- Established in 1952
- ~ 8,000 LLNS employees
- 1 square mile and 526 facilities
- Annual budget: ~ $2.8B
- Operated by LLNS, LLC
  (University of California and Bechtel, BWXT, Amentum, Battelle)
Nuclear security is LLNL’s core national security mission, and Nuclear Threat Reduction is one of the pillars of this mission.

**Stockpile Stewardship**
- Annual Assessment
- Life extensions
- Improved predictive capability
- Enterprise integration and responsiveness

**All-WMD Threat Reduction**
- Nuclear nonproliferation
- Counterterrorism
- Chemical/biosecurity
- Forensic science
- All-source intelligence

**Multi-Domain Deterrence**
- Strategic defense
- Conventional strike
- Space security
- Cybersecurity

**Energy and Climate Security**
- Diverse domestic energy resources
- Enhancing reliable delivery
- Climate impact assessment
The Nonproliferation R&D program develops new capabilities to reduce nuclear threats at every developmental stage.

**Motivation and Planning**
- Acquire Materials and Technology
- Develop Weapon or IND Capability
- Produce Weapon or IND
- Deliver Weapon or IND to Target
- Detonation
- Post-Event Actions

**Monitor • Detect • Characterize**

**Prevent • Counter • Respond**
The Nonproliferation R&D program applies the Lab’s core competencies to the nuclear threat reduction mission.
Nonproliferation R&D Areas with Active University Collaborations

- Nuclear physics, science and engineering
- Radiation detector science and applications
- Nuclear material science
- Radiochemistry
- Nuclear chemical engineering
- Computational and optimization methods for nuclear security applications
- Nuclear Security Policy
Nuclear Safety Intern Pipeline

- Partnering with universities in nuclear safety and operations R&D
- Opportunities for BS, MS, PhD students and postdocs
- Accident and hazard analysis, control selection, system engineering
- Criticality Safety R&D and training
- Additive manufacturing for nuclear applications (ceramics, metals, polymers, scintillators, etc.)
- Radiochemistry
- Health Physics, Nuclear accident dosimetry

Figure 1. Students conducting research with ISSA.

Figure 2: Illustration of how SC construction shortens the construction timeline.
LLNL supports several University Consortia to help build the pipeline of talent for the next generation of nuclear national security technical experts. The goal is to bridge the academic and Department of Energy (DOE) national laboratory knowledge bases to build broader support for non-proliferation research and development.

LLNL has been actively engaged since the inception of the DNNConsortia structure in 2012, contributing to the training of dozens of students so far. LLNL’s world-class laboratory facilities and expertise provide unique opportunities for students to work at the cutting edge of national security research as part of their training. This successful collaborative enterprise has forged deep and enduring connections between LLNL and academia, and resulted in numerous job opportunities at LLNL for consortium graduates. Through ongoing student-mentor collaborations, the university consortia program is training the next generation of nuclear science and security experts to lead the nation’s research endeavors across government, industry, and our national labs.
Establishing strong academic collaborations is crucial for maintaining forefront S&T and training the next generation workforce.
LLNL is hiring!

- Cutting-edge science and technology
- Some of the world’s fastest supercomputers
- Career development and advancement
- Flexible work schedule
- Opportunities for varying levels of experience and education
- Competitive salary and benefits package

computing.llnl.gov/careers
careers.llnl.gov
Postdoc opportunities at LLNL

Professional development
- Research that is complementary to funded project
- Maintain university collaborations
- Travel and professional training activities

LLNL culture
- Networking and team building
- Postdocs allowed to PI grants
- Publishing is a priority

Emphasis on mentoring
- One-on-one meetings to help postdocs succeed

For more information email visit https://postdocs.llnl.gov/
Science and Technology on a Mission