a tour, and help in adjusting to the organizational culture and the unwritten rules of SLAC. The goal would be to retain staff, to build networks, and to the encourage productivity of all new employees.

Moore completed the speech by pointing out that SLAC has fallen behind other DOE labs in the areas of formal career development mentoring and career planning. "On the negative side," she said, "this should embarrass us, but on the positive side, it should get us moving towards some action."

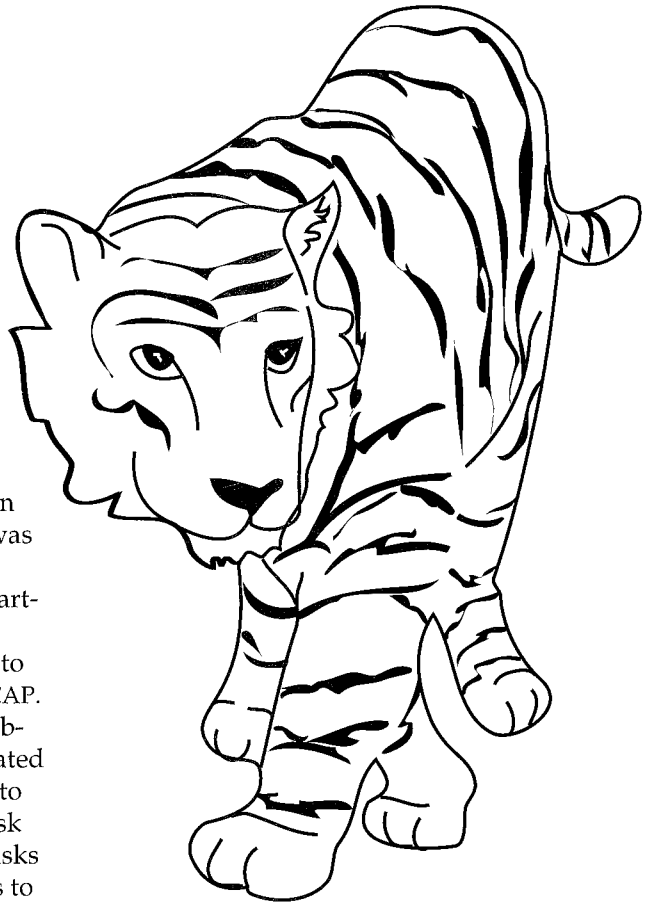
Her point may be more poignant because mentoring is not necessarily expensive. In an environment where budget cuts threaten many of the formal affirmative action programs at SLAC, mentoring is one way not only to provide support to specified groups, like women, minorities or new employees, but to network the entire community.

*—Jill Mhyre*

# Welcome Guests and New Employees

**Viktor Alexandrov**, Experimental Group I; **Tom Banks,** Theory; **Micha Berkooz,** Theory; **Andrea DiCicco,** SSRL Research; **Adriano Filipponi,** SSRL Research; **Jennifer Huang,** PEP-II B Factory; **Ingrid Kuehn,** Computing Services; **Johann (Hans) Kuehn,** Theory; **Greg Robinson,** Metrology; **Javier Sevilla,** Plant Engineering.

# Taming the Tigers



There was a time, not long ago, when tigers roamed freely at SLAC. In fact, the year was 1991 when a group of inspectors from the DOE known as the "Tiger Team" came to SLAC to assess the site's performance in the areas of environment, safety and health.

Tiger Teams were created by the DOE to inspect all of the national labs in order to identify operations that put people and the environment at risk or that were out of compliance with applicable laws or standards. In some cases, Tiger Teams actually closed down entire facilities where safety issues were not being adequately handled. SLAC fared much better than many of the labs. Although the Tiger Team wrote up 187 findings in a large report called the "Tiger Team Assessment of the Stanford Linear Accelerator Center," none of the findings were serious enough to warrant the curtailment of any operations at SLAC. However, the findings did show that SLAC needed to pay greater attention to environment, safety and health issues.

Anyone who was here during the Tiger Team era remembers the flurry of activities involved in preparing for and hosting the tigers. Dealing with those hungry felines was no easy feat. But SLAC survived the encounter and grew from the experience. Of course, the word "tiger" took on new meanings and can never be used at SLAC in polite company again, but life goes on.

After the Tigers issued their report, SLAC was required to prepare a Corrective Action Plan (CAP) to address the findings. SLAC's CAP includes 181 tasks that deal with the Tiger Team's 187 findings (some tasks address more than one finding). Among the Tiger Team findings was that SLAC did not have a system in place to track the progress of tasks and action plans designed to meet the requirements of various audits, regulatory requirements, and self-inspections. As a result of this finding, a Corrective Action Management System (CAMS) was created in the ES&H Division's Planning and Assessment Department.

The CAMS database is used to keep track of each task in the CAP. When the system was first established, each finding was evaluated and a task leader was selected to help design and oversee the task that deals with that finding. Tasks range from rather simple items to very complex projects. They may be anything from the installation of new safety equipment to the implementation of an asbestos management plan.

Each CAP task has a milestone schedule that provides a timeframe for the completion of the task. By monitoring where each task is in relation to its milestone schedule, and entering this information into their database, the Planning and Assessment Department tracks the progress of each task. When a milestone schedule shows that a task is due to be completed within the next ninety days, the task leader is sent a reminder notice. The task leader responds to the notice with information about the actual status of the task, and the database is updated accordingly. When the task leader states that a task has been completed, the task leader sends brief, supporting documentation to the Planning and Assessment Department (PAD). After the PAD staff reviews the documentation, it is forwarded to the Associate Director of the ES&H Division for sign off. The final stage in the close-out of a CAP task occurs when representatives from the local DOE Site Office validate that the finding has been satisfactorily resolved.

According to Mary Ross, Head of the Planning and Assessment Department, SLAC has completed 136 of the original 181 tasks, and, to date, 44 of these have been validated by the DOE Site Office. Of the remaining 45 open CAP tasks, 32 have completion dates scheduled for the future and 13 tasks are overdue.

In addition to tracking the progress of the remaining 45 CAP tasks, the Planning and Assessment Department tracks the progress of many non-tiger assessments, audits, inspections and regulations. So, while SLAC has succeeded in addressing many of the findings of the Tiger Team, we're not quite out of the jungle.

*—Jack LaVelle and Melinda Saltzberg*

# Communications/Meetings in the Electronics Age

THE LAB OFFERS many types of electronic equipment, capabilities, and support services to help facilitate meetings, conferences, and seminars. Electronic communications capabilities range from operational "plug-and-play" mode to highly experimental forms. The basic categories of lab-wide support are audio-visual services provided by the Public Affairs Office and audio- and video-teleconferencing provided by Telecommunications.

The following descriptions will help identify your needs and enable you to request services in the most direct manner. It is the requester's responsibility to reserve the necessary facilities, provide an account number for staff support, obtain detailed technical requirements, and schedule any necessary setup time. The more clearly your needs are presented, the better we can provide support for your activity. Lead time to accommodate special requests is always an asset and providing appropriate details in advance will save time during the actual event.

## Audio-Visual

Audio-visual support services range from providing technical expertise to scheduling audio-visual operators for videotaping seminars or technical documentation projects. Audio-Visual Services are provided by the Public Affairs Office (Herbert McIntye, ext. 4787).

The Auditorium is equipped with an audio-video recording system including a video projector for large screen video or computer projection. A live program in the Auditorium can be routed to the Orange Room and can also be transmitted to Lawrence Berkeley Laboratory (LBL). Setup and test time are required to assure performance for meetings and seminars.

To reserve the SLAC Auditorium, please call the Public Affairs Office (ext. 2204). You will be asked what form your event will take, the number of attendees, and the required audio-visual support. Audio-visual equipment other than an overhead transparency projector requires an operator, for which you will need to provide an account number.

## Satellite Broadcasting

In addition to the meeting and conference facilities, the Auditorium now houses a 260-channel satellite receiving system. Typically, this system is used for receiving DOE meetings conducted in Washington, DC using satellite broadcast technology. It can be used for other satellite broadcast programs that SLAC would like to receive. These programs are routed to the Auditorium control room for video recording and to the Auditorium and/or the Orange Room for viewing. Requests for meetings that include satellite broadcast are forwarded to the Public Affairs Office at the time the Auditorium is reserved.

## Video Conferencing

Video conferencing (circuit-based or switched) is available for point-to-point and multi-point conferences where both audio and video are required. The Video Conferencing Service at SLAC is part of the Energy Research Video Network (ERVN). The central hub for this network is located at Lawrence Livermore National Laboratory. Over 30 universities and labs globally are connected through ERVN. To schedule a video conference, contact the SCS Help Desk (ext. 2406) at least 24 hours in advance.

Specific requirements have to be provided before a conference can be scheduled in the automated scheduling system. These include conference title, date and time; conference requester (end user) and e-mail address; conference attendee (or leader) and e-mail address; and remote site(s) room coordinator(s) contact information. It is the requester's responsibility to reserve remote site room(s) and alert Telecommunications of any special requirements. (For more detail, see *SLAC Business Briefs*, Vol. 2, No. 2, February 1995.)

## Teleconferencing

On-site participants can initiate a telephone conference call (audio only) with several off-site parties. Teleconferencing calls can easily be established using any SLAC telephone that has the appropriate class of service for the call (for example, long distance or international calling privileges). A table-top voice-point teleconferencing unit can be connected to the on-site telephone that amplifies the communication to and from the off-site participants. Another mechanism for establishing a teleconference call with people at multiple sites is a "meet me" bridge-type of arrangement. "Meet me" bridger conference calls require using commercial network services. Fran Balkovich (ext. 3806) can help you make those arrangements for "meet bridge" conference calls and answer any other questions you may have about teleconferencing.

## Microwave link to LBL

SLAC has a dedicated two-way audio-video microwave conference system in the Yellow Room for meetings with Lawrence Berkeley Laboratory (LBL). Reservations are made for the microwave link by contacting the A&E

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