

COMMUNITY CONNECTIONS

Supporting local communities through science education and charitable giving

Each year the Laboratory engages in a wide range of community activities. Many are directed at enhancing science, technology, engineering, and mathematics (STEM) education. Other prominent community outreach efforts include volunteer work supporting local service agencies and charitable giving. In addition, LLNS conducts an annual grant program that provides a direct investment in community education, arts, and services.



Each year, the Laboratory hosts more than 100 instructors from high schools and community colleges at its Teacher Research Academy, providing state-of-the-art lessons in science and technology to educators.

Laboratory employees participate in the Run for HOME (Helping Others More Effectively). This event, held in late October, kicks off LLNL's annual charitable-giving campaign.

Learning That's Fun-damental

More than 12,500 children at the fourth- and fifth-grade levels, along with their chaperones, were introduced to scientific concepts through hands-on experiments at Fun With Science events. Presented by Laboratory employees and retirees, the popular program provides an entertaining introduction to scientific phenomena and helps prepare young minds as they embark on their science education. In addition to shows held at LLNL's Discovery Center, Fun With Science is presented at street fairs, science festivals, and other special events.

Partnerships in Education

Each summer, educators look to LLNL's Teacher Research Academy to gain key skills they need to bring state-of-the-art science into their classrooms—from biotechnology and high-performance computing to 3D printing and astrophysics. In FY 2016, the Laboratory hosted more than 110 teachers from all over California—and more than 500 students across the nation—for internships and educational training.

The Laboratory remains committed to introducing practical science and technological curricula to the classroom with support provided by the LLNS Community Gift Program (see p. 21). In addition, senior leaders from the Laboratory, including the director and deputy director, met with members of the Livermore Joint Unified School District and science curriculum educators to discuss common goals and opportunities for future collaboration.

Science Fare at the Fair

Livermore continues to promote science through various fairs and festivals. In November, the Laboratory participated in the Bay Area Science Festival, which attracted more than 30,000 young scientists and their families to AT&T Park in San Francisco, California. In addition to participating in presentations of Fun With Science, attendees were also challenged to show off their scientific know-how and use their pedal power to make lights glow and small household appliances hum.

Closer to home, the Laboratory continued to sponsor the annual Alameda County Science and Engineering Fair (ACSEF), held in March. Approximately 680 middle- and high-school students and more than 175 teachers from 18 school districts participated in the fair. More than 170 awards and scholarships were distributed for first, second, and third place, and 60 special awards were given by national and local government and industry sponsors. The ACSEF is affiliated with the Intel International Science and Engineering Fair and the California State Science Fair, the state's most elite science competition for middle- and high-school students.



LLNL's popular Fun With Science program, an interactive "show and tell" of scientific concepts, prepares young minds as they embark on their science education. Although geared toward grade-schoolers, the show is popular with all ages.

LLNL also sponsored Expanding Your Horizons, held several times a year throughout the San Francisco Bay Area, to introduce STEM careers to middle- and high-school girls. The free events pair women scientists and engineers with students to conduct hands-on demonstrations of science and discuss career paths.

Saturday is Science Day

LLNL's Science on Saturday (SOS) lecture series for middle- and high-school students plays to sold-out crowds every year. More than 5,000 people attended this season's 12 lectures held in the cities of Livermore and Tracy, and plans are underway to expand the program to Oakland. Each topic highlights cutting-edge science and technology at the Laboratory. This season, SOS presented themed discussions on women in STEM—pairing Laboratory researchers with local science educators to discuss topics such as searching for new elements, placing human physiology on a microchip, harnessing fusion energy, and understanding the world through statistics. As always, the presentations are free of charge and recorded for the University of California's TV website and YouTube.

The Laboratory takes a look at Hollywood's perspective on science and technology through the Science on Screen lecture series for students ranging from middle-school to college level. It combines popular feature-length movies with prominent researchers from the Laboratory, who discuss the scientific viability of what's depicted in these classic, cult, science fiction, and documentary films. This year's

series of three lectures, again playing to sold-out audiences, looked at the study of earthquakes, re-creating the power of the sun through fusion energy, and miniaturizing human physiology.

The Laboratory also partners with Las Positas College for an annual Science and Engineering Seminar Series. LLNL researchers present "behind the scenes" perspectives of how multidisciplinary science really works. The seminars, targeted for science majors and faculty, help connect students to potential career paths.

HOME Campaign and Community Gifts

Employees and LLNS raised more than \$3.8 million in the 2016 HOME (Helping Others More Effectively) campaign, an annual charitable drive that benefits community and nonprofit agencies in the Tri-Valley, San Joaquin Valley, and greater San Francisco Bay Area. Employees pledged almost \$2.8 million, while LLNS contributed \$1 million in matching funds.

At an October ceremony at the LLNS office in the city of Livermore, Director Bill Goldstein presented checks totaling \$100,000 to the recipients of the 2016 LLNS Community Gift Program. LLNS received 81 applications totaling almost \$700,000 in requests. Thirty-four applications were selected for awards through a committee review process. The majority of these awards serve children in the Tri-Valley and San Joaquin County, and focus on science, mathematics, education, and cultural arts.



The Laboratory's hands-on displays and scientific challenges have become a mainstay of the annual Bay Area Science Festival, held at AT&T Park in San Francisco, California, in November. The festival attracts more than 30,000 aspiring scientists and their families.



What began as a simple lecture series for middle- and high-school students has turned into a highly anticipated annual gathering. Science on Saturday, featuring LLNL scientists and engineers speaking about their research, plays to standing-room-only crowds in Livermore, and Tracy.