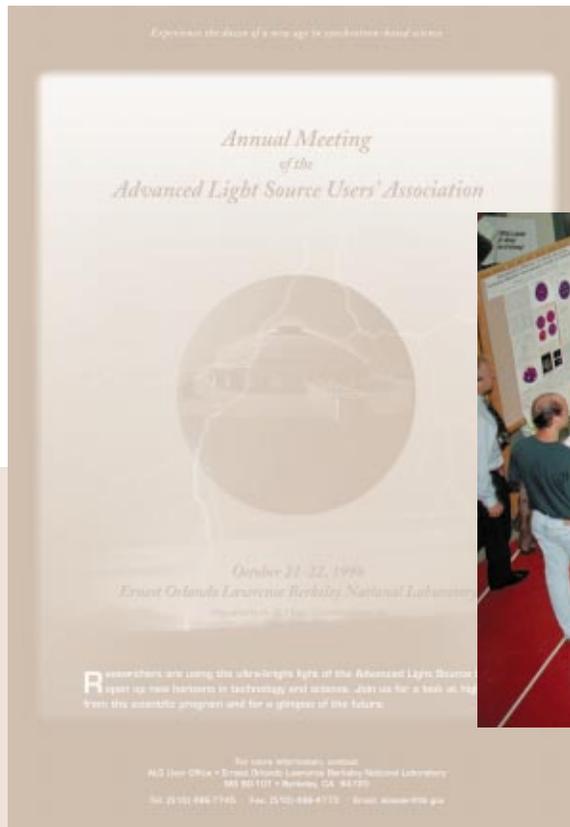


SPECIAL EVENTS



August's INTERACTIVE BIOGRAPHY from the People at the ALS

Annette Greiner

When she is not busy coding ALS documents for the WWW, researchers seek her out to decode their scientific manuscripts for the rest of the world to understand.

AT THE ALS
What does she do at the ALS?
What does her job involve?
What is a typical day at the ALS like for her?
What she is doing now?
What are the highs and lows of her job?

KEY & PERSONAL
What is she really like?
How did she get here?
What does she do in her spare time?
What is her music?
What is something else cool that she has done?

Click here to see something cool that she has worked with!

MY TURN
Click here to send your own questions to Annette Greiner.

PUZZLE CHALLENGE
Click here to be the first to enter your solution to Annette Greiner's PUZZLER!

ANNETTE GREINER'S PUZZLER:
"Annette Greiner's favorite quote is "Simplify, simplify," from Henry David Thoreau. She finds that it works for writing coding, and life. Can you simplify this sentence into just four words?"

The casino under our legal responsibility in case of fault is penalties is harboring on the external limiting layer of flexible cover and supplying food for vertically moving, parasitic crustaceans.

BLAST FROM THE PAST
Click here to see past biographies with shadow questions and interviewee answers!

Berkeley Lab's MicroWorlds Contents | Advanced Light Source Home Page

The Bright & The Busy

Interactive biographies of people at Berkeley Lab's Advanced Light Source

Annette Greiner

When she is not busy coding ALS documents for the Web, she is decoding scientific texts so that the rest of the world can understand them.

What does she do at the ALS?

- What does her job involve?
- What is she doing now?
- What are the highs and lows of her job?
- What is a typical day like for her at the ALS?

What is she really like?

- How did she get here?
- What is very important to her?
- What does she do in her spare time?
- What is something else cool she has done?

Click here to see Annette's answers to student questions!

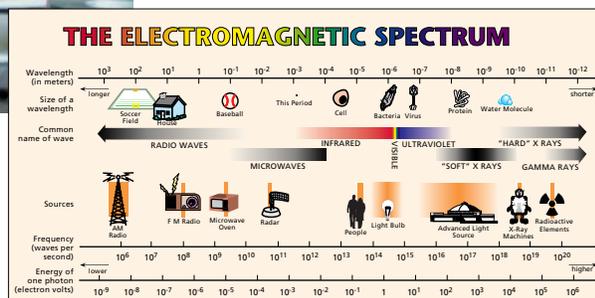
Click here to see something cool she has worked with!

EDUCATIONAL OUTREACH



TEACHERS' WORKSHOP

In March 1996, the ALS followed up on interest generated at the Lab-wide Open House in 1995 by holding a workshop for teachers from the San Francisco Bay Area and beyond. Teachers explored the ALS and related science topics through tours, presentations, and hands-on activities designed to take back to their classrooms. Several teachers from the workshop have prepared their classes for visits to the ALS using these activities and the popular *Inside the ALS* and *Electromagnetic Spectrum* posters.



SCHOOL VISITS

Student visits to the ALS don't stop with a tour of the machine; opportunities abound to put this huge research tool in context. Above, students explore the behavior of polarized light and its interaction with materials. At right, getting friendly with a 4000-kg (8800-lb) bend magnet gives students an appreciation for the scale and precision of the ALS.





REACHING PEOPLE CLOSE TO HOME...

Cal Day in April 1997 provided opportunities for members of the local community to learn more about the ALS. During the Cal Day Open House, organized by the University of California at Berkeley, ALS staff gave crowd-pleasing "Cool Science" demonstrations with liquid nitrogen, vacuum pumps, and other scientific tools used at the ALS.

...AND AROUND THE WORLD

Student intern Andrea Macfie spent the summer before her senior year in high school at the ALS, creating a fresh new section for the Microworlds Web magazine. "The Bright and the Busy" tells a worldwide student audience about the variety of jobs at a scientific facility and the people doing those jobs. It features profiles of ALS staff members describing what they do at the ALS and their interests off the job. Microworlds (<http://www.lbl.gov/MicroWorlds/>) makes ALS science accessible to students and teachers by presenting articles with integrated activities to teach the basic concepts involved.



Richard Lak's MicroWorlds Content | Advanced Light Science Home Page

The Bright & The Busy

Interactive Biographies of people at Berkeley Lab's Advanced Light Source



Richard DeMarco

In a machine the size of a football field, Richard DeMarco and his team survey and align mirrors to an accuracy of the width of a human hair.



At the ALS

What does he do at the ALS?

- What does his job involve?
- What is he doing now?
- What are the highs and lows of his job?
- What is a typical day like for him at the ALS?



Up Close & Personal

What is he really like?

- What does he do in his spare time?
- What is most important to him?
- What is something else cool he has done?
- How did he get here?



My Turn

Click here to see Richard's answers to student questions!



Check it Out!

Click here to see something cool he has worked with!

SCIENCE BOWL WINNERS PARTICIPATE IN RESEARCH

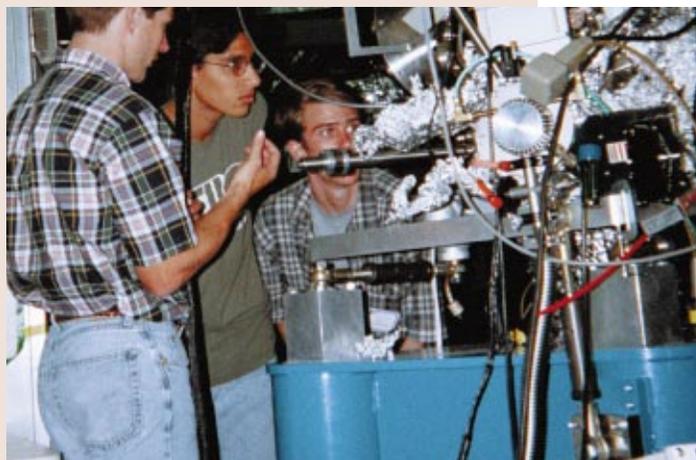
When choosing their prize for prevailing over 1,700 other teams in the U.S. Department of Energy–sponsored Science Bowl, the team from Venice (California) High School passed up a trip to Alaska’s North Slope for a chance to visit the ALS. Team members received a crash course on the ALS for a week in August 1996, from survey and alignment of beamline components to residual gas analysis in ultra-high-vacuum systems and computer-aided design. They then became the first high-school students to participate in experiments on beamlines at the ALS.



Above, the team (clockwise from upper left): Candice Kamachi, My Le Hoang, Richard Erdman (coach), Chris Mayor, Noah Bray-Ali, and David Dickinson.



Above and at right, the team members at work, imaging malaria-infected red blood cells with the x-ray transmission microscope at Beamline 6.1.2, and using photoemission spectroscopy at Beamline 9.3.2 to probe the surface and bulk properties of various materials.



ALS A FOCUS OF COOPERATIVE EFFORT



INDUSTRIAL COLLABORATION A SUCCESS

Representatives from Intel and Applied Materials joined ALS scientists, engineers, and shops staff on March 5, 1997, to celebrate the on-schedule completion of the first application-specific beamline. Beamline 7.3.1.2 delivers light to a micro x-ray photoelectron spectroscopy endstation (see p. 40) constructed with funding from the two companies and the U.S. Department of Energy and designed to analyze the microstructures and small-area interfaces in integrated circuits (ICs) and the silicon wafers from which ICs are made.

A VISIT FROM THAILAND

In May 1997, 23 visitors from the Parliament of Thailand, including six Parliament members, visited Berkeley Lab and the ALS. Led by Pavena Hongsakul (sixth from left, standing), member of Parliament and chair of the House Committee on Science and Technology, the group made a world-wide tour to explore the contributions that high-technology companies and facilities make to the science, technology, and economies of their home countries. A new synchrotron light source, the Siam Photon Project, is under construction in Khorat, Thailand.



NEW LINKS WITH CHINA

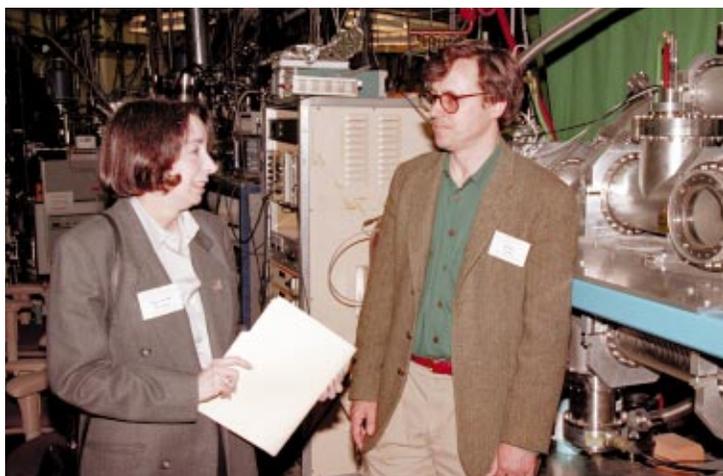
Yang Fujia (left), President of Fudan University in Shanghai and Director of the Shanghai Institute of Nuclear Research (SINR), visited Berkeley Lab in July 1996 to formalize an agreement between SINR and Berkeley Lab on cooperation in synchrotron research. A dinner in Berkeley and an exchange of gifts with Brian Kincaid on behalf of the ALS marked the occasion.

ALS USERS' ASSOCIATION MEETING



USERS' MEETING DRAWS A CROWD

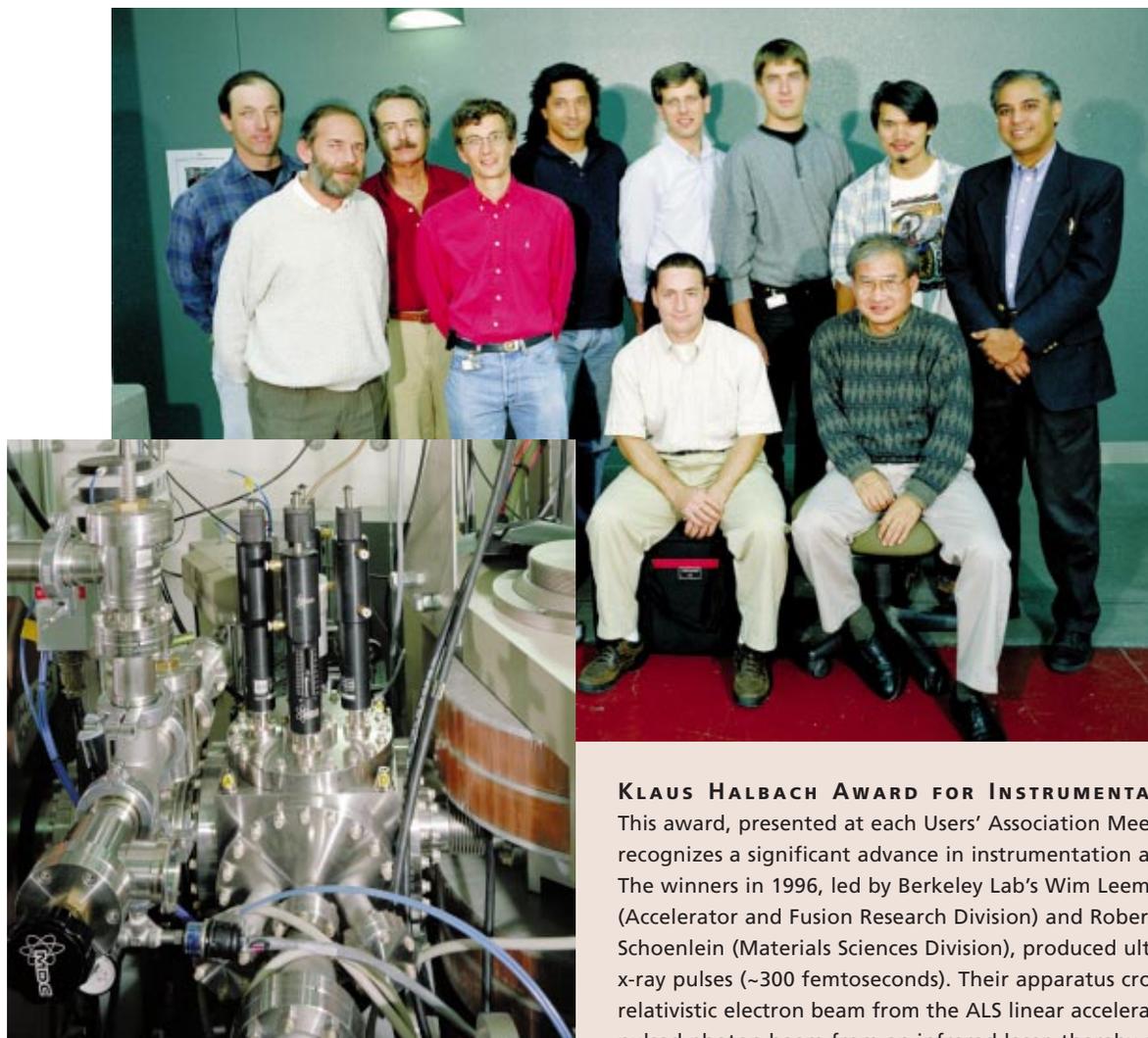
The October 1996 meeting of the ALS Users' Association attracted 220 participants from 12 countries for talks, workshops, and a chance to view the ever-increasing number of beamlines. At the poster session, held in conjunction with vendor exhibits, participants could discuss their work and see the latest offerings in beamline and endstation components.



Patricia Dehmer, head of the Office for Basic Energy Sciences at the U.S. Department of Energy, gave a talk and also came to the experiment floor (left) to talk with scientists about their work.

A banquet (below) gave participants and family members a chance to relax, enjoy each other's company, and witness the presentation of awards.





KLAUS HALBACH AWARD FOR INSTRUMENTATION

This award, presented at each Users' Association Meeting, recognizes a significant advance in instrumentation at the ALS. The winners in 1996, led by Berkeley Lab's Wim Leemans (Accelerator and Fusion Research Division) and Robert Schoenlein (Materials Sciences Division), produced ultrashort x-ray pulses (~300 femtoseconds). Their apparatus crosses the relativistic electron beam from the ALS linear accelerator with a pulsed photon beam from an infrared laser, thereby scattering the photons up to x-ray energies. Above, the group. Standing, left to right: Jim Dougherty, Max Zolotorev, Leon Archambault, Wim Leemans, T. Ernest Glover, Robert Schoenlein, Peter Balling, Alan Chin, Swapan Chattopadhyay. Seated: Paul Volfbeyn, Kwang-Je Kim. Not pictured: Charles Shank.

ALS-SPONSORED WORKSHOPS

Adventures in Light and Science Teachers' Workshop
March 4 and 16, 1996

High-Resolution Computed Microtomography
August 12–13, 1996

ALS Users' Association Annual Meeting and Workshops
October 21–23, 1996

Molecular Environmental Science at the ALS
March 27–28, 1997