This paper describes objective technical results and analysis. Any subjective views or opinions that might be expressed in the paper do not necessarily represent the views of the U.S. Department of Energy or the United States Government.

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Sandia National Laboratories

Mathematics Careers at Sandia National Laboratories

Brian M. Adams
Optimization and Uncertainty Quantification Department

SIAM Annual Meeting, July 14, 2022

MS92: Student Internships in the US National Laboratories: Experiences and Opportunities

U.S. DEPARTMENT OF ENERGY

NNSA National Nuclear Security Administration

Brian Adams
Optimization and UQ Department, Sandia National Laboratories

St. Michael's College (VT): Mathematics, music, CS, secondary education

Americorps Volunteer, New Orleans

NC State: Computational applied mathematics PhD; HIV model calibration

SNL, Albuquerque since 2005

Dakota: research, software development, applications, team management

NC State recruiting team lead: *recruit interns, postdocs, staff*

Consider Sandia / DOE Laboratories for...

Sense of purpose: critical national security work

Fundamental to highly applied R&D; science/engineering challenges drive research/software

Autonomy and teaming; work with world class, yet approachable, researchers

Diverse mathematical sciences opportunities: fundamental math/CS research, data analytics, modeling/simulation, HPC, cyber security, hardware/software R&D

Quality of life: flexibility, growth, work/home balance

Robust design of satellite radiation shields

Optimal control allocation for aerospace vehicles

https://www.sandia.gov/m/missions/defense_systems/accomplishments/

Internships

Encourages qualified students to develop interests in critical skills areas related to our mission, with the ultimate objective of developing our pipeline for our future. Available for Summer, Year Round and Co-op.

Eligibility Criteria

- Full-time enrollment status at an accredited school during the academic school year

- Undergraduate equivalent of 12 hours per semester

- Graduate equivalent of 9 hours per semester

- Must have a minimum cumulative GPA of 3.0 on a 4.0 scale for Technical, R&D, and Business interns; 2.5 on a 4.0 scale for Clerical and Labor interns

- Have U.S. citizenship for positions that require a security clearance or as stated in the job posting

- At least 16 years of age

Institute Internships

[Institute Programs Website](#)

- Computer Science Research Institute (CSRI)

- Interdisciplinary Design, Engineering, and Assurance Students (IDEAS)

- Interns for Security, Arms Control, and Force Protection Engineering (iSAFE)

- Mission Services Talent Acquisition Team (MSTAT)

- Monitoring Systems and Technology Intern Center (MSTIC)

- Nonlinear Mechanics and Dynamics (NOMAD)

- Research and Applications of Mechanics of Structures (RAMS)

- START HBCU – Partnering with HBCUs to provide diverse groups with technical and business internships

- Science of Extreme Environments Research Institute (SEERI)

- Resilient Energy Systems Intern Institute (RESII)

- Future of Research for Climate, Earth, and Energy (FORCEE)

- TITANS:

  - AutonomyNM

  - Cybersecurity

  - Math and Analytics

  - Software Engineering