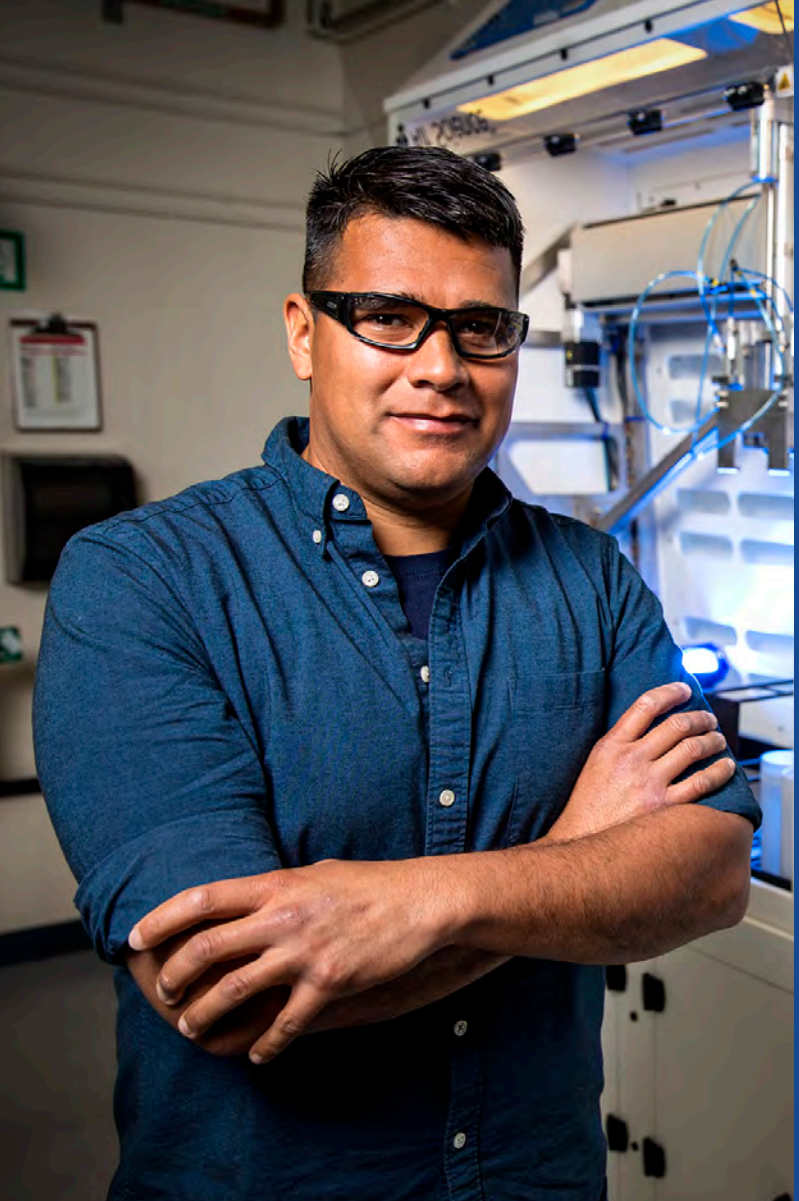
Lawrence Livermore National Laboratory

We're science and technology on a mission.

JOIN US AND MAKE YOUR MARK ON THE WORLD!



Lawrence Livermore National Laboratory

Build a future with us and make your mark among colleagues who share your passion for big ideas and believe strongly in our mission.

YOU MATTER

The power of our people… in a world of opportunities.

Our square-mile campus is flooded with brilliant minds, innovative work, and a first-class workforce environment with our signature multidisciplinary teamwork approach as our principal strength.

We have accomplished many milestones and contribute greatly to national security, international stability, and human progress. However, to continue our momentum and legacy of pioneering the future we need someone like you who believes in big ideas and wants to help unlock and solve some of the most interesting challenges that face our nation and the world.

Your ideas, strong work ethic, and passion is our next step to making a difference.

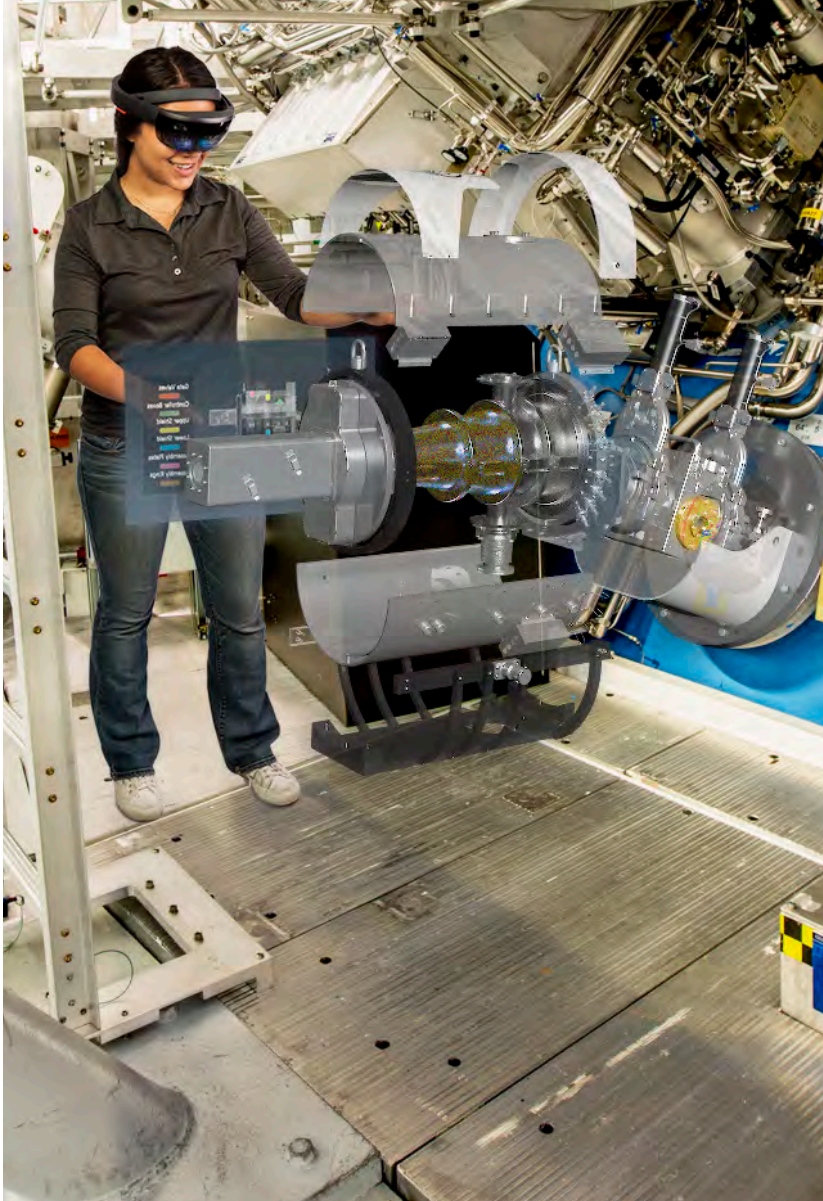
ABOUT US

Lawrence Livermore National Laboratory strengthens national security through the development and application of innovative, world-class science and technology (S&T). We ensure the safety, security, and effectiveness of America's nuclear arsenal and diminish the likelihood and impact of war, terrorism, and natural and human-caused disasters. Combining mission focus and S&T excellence has been the Laboratory's distinguishing hallmark since its inception in 1952.

The extraordinary scientific and engineering capabilities of our talented employees make the Laboratory a wellspring of innovation. Recognizing that research and technological prowess is increasingly global in nature, we partner with industry, government agencies, universities, and non-governmental organizations to cultivate entrepreneurship.

We encourage researchers to work with us at our institutes and capability centers that provide specialized resources and expertise in many S&T disciplines. Our user facilities provide world-class, one-of-a-kind capabilities to the broader scientific community.

We have a driving passion to excel, lead, and ultimately change the world.



COMMUNITY

We support local communities by providing educational opportunities and charitable giving. The Laboratory is committed to many educational and diversity outreach programs, business partnerships, and economic development initiatives within our local communities.

Other priorities are STEM youth-educational programs such as Fun with Science, STEM Day at the Lab, Expanding Your Horizons, and Science on Saturdays. Our annual grant program provides direct investment in community education, arts, and services.

HOME CAMPAIGN The Laboratory's Helping Others More Effectively (HOME) Campaign is a major community support event. It begins with an annual charity run benefiting local nonprofit agencies and umbrella groups that improve the daily lives of our neighbors across California's Tri-Valley and Central Valley regions.

FUN WITH SCIENCE PROGRAM Our employees and retirees present hands-on experiments to more than 12,500 children at the fourth- and fifth-grade levels. The program is an entertaining introduction to scientific

Locally committed. Personally involved.

concepts and helps prepare young minds as they begin their science education.

SCIENCE ON SATURDAYS Science on Saturday, our annual lecture series for middle- and high-school students, plays to sold-out crowds. Each speaker discusses a different aspect of cutting-edge research at the Laboratory. The free presentations are recorded for the University of California's TV website and YouTube.

EDUCATION PARTNERSHIPS Each summer, local educators attend our Teacher Research Academy to gain skills needed to bring state-of-the-art science into their classrooms. Topics include biotechnology, high-performance computing, 3D printing, and astrophysics.

The Lawrence Livermore National Laboratory invites teachers and students for STEM DAY AT THE LAB, an exciting visit of science exploration. A typical visit includes tours of the National Ignition Facility (NIF) and the National Atmospheric Release Advisory Center (NARAC), lunch with a panel of scientists and a visit to the LLNL Discovery Center.

COMMUNITY TOUR PROGRAM Each year, visitors are given the opportunity to tour Laboratory facilities including NIF, NARAC, and the Center for Accelerator Mass Spectrometry (CAMS).

For more information, visit diversity.llnl.gov/outreach/stem-programs.

OUR BENEFITS

We believe our workforce is our most valuable resource. Our mission is to ensure employees' needs are met while enabling their focus on making the world safer. Our approach to benefits is about managing "total health:" the physical, emotional, and financial components of our lives. We offer a comprehensive benefits package that will help you and your family lead a healthy life, save for the future, and enjoy your career at the Laboratory.

EDUCATION AND TRAINING Through our online learning system and our Education Assistance Program, employees have an opportunity to grow and develop by pursuing higher degrees or certifications.

FLEXIBLE WORK SCHEDULE OPTIONS The Laboratory offers a variety of alternative work schedules to accommodate employees' unique work-life needs.

It's all about our employees.

RETIREMENT We provide a 100% employer matching contribution up to 6%. In addition, you receive an automatic employer contribution to the 401(k) plan based on years of service: 3.5% for 0–9 years of service, 4.5% for 10–19 years of service, and 5.5% for 20+ years of service.

ON-SITE WELLNESS SERVICES We offer medical examinations, personal counseling, risk evaluations, and health education and resources.

Vacation Time | Sick Time | Paid Holidays

Health Plans | Disability Insurance

Flexible Spending Account | Legal Plan

View our wide variety of benefits at benefits.llnl.gov.

WORK–LIFE

A fulfilling work-life balance is an important part of our culture because "a-ha!" moments don't always happen at your desk. We provide flexible work schedules and numerous recreational opportunities through our many activity groups, on-site fitness center, and wellness resources.

The Livermore Laboratory Employee Services Association (LLESA) is dedicated to providing quality recreational and educational programs and services to enrich the lives of our employees.

Keeping it all in perspective.

"I am often more creative while running or riding. Because scientists are passionate, we think about physics all the time. I find breakthroughs as often in my office as while climbing the hilly roads around the Lab."

— Marius

The Lab is located in the heart of the Livermore Valley in the East Bay area of California, close to major metropolitan areas like San Francisco, Oakland, and San José. The city of Livermore offers a rural/suburban environment replete with lush vineyards, scenic rolling hills, a downtown area, shopping, and a diverse range of recreational activities like hiking, fishing, and camping. For Lab employees and their families, the San Francisco Bay Area provides an exceptional range of resources, including access to major universities, other Department of Energy labs, and various research and development communities.

On-Site Farmers Market | Group Exercise Classes and Gym | Children Center

Discount Programs | Gardening

More Than 35 Different Networking Groups

Author Series | Music Concerts

And Many More! Visit llesa.com

EDUCATION

There are many educational opportunities to choose from at the Laboratory. Whether you are faculty, a postdoc, a Ph.D. candidate, a recent graduate, or a current student, there is a program for you. Explore the following options and find one that fits your educational status and career interests.

Supporting education through internships and postdoc programs.

> **“LLNL postdocs play an important role in bearing new discoveries in our quest for scientific truth and knowledge.”**
>
> *— Alysa*

CGSR RESEARCH INTERNSHIPS
For an undergraduate, graduate, or those accepted into a program
cgsr.llnl.gov/research-internships

DOE NNSA STEWARDSHIP SCIENCE GRADUATE FELLOWSHIP
For Ph.D. candidates
krellinst.org/ssgf/about-doe-nnsa-ssgf

DOE OFFICE OF SCIENCE GRADUATE STUDENT RESEARCHER PROGRAM
For Ph.D. candidates
science.osti.gov/wdts/scgsr

DOE OFFICE OF SCIENCE UNDERGRADUATE LABORATORY INTERNSHIPS
For students or recent college graduates
science.osti.gov/wdts/suli

DOE SCHOLAR PROGRAMS
For students or recent college graduates
orise.orau.gov/doescholars

LAWRENCE FELLOW PROGRAM
For postdocs within 5 years of graduation
fellowship.llnl.gov

LIVERMORE GRADUATE SCHOLAR PROGRAM
For Ph.D. candidates
lgsp.llnl.gov

LLNL POSTDOC PROGRAM
For postdocs within 5 years of graduation
st.llnl.gov/opportunities/postdocs

LLNL STUDENT INTERNSHIP PROGRAM
For students or recent college graduates
scholars.llnl.gov

NNSA MINORITY SERVING INSTITUTIONS INTERNSHIP
For students at a participating minority-serving institution
energy.gov/nnsa/nnsa-minority-serving-institution-partnership-program

SIDNEY FERNBACH POSTDOCTORAL FELLOWSHIP
For postdocs within 5 years of graduation
computing.llnl.gov/fernbach

UC LAB FEES RESEARCH PROGRAM
For faculty
ucop.edu/research-initiatives/programs/lab-fees

Internships: scholars.llnl.gov

Postdocs: postdocs.llnl.gov

Job Listings: careers.llnl.gov


ONE
MULTIPLE


LAB
CAREERS

Your opportunity awaits you at Lawrence Livermore National Laboratory!

ORGANIZATIONS

Lawrence Livermore is composed of many organizations that each contribute to our overall mission and success. Whether you are a scientist, engineer, technician, facilities specialist, or other professional, there is a place for you at the Lab.

COMPUTING

DIRECTOR'S OFFICE

ENGINEERING

GLOBAL SECURITY

NATIONAL IGNITION FACILITY & PHOTON SCIENCE

OPERATIONS & BUSINESS

PHYSICAL & LIFE SCIENCES

WEAPONS & COMPLEX INTEGRATION

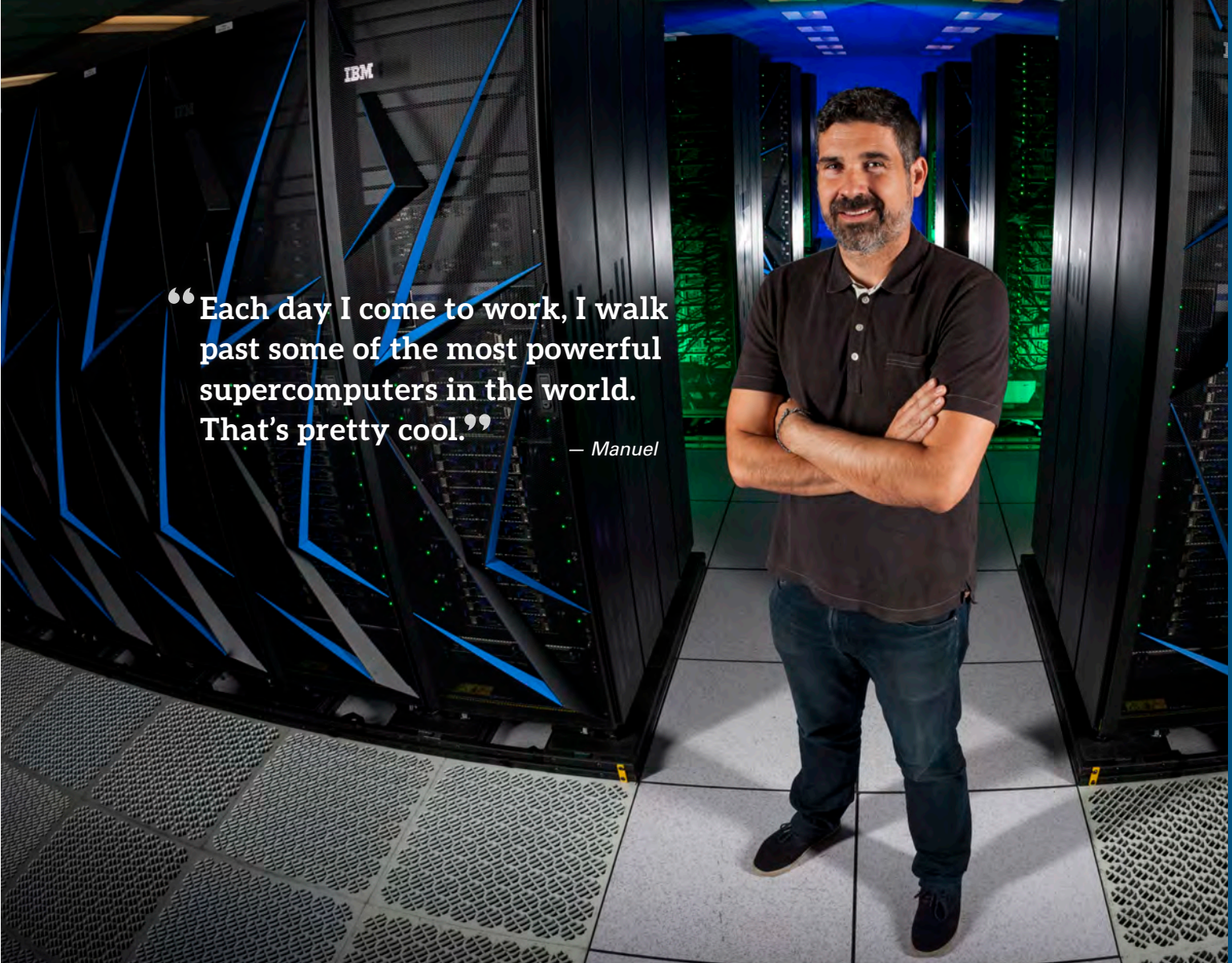
COMPUTING is responsible for LLNL's computational ecosystem, including research, platforms, and services. We are making the nation and world safer by shaping the frontiers of high performance computing (HPC), computer science, data science, cyber security, and information technology.

We advance scientific discovery through leading-edge research; mission-driven data science; complex modeling, simulation, and analysis; and creative technologies and software solutions. Our innovations have led to a better understanding of matter and material behavior, radically altered climate science research, made cars safer by simulating crash tests, and produced the most detailed 3D simulation of a beating human heart.

We design, develop, and deploy premier HPC capabilities, including some of the fastest computers in the world. Our newest and most advanced supercomputer, Sierra, is focused on predictive applications to sustain the nation's nuclear deterrent. Sierra's innovative architecture brings speed-ups on the order of 6 times for many of our applications, processing these crucial simulations efficiently and enabling the routine use of 3D approximations.

We are taking supercomputing to the next level by preparing for exascale systems, such as El Capitan, which could be up to 10 times more powerful than today's supercomputers when it comes online in 2023. We also push the computing frontier in neural and quantum architectures.

Learn more: computing.llnl.gov



“Each day I come to work, I walk past some of the most powerful supercomputers in the world. That’s pretty cool.”

— Manuel

The DIRECTOR'S OFFICE is a multidisciplinary organization specializing in different aspects in support of the Lab's mission.

Our DISCOVERY CENTER provides visitors with a window into state-of-the-art research programs, computational capabilities, and experimental tools.

ENVIRONMENT, SAFETY, AND HEALTH (ES&H) enables and supports the Lab mission through effective and efficient environmental, safety, and health programs.

INTERNAL AUDIT & ETHICS (IAED) proactively assists our Board of Governors and Lab management in effectively discharging their corporate governance responsibilities.

OFFICE OF THE CHIEF FINANCIAL OFFICER (OCFO) provides financial leadership, stewardship, and decision support and is responsible for establishing and overseeing financial policies.

OFFICE OF GENERAL COUNSEL (OGC) serves as the legal advisors to the Laboratory, ensuring that the Lab's national security mission is fulfilled in a legally sound manner.

The OFFICE OF STRATEGIC DIVERSITY & INCLUSION strives to help create a diverse work environment as each individual brings experiences and knowledge that enhances teamwork and productivity.

SECURITY AWARENESS FOR EMPLOYEES (SAFE) is our counterintelligence program with a mission to detect, deter and mitigate foreign intelligence collection, espionage and international threats.

The SECURITY ORGANIZATION provides security and guidance to ensure uninterrupted protection of Lab assets.

The WORK PLANNING & CONTROL team helps to ensure that activity-level work is planned, controlled, and performed through formalized process.

Learn more: llnl.gov

“Bringing together individuals from a variety of backgrounds not only enhances our shared knowledge, but it also enriches our daily lives while working together. Diversity and inclusion strengthens the Laboratory’s mission, science, and our Lab family’s bond.”

— Tony

ENGINEERING relies on multidisciplinary collaboration to achieve breakthroughs in fields vital to national security, notably materials engineering and manufacturing, bioengineering, data analytics, machine learning, sensing, and autonomous systems. Many of our leading-edge concepts and innovations have been translated by R&D firms into commercial products that improve everyday life in novel and practical ways.

APPLIED ELECTROMAGNETICS Understanding the properties of exotic and mundane materials in very extreme conditions requires reproducing those conditions in the lab and measuring them.

BIOENGINEERING Understanding how the human body reacts in a range of conditions is a continuing focus of our laboratory programs, from radiation effects to overall health, injury, disease, and mitigation of biological defects.

COMPUTATIONAL ENGINEERING Engineering staff fully exploit the massive computing power onsite and unravel many complex problems.

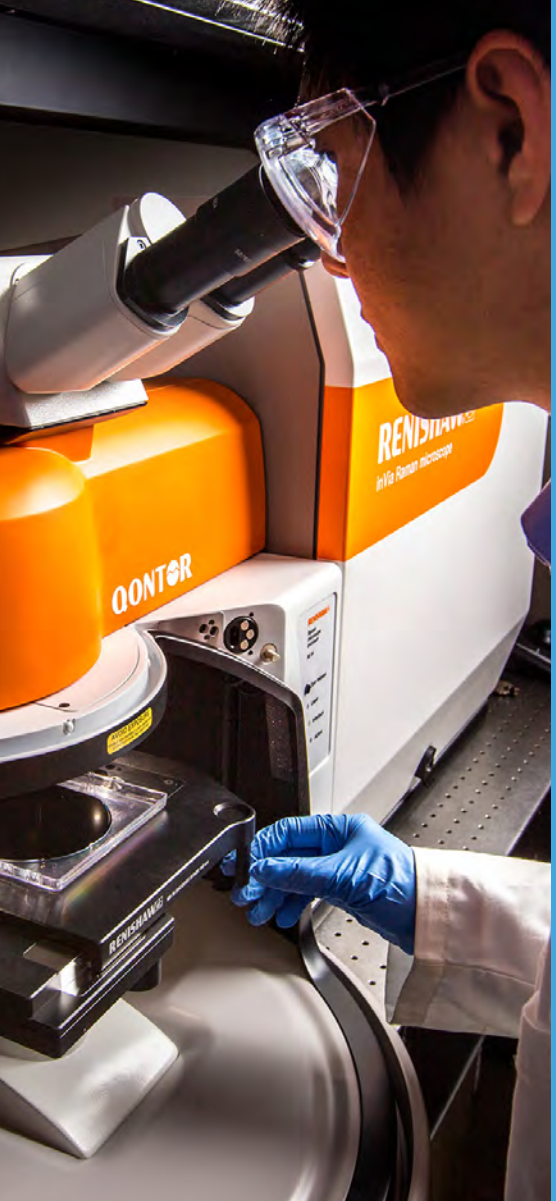
MATERIALS ENGINEERING & MANUFACTURING With 3D printing and complementary technologies, we are revolutionizing manufacturing.

POWER AND ENERGY SYSTEMS With Department of Energy as our main customer, we apply national security solutions to energy systems.

ULTRAFAST OPTICS AND PHOTONICS We house the world's most powerful laser at the National Ignition Facility (NIF) for management of the nuclear stockpile. The world's foremost optics and photonics engineers are assembled here for research, design, building, operation, and testing, and uncharted territory is explored daily.

Learn more: engineering.llnl.gov


“Vets2Tech brought us here in person to talk with other veterans on the same path. In the military, you feel responsible for national security. The lab is based on the same principle.”
— Dan



GLOBAL SECURITY (GS) applies multidisciplinary science and technology to anticipate, innovate, and deliver responsive solutions to complex global security needs. With a focus on reducing the threat from terrorism and weapons of mass destruction, Global Security creates and deploys transformational technologies and expertise to secure the U.S. homeland from chemical, biological, radiological, nuclear, and explosive threats. We also provide analytic operational support to the intelligence community, collaborate with agencies responsible for monitoring and verifying compliance with international treaties, and serve as an important national resource for addressing nonproliferation challenges. The following projects show some of the areas we are working:

DEEP LEARNING FOR NUCLEAR NONPROLIFERATION ANALYSIS Developing new deep-learning and high-performance computing algorithms that sift data for evidence of nuclear proliferation activities.

DEFENDING THE NATION'S POWER GRID Studying how a substation would respond in the real world if a system were under attack to figure out ways to increase the resiliency of the nation's power grid.

FORENSIC SCIENCE Developing new types of forensic methods such as using proteins from bones—as well as hair—for identifying human remains recovered from challenging environments.

"BRAIN-ON-A-CHIP" Simulating the human central nervous system. Laboratory researchers are looking to use the technology to test and predict the effects of biological and chemical agents, disease, and pharmaceuticals without the need for testing on human or animal subjects.

LIVERMORE'S CARBON INITIATIVE Helping to create the science and technology to support global-scale CO_2 removal. We are looking at how to catch billions of tons of CO_2 at an affordable price.

Learn more: www-gs.llnl.gov

> “Some of the brightest minds in the world work at this facility, so there is always something to learn from someone and there are always interesting things happening.”
>
> — *Frank*

The NATIONAL IGNITION FACILITY (NIF) is a world-class research facility pursuing the scientific Grand Challenge of fusion ignition – creating more energy from a fusion reaction than was required to create it. Among NIF's key missions are supporting the National Nuclear Security Administration's Stockpile Stewardship Program to ensure the reliability, safety, and security of the nation's nuclear weapons without the need for underground tests.

NIF experiments are an essential component of the nation's stockpile assessment and certification strategy because NIF provides the only process for scientists to gain access to and examine thermonuclear burn.

NIF also conducts experiments designed to probe the secrets of the universe by creating temperatures and pressures similar to those that exist in the cores of stars and giant planets. NIF is also laying the groundwork for the study of fusion as a limitless source of clean, safe energy.

The skilled and dedicated people who work at NIF are responsible for devising groundbreaking experiments and operating and maintaining the world's largest and highest-energy laser facility. NIF's 40,000 cutting-edge optical components guide and focus 192 laser beams onto intricate, precisely fabricated targets the size of a pencil eraser. NIF's unique capabilities provide scientists from across the nation and around the world with the opportunity to explore new frontiers in astrophysics, materials science, nuclear science, and many other scientific disciplines.

Learn more: lasers.llnl.gov


“Working at NIF is all about extremes, whether it’s the pressures and temperatures achieved in our experiments, or the extreme levels of precision, scale, and accuracy of the laser and associated diagnostics.”
— Doug

OPERATIONS & BUSINESS (O&B) is the backbone of the Laboratory, managing areas like hiring, communications, construction, maintenance, and emergency response to ensure the Lab runs smoothly while meeting its national security mission.

BUILDING STATE-OF-THE-ART FACILITIES FOR SCIENTIFIC RESEARCH O&B organizations support the design, construction, and commissioning of state-of-the-art buildings to house new scientific and technical capabilities.

BUSINESS Provides a broad array of essential business services, such as procurement and subcontracting, supply and distribution, and creative services like design and web development to support the Lab's organizations.

INFRASTRUCTURE & OPERATIONS Supports facilities maintenance and operations, emergency management (fire, emergency operations center, alarms), and soil and groundwater characterization and remediation.

LABORATORY STRATEGIC INFRASTRUCTURE Provides long-term strategic planning for improvements in facilities, equipment, and critical skills in support of the Lab's core mission areas.

NUCLEAR OPERATIONS Advise Laboratory programs on nuclear operations requirements to enable safe and compliant pursuit of the Lab's mission.

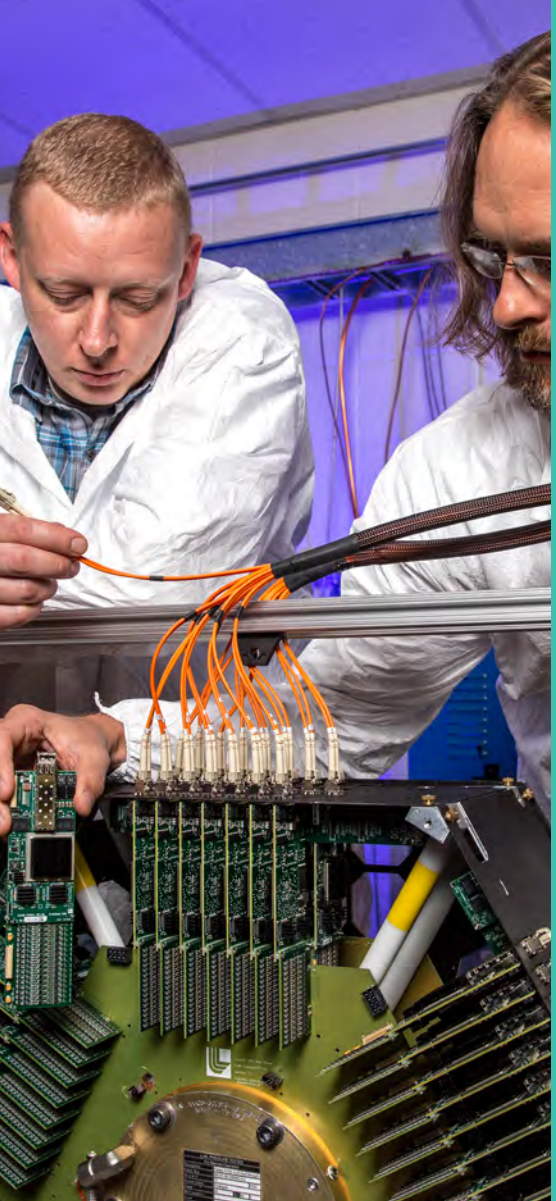
PROJECT MANAGEMENT OFFICE Executes project management, engineering, and construction for the Lab.

STRATEGIC HUMAN RESOURCES MANAGEMENT Recruits, trains, and retains a world-class workforce and develops strategic solutions in anticipation of the Lab's future needs.

Learn more: llnl.gov

> The lab offers so many different opportunities — it's exciting getting to work in a scientific environment every day.

— Shauntay



The PHYSICAL AND LIFE SCIENCES DIRECTORATE (PLS) is a vibrant organization that performs wide-ranging fundamental and applied science in support of LLNL's mission. About 80% of peer-reviewed journal papers published by the Lab's scientists have PLS authors or coauthors, and PLS researchers contribute to projects and programs all across the Lab. The directorate has five key research areas: atmospheric, earth, and energy; biology and biotechnology; materials science; nuclear and chemical science; and physics.

Examples of ongoing PLS efforts to support our mission include:

SEISMIC MONITORING We formulate key methods, models, and software for explosion monitoring and forensics and provide unique expertise to U.S. policy makers on seismic monitoring.

COUNTERTERRORISM We analyze samples to support chemical, nuclear, explosive, and biological counterterrorism.

SPACE We develop cutting-edge modeling and simulation tools and novel hardware to advance space science and enhance space security—everything from X-ray optics to simulation codes to small satellite technology.

HEALTH We apply machine learning methods to develop cancer treatments.

MATERIALS We develop specialized materials for projects as diverse as water desalination and planetary research.

Learn more: pls.llnl.gov

“We work on challenging problems that demand people step outside of their comfort zone.”

— Joe

WEAPONS AND COMPLEX INTEGRATION (WCI) delivers unparalleled innovations to ensure the safety, security, and effectiveness of our nation's nuclear deterrent. We rely on a science-based approach to modernize and extend the lifetime of the U.S. stockpile. Our researchers have routine access to many flagship experimental and computational facilities, while developing highly capable tools and predictive capabilities to strengthen our nation's security.

Our multidisciplinary teams take pride in their work and contribute to solving challenges in areas such as:

MODERNIZING THE NUCLEAR DETERRENT Stewardship of the U.S. nuclear deterrent is the foremost responsibility of LLNL. We help keep the U.S. and our allies safe by modernizing our nuclear warheads and the infrastructure supporting them.

CONTROLLING FUSION IN THE LABORATORY In the absence of nuclear testing, our researchers conduct ignition experiments to access extreme temperature, pressure and density regimes relevant to nuclear explosions.

SIMULATING WEAPONS PERFORMANCE To lend new insight or reveal 3D physical phenomena of nuclear detonations, breakthrough computer simulations require the most powerful machines and advanced codes available.

Learn more: wci.llnl.gov


“It’s not a race for profits here. And it’s really fulfilling to work with brilliant people and cutting-edge tech to help protect the nation.”
— Allen

The National Ignition Facility (NIF) is the largest laser facility in the world and has nearly 40,000 optics and 192 laser beams.

The Sierra supercomputer is one of the fastest supercomputers in the world (Ranked 2nd in 2019).

Sean McCoy | *Energy Analyst*

What I Do: I evaluate the market potential and environmental performance of energy and climate mitigation technologies being developed at the Lab, most notably through the director's carbon initiative.

Why LLNL: The opportunity to work on cutting-edge technologies that could have real impact in the world.

GLOBAL

Calgary, Canada

San Francisco, California

Panama City, Panama

Ignacio Peralta | *Computer Scientist*

What I Do: I perform research on high performance computing (HPC). My work focuses on making HPC systems and applications more reliable.

Why LLNL: The Lab's work directly impacts the safety of the country, so it is rewarding that the work I do somehow helps the Lab accomplish its defense and security missions.

PERSPECTIVE

Gemma Anderson | *Research Scientist*

What I Do: I have been using thousands of simulations, observed data, and machine learning to quantify uncertainties in climate models.

Why LLNL: LLNL has the perfect combination of powerful supercomputers generating tons of interesting data and world-class scientists and engineers who are also friendly and approachable.

Félicie Albert | *Research Scientist*

What I Do: I am an experimental plasma physicist developing new x-ray light sources based on laser-plasma acceleration.

Why LLNL: The environment can be challenging, but it is very stimulating. This place has allowed me to flourish as a scientist (thanks to a lot of great mentors) and to get recognition I never thought I would have received.

Kyoung Kweon | *Postdoctoral Research Staff*

What I Do: I perform first-principles-based atomistic simulations to examine the electronic, chemical, and physical properties of materials for existing and next-generation energy storage applications and solar cells.

Why LLNL: As one of the best research institutions in the world, LLNL focuses on both the fundamental understanding of science and applications in various fields. I wanted to broaden my engineering interests as well as deepen my scientific knowledge, and LLNL provided me those opportunities.

Kento Sato | *Computer Scientist*

What I Do: I develop debugging tools for high performance computing (HPC) applications.

Why LLNL: There are three things I like about working at LLNL. First, I can work with skilled researchers. Working in teams is necessary for thinking outside of the box and coming up with new ideas. Second, I have access to rich computational resources. Third, LLNL is one of the leading national laboratories in HPC. I take pride and responsibility in my role as an LLNL researcher.

Sam Jacobs | *Computer Scientist*

What I Do: I do research focusing on scalable machine learning and big data analytics with applications in cancer drug discovery, global nuclear nonproliferation analysis, and more.

Why LLNL: I was drawn to LLNL because of its focus on high-impact, big science problems and the availability of human, hardware, and software resources to address these problems.

Paul Durack | *Research Scientist*

What I Do: I'm an oceanographer, studying climate variability and change with a focus on the global oceans.

Why LLNL: The infrastructure provided by the Lab is world-leading and facilitates many of the large projects that I am working within and alongside.

CAREERS.LLNL.GOV

U.S. DEPARTMENT OF
ENERGY

NNSA
National Nuclear Security Administration

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