

## PROGRAM OVERVIEW

- ▶ \$193M in research awards
- ▶ 188 awards involving >570 faculty and lab scientists
- ▶ 640 graduate students and postdocs supported, including 48 in-residence fellowships
- ▶ \$260M in leveraged funding

Sponsors innovative research, fosters new collaborations between UC faculty and national laboratory scientists, and provides unique training opportunities for UC graduate students and postdoctoral fellows.

Funded by the net fee income the University receives for managing Lawrence Livermore (LLNL) and Los Alamos (LANL) National Laboratories.

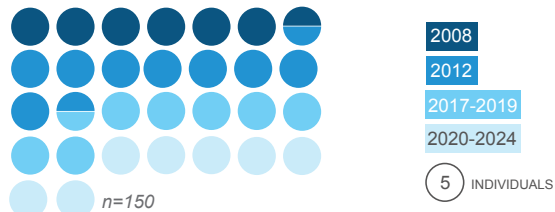
Two programmatic arms: Collaborative Research and Training Award for UC faculty in partnership with National Lab scientists, and the In-Residence Graduate Fellowship for UC graduate students.

## TRAINING THE NEXT GENERATION

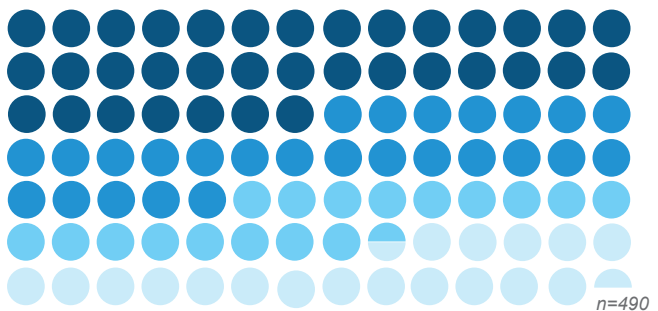
Mentorship at the national laboratories and the advancement of students and early career scientists are critical components of LFRP. Since 2008, the program has supported a total of 640 UC graduate students and postdoctoral fellows. LFRP awards provide unique training and hands-on professional opportunities at the national laboratories, preparing UC graduate students and postdoctoral fellows for careers in science and national security.

The UC-National Lab In-Residence Graduate Fellowship, launched in 2017, has been awarded to 48 outstanding UC students to complete training at LANL or LLNL. With diverse projects ranging from climate science to nanotechnology, graduate fellows pursue research at the leading edge of discovery in fields such as private and academic research, consulting, and computational infrastructure.

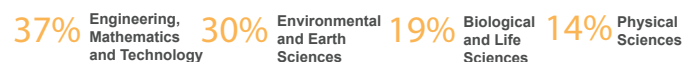
### POSTDOCS



### GRADUATE STUDENTS



### IN-RESIDENCE FELLOW DISCIPLINARY FOCI



## TACKLING REAL-WORLD PROBLEMS TO BENEFIT CALIFORNIA AND THE NATION

Covering a full range of scientific inquiry from energy and environment to engineering and computational sciences, LFRP funding catalyzes multi-disciplinary and inter-disciplinary teams to tackle challenging problems and find solutions to critical issues. Recently funded projects include:

### ENVIRONMENT

5 UC campuses joined with researchers at LANL and LLNL to develop guidelines for maximizing the [effectiveness of coastal wetlands](#) to mitigate climate change.

### HEALTH

UC Merced Grad Fellow and LLNL researchers are investigating the [impact of Valley Fever](#) and the immune regulatory mechanisms controlling disease severity.

### SECURITY

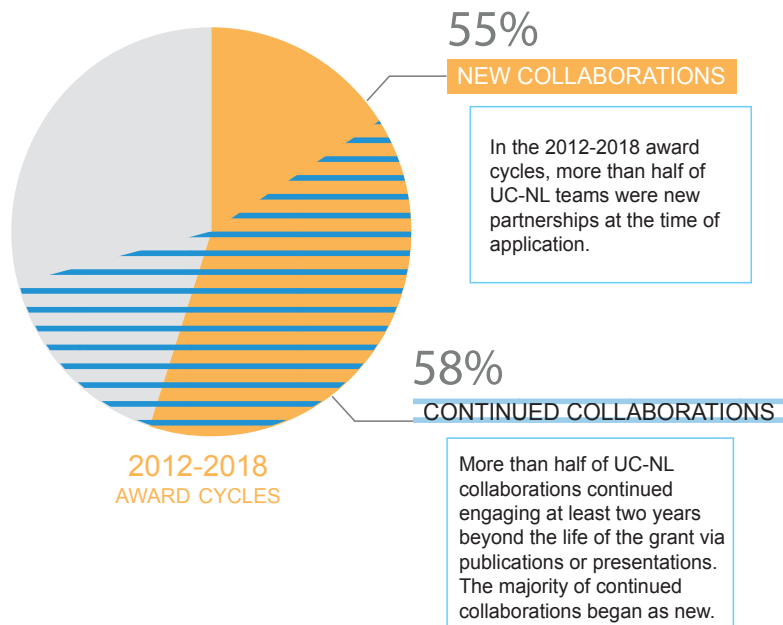
Collaboration between UCSD, UC Berkeley, UCI, UCLA and researchers from LLNL on the 21st-century great power competition results in a [new book by lead-PI](#).

## FOSTERING NEW AND LASTING UC-NL COLLABORATIONS

Since 2008, LFRP has supported UC-NL partnerships between and among all 10 campuses and both LANL and LLNL. These collaborations capitalize on the strengths and resources of each institution to launch compelling, cutting-edge research across a full range of thematic topics.

LFRP prides itself as a mechanism for fostering new and lasting collaborations across the UC and the national labs. The majority of partnerships are new at the time of application, and more than half of these teams maintain cohesion for at least two years beyond the life of the grant.

With seed funding from LFRP, UC-NL collaborations have attracted \$260 million in extramural funding and have produced over 1,250 peer-reviewed publications.



## STIMULATING CUTTING-EDGE DISCOVERIES

In 2017, LFRP began directing funds towards strategic areas of scientific and national security importance, identified as high-impact areas for UC-national lab synergy. The more than \$90 million investment since 2017 has funded multicampus-national laboratory teams to pursue breakthroughs in:

- ▶ Accelerator research
- ▶ Biological applications of advanced computing
- ▶ Climate science
- ▶ Cybersecurity
- ▶ High energy density science
- ▶ Mesoscale materials science
- ▶ National security through social sciences
- ▶ Quantum information sciences
- ▶ Wildfire-related research

## POSITIONING UC AND CALIFORNIA FOR NATIONAL LEADERSHIP IN SCIENCE, TECHNOLOGY AND POLICY

### EXAMPLE SOURCES OF EXTRAMURAL FUNDS

MacArthur Foundation  
 National Aeronautics and Space Administration  
 National Institutes of Health  
 US Environmental Protection Agency  
 US Department of Defense  
 US Department of Energy  
 Sloan Foundation  
 National Science Foundation

**\$260M**

The programmatic strength of LFRP to produce impactful partnerships is evident in the role these partnerships play nationally and internationally. For example, a combined UC-NL group spanning 5 UC campuses and three national labs contributed crucial developments to the field of mesoscopic science. They established UC scientific leadership in atomic-scale semiconductor optoelectronics with over \$27 million secured in leveraged funds from six national organizations including the DoD, DoE, and NSF. LFRP's collaboration model enables groups to integrate core expertise areas, and to leverage research innovations to maximum advantage. Since 2008, LFRP's many partnerships have secured a total of \$260 million in extramural funds from over 25 sources.