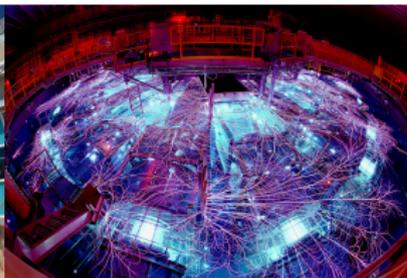


Exceptional service in the national interest



Working at a National Lab

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The US DOE National Laboratories



- *Federally Funded Research and Development Center*: Sandia is operated by a private company (Honeywell) as a contractor for the US Department of Energy's (DOE) National Nuclear Security Administration (NNSA).
- 16,700 employees primarily at 2 locations, Albuquerque and Livermore with a budget of \$4.6B in 2023.

DOE EXECUTES ITS MISSIONS THROUGH DIVERSE NATIONAL LABS



- Somewhere in between academia and industry
- No teaching, but lots of interns
- Management structure
- Work needs to be specifically funded. All time worked is charged against projects.
- Research directions are determined by funding and requirements.
- Can apply for funding to work on particular topics of interest.
- Projects are team efforts. Team size can vary a lot.
- Academic backgrounds in my center:
mostly PhD, mostly from math, CS, engineering, physics, ...
Common theme: “Computational sciences”
- Career ladder:
postdoc → [limited term employee] → senior MTS → principal MTS → distinguished MTS
- My background:
 - Mathematics undergrad in Germany and France
 - PhD @ Brown in Applied Math.
Thesis: “Multigrid and Domain Decomposition Methods in Fault-Prone Environments”
 - At Sandia since 2017.
 - Work on scalable solvers and preconditioners, finite element discretizations, inverse problems, UQ, hierarchical matrices, computational electromagnetics, HPC, GPUs.
- At Sandia, foreign nationals are overall a small minority, but varies a lot by center
- Work-life balance



Internships at Sandia



- Each year, we welcome high school, undergrad and grad student interns.
 - Seminar series about research at Sandia
 - Group activities
 - Facility tours
 - Proceedings article about your work

■ Internships can be over the summer or year-round.

■ Some internships may require US citizenship.

■ Sandia Internships

sandia.gov/careers/career-possibilities/students-and-postdocs/internships-co-ops/

■ Internship at the Center for Computing Research

sandia.gov/ccr/csri-summer-programs

■ Mathematics and Analytics Research Technical Internship for Advanced National Security (MARTIANS)

sandia.gov/careers/career-possibilities/students-and-postdocs/internships-co-ops/institute-programs/titans-technical-internships-to-advance-national-security/titans-mathematics-analytics/

■ NSF Mathematical Sciences Graduate Internship [**not offered in 2024**]

orise.orau.gov/nsf-msgi

■ NSF INTERN program

new.nsf.gov/funding/opportunities/dcl-non-academic-research-internships-graduate-students-intern

Other opportunities

■ DOE Computational Science Graduate Fellowship krellinst.org/csgf

■ Argonne Training Program on Extreme-Scale Computing extremecomputingtraining.anl.gov

Feel free to email me with questions: caglusa@sandia.gov