

COMMUNITY CONNECTIONS

Partnering with our neighbors through science education and charitable giving



Children gather around Livermorium Plaza's focal point and rotate the floating-on-a-fountain-of-water, five-foot-diameter granite sphere that represents the nucleus of a livermorium atom.

The Laboratory is an active member of local communities, offering a wide variety of programs to enhance science, technology, engineering, and mathematics (STEM) education. Outreach extends beyond the classroom. This year LLNL staff and LLNS donated more than \$3.6 million to local nonprofits, while hundreds of employees donated their time to local service agencies. In FY 2022, more events and programs were held in-person as COVID restrictions were lifted.

CITY CONNECTIONS

In June 2022, representatives from the City of Livermore, NNSA, and LLNL joined other community members to dedicate Livermorium Plaza in downtown Livermore. The park honors the Laboratory's contributions to the discovery of element 116—livermorium—and boasts a five-foot-diameter, 18,000-pound floating granite sphere fountain that represents the atom's nucleus. The sphere is inscribed with facts about the element's discovery. Signs within the plaza provide additional scientific information for visitors.

The Laboratory also collaborated with the City of Livermore to advance local climate actions and build community-wide resilience to climate change impacts.

REACHING TEACHERS AND STUDENTS

LLNL debuted an all-new Virtual Tour Map, providing an interactive experience for visitors to learn about the Laboratory and its missions by navigating the site online. In addition, nearly 400 high-school students attended virtual NIF tours and the Laboratory's Scientist in the Classroom program. LLNL also conducted other virtual programs to help local teachers improve and broaden their STEM education offerings. For example, a NIF scientist took the Laser Road Show to fifth-grade classes in the Livermore Valley Joint Unified School District (LVJUSD), engaging nearly 900 students in demonstrations and hands-on activities about special properties of light.



Hands-on projects offer a learning experience about the Laboratory's research and provides SAGE program participants opportunities to gain technical skills.

THE LABORATORY GOES TO SCHOOL

Throughout FY 2022, LLNL worked directly with Livermore-area schools to continue promoting science education and technical skills for students. The Laboratory hosts the Girls Who Code program, an after-school coding program for LVJUSD's middle- and high-school students. New in 2022, the Laboratory expanded the program to include nearly 100 students from the Tracy Unified School District. MathCounts continues to draw Livermore middle-school students to help improve their math and problem-solving skills. In February 2022, the Science on Saturdays' virtual series theme was "Energy and the Environment." Accomplished LLNL scientists and researchers spoke to more than 500 middle- and high-school students about the Laboratory's efforts in energy research and climate change.

A SUMMER OF SCIENCE

During the summer, the Laboratory provided exciting opportunities for budding scientists to learn more about STEM disciplines and contribute to ongoing research projects. More than 800 college undergraduate and graduate students completed LLNL summer internships through virtual interactions with mentors and various web-based learning activities. In July, nearly a dozen middle-school students were introduced to robotics during the 8th Grade Tech Workshop and given programming instruction in Python and Blockly. The

Biotech Summer Experience in July brought 22 local high-school students together for two weeks of immersion in biotechnology and bioinformatics. Students took a deep dive into the DNA of duckweed, a promising potential source of biofuel.

Science Accelerating Girls Engagement (SAGE) in STEM was a new program for summer 2022. LLNL hosted 20 girls for a weeklong camp to learn about the science and technology research and careers at LLNL and in the national laboratory system. The Laboratory continued to offer the Teacher Research Academy (TRA) program virtually, hosting six workshops for middle- and high-school teachers and adding a new Climate Science TRA to the offerings.

DATA SCIENCE EVENTS AND CHALLENGES

The Laboratory's fifth Women in Data Science (WiDS) regional event took place in March, in conjunction with the worldwide event at Stanford University. The program for this one-day virtual conference included a livestream of the Stanford conference as well as workshops, mentoring sessions, and networking opportunities. This year's Livermore event was kicked off by a fireside chat with Kimberly Budil, LLNL's first woman director. The Laboratory's event was one of more than 200 WiDS events organized in 60-plus countries held in conjunction with a conference featuring prominent women data

scientists from around the world.

Students from UC Merced worked with LLNL mentors to identify drug compounds that could be used to treat COVID-19 during a two-week Data Science Challenge. Two dozen students, including recent graduates, undergraduates, and Ph.D. candidates in computer science, engineering, mathematics, and biology, formed into teams led by the doctoral students. Each team worked with a Laboratory computer scientist on real-world drug discovery problems, using machine learning and other advanced tools to find small molecule inhibitors of SARS-Cov-2, the virus that causes COVID-19.

HOME CAMPAIGN AND COMMUNITY GIFTS

Laboratory employees and LLNS raised more than \$3.6 million in the 2022 HOME (Helping Others More Effectively) campaign. The charitable drive benefits community and nonprofit agencies in the Tri-Valley, San Joaquin Valley, and greater San Francisco Bay Area. Employees pledged more than \$2.6 million, while LLNS contributed \$1 million in matching funds. In December, LLNS announced the recipients of the 2022 Community Gift Program, with funds totaling \$200,000. Many of the awards serve children in the Tri-Valley area as well as Contra Costa, San Francisco, and San Joaquin counties, and focus on literacy, STEM education, and cultural arts. Other recipients focus their charitable efforts toward children, families, senior citizens, and individuals in need of assistance.