

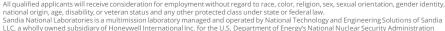
Exceptional service in the national interest

# Sandia National Laboratories

Laura Biedermann Shannon Murray



under contract DE-NA0003525









Sandia strives to become the laboratory that the U.S. turns to first for technology solutions to the most challenging problems that threaten peace and freedom for our nation and the globe.

# Sandia's Impact

Sandia is often called upon to respond to high-profile events



#### **Mars Perseverance rover**

NASA's Perseverance rover landed safely on Mars after a seven-month journey through space. The event could only take place following a safe launch that had been vetted by Sandia scientists.

(Courtesy of NASA/JPL-Caltech)



#### Cleanroom invented 1963

As the birthplace of the modern cleanroom, Sandia helped revolutionize manufacturing in electronics and pharmaceuticals and advance space exploration. \$50 billion worth of cleanrooms built worldwide.



#### **Combating Viruses**

Sandians have created a new process of screening for nanobodies that "neutralize" or disable the virus. The new process represents a faster, more effective approach to developing nanobody therapies that prevent or treat viral infection.



#### **Sustainable Energy**

Sandia seeks to support the creation of a secure energy future for the US by using its capabilities to enable an uninterrupted and enduring supply of energy from domestic sources, and to assure the reliability and resiliency of the associated energy infrastructure.

# U.S. National Laboratories



# Sandia Has Two Main Locations



# Fulfilling Our National Security Mission



**Global Security** 

*Nuclear Deterrence* 

National Security
Programs

Energy & Homeland Security

Advanced Science & Technology

Shedic chalical solution distributions the blescongibeth metalental igenide postation of the blescongibeth metalental igenide postation of the production of the critical national security issues that we address lie in the cyber area.

# Our Workforce & Culture

# Our Workforce ~16,500 employees



**~14,000** Regular employees

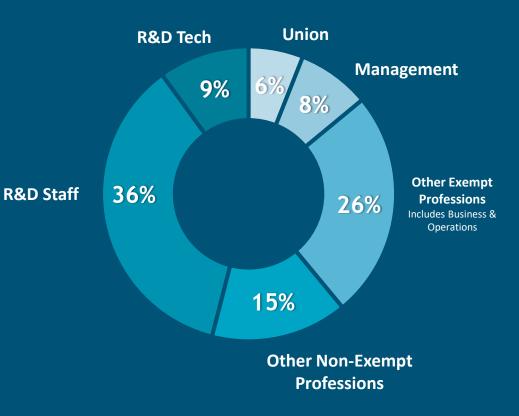
**~2,500** Temporary employees, students & postdoctoral appointees

New Mexico Site: (see breakout)

Workforce: ~14,700 R&D employees: ~7,300 (R&D Staff & Technologists)

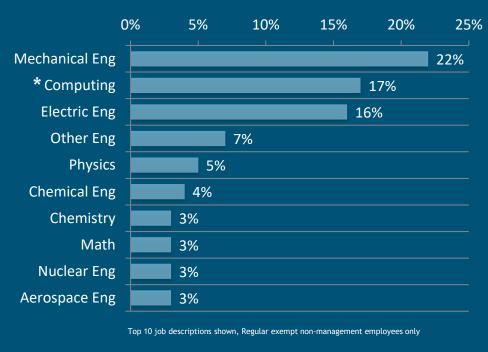
California Site: (see breakout)

Workforce: ~2,000 R&D employees: ~1,000 (R&D Staff & Technologists)

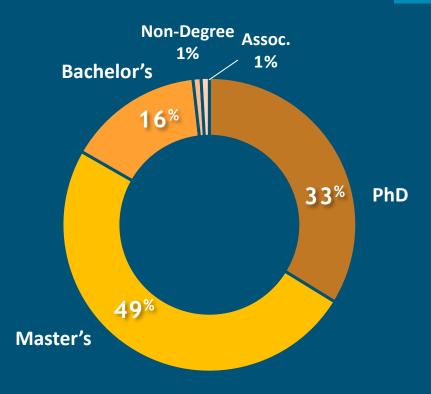


## **(1)**

# R&D by Discipline & Degree

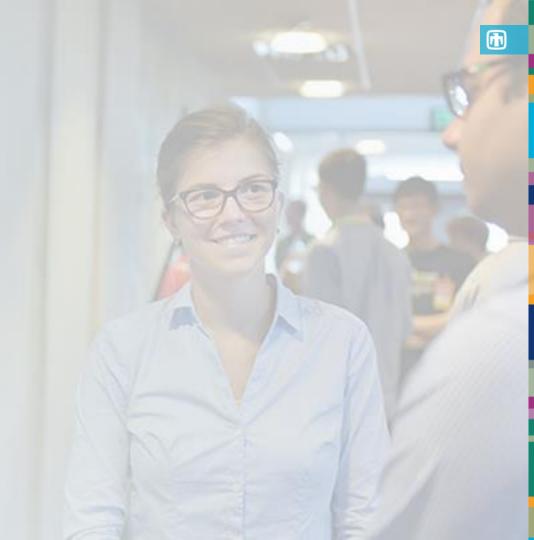


(\*) Computing includes disciplines such as High Performance Computing, Cybersecurity, Machine Learning, Autonomous Sensing and Perception



# Our Culture - Our Values

- We serve the nation
- We respect each other
- We act with integrity
- We deliver with excellence
- We team for great results









- Have meaningful & challenging work assignments
- Work in state-of-the-art research facilities
   Take a Virtual Tour @ tours.sandia.gov
- Work with top minds
- Join outreach and networking groups
- Receive award recognitions,
   like <u>R&D 100 Awards</u> and more
- Take a leave to pursue qualifying research and professional opportunities
- Receive patent royalties, if eligible
- Experience a career path in various areas at Sandia
- Check out <u>Sandia's Lab Accomplishments!</u>

# Outreach & Networking Groups

- Abilities Champions of Sandia
- Advancing the Next Generation of Leadership Excellence (ANGLE)
- American Indian Outreach Committee
- Asian Leadership & Outreach Committee
- Black Leadership Committee
- Hispanic Outreach for Leadership Awareness
- Military Support Committee
- Sandia Parents Group
- Sandia Pride Alliance Network
- Sandia Women's Action Network
- Sandia Postdoctoral Development Association
- And many other employee engagement groups!



# Quality of Work-Life











#### **Flexible Work Schedules**

- 9/80 and 4/10 workweek options \*
- Generous paid time off
- 11 paid holidays includes a winter shutdown at the end of each calendar year
- Telecommuting arrangements\*
- Part-time options\*
- Vacation buy & sell plans
- Sickness absence
- \* with management approval

#### **Family Life**

- Paid family leave
- Referral services and discounts for childcare and eldercare
- Adoption assistance
- Expectant Parent Program
- On-site Nursing Mother's Rooms
- Support for special needs family members
- Family recreational activities and discounts

#### **Lab Amenities**

- Medical Clinic
- Sandia Laboratory
   Federal Credit Union
- On-site Café
- On-site Fitness Center
- Access to group exercise classes (NM) and nutritional support/health education classes (CA)
- Employee self-formed sports teams

Available at NM & CA sites

#### **Health & Benefits**

- Robust medical, dental & vision plans
- Life, accident, and disability insurance
- Healthcare and dependent care spending accounts
- Exceptional 401(k) Plan
- Employee discounts
- Voluntary benefits like pet, auto, and home insurance as well as identity theft protection
- Tuition assistance
- Sandia-funded Lifestyle Spending Account of \$500





## Life in Albuquerque

- Albuquerque is the largest city in New Mexico with a population of ~ 560,000
- Affordable housing, reasonable cost of living
- Film tourism Breaking bad, Stranger Things, The Avengers and more

## Albuquerque Environment

- Elevation 5,312'
- High desert climate with 278 annual days of sunshine
- Average temperatures between 78° and 40°
- Wide-open spaces

## Things to Do

- Outdoor recreation –
   Ski, snowboard, hike, etc.
- Santa Fe rich culture
- International Balloon Fiesta
- Explore Indian pueblos and our Hispanic heritage
- Green chile NM Cuisine





### Life in Livermore

- Livermore's relaxed lifestyle includes a population of ~87,000
- Close proximity to first-tier universities, Silicon Valley companies, and other top research laboratories and facilities
- Access to California's finest public and private schools

## Livermore Environment

- Elevation 495'
- 260 annual days of sunshine
- Average temperatures between 75° and 50°
- Annual average rainfall: 14.6 inches

## Things to Do

- Vineyards
- Beaches
- State Parks
- Sports Nearby are six major league franchises
- Art haven
- Proximity to SF Bay Area



# 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
- Have U.S. citizenship for positions that require a security clearance or as stated in the job posting
- At least 16 years of age



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# Internships – Outreach & Networking Events

Summer Welcome Event

Intern Career Fair

Intern Symposium

**Graduate Fairs** 

Senior Manager Shuffle

**Facility Tours** 

**Speaker Forums** 

Professional Development Classes













## Intern Institute Programs



Intern Institute Website

- Computer Science Research Institute (CSRI)
- Future of Research for Climate, Earth, and Energy (FORCEE)
- 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)
- ND Mission Technologies (Mission Tech)
- Research and Applications of Mechanics of Structures (RAMS)
- Resilient Energy Systems Intern Institute (RESII)
- Student Intern Group for Microelectronic Advancement (SIGMA)
- START HBCU Partnering with HBCUs to provide diverse groups with technical and business internships
- Science of Extreme Environments Research Institute (SEERI)
- TITANS:
  - AutonomyNM
  - Cybersecurity
  - Math and Analytics
  - Software Engineering

## Intern Institute Programs



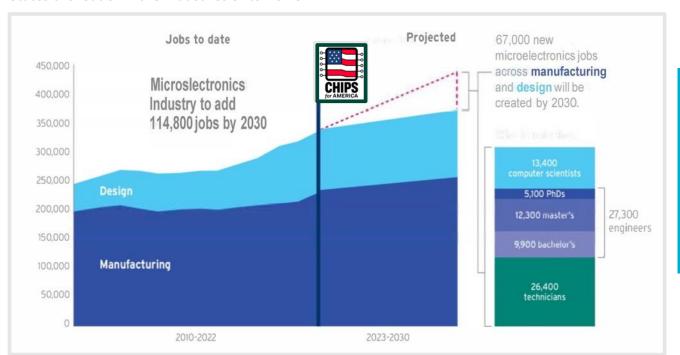
Intern Institute Website

- Future of Research for Climate, Earth, and Energy (FORCEE)
- Interns for Security, Arms Control, and Force
   Protection Engineering (iSAFE)
- Monitoring Systems and Technology Intern Center (MSTIC)
- ND Mission Technologies (MissionTech)
- Resilient Energy Systems Intern Institute (RESII)
- Student Intern Group for Microelectronic Advancement (SIGMA)
- Science of Extreme Environments Research Institute (SEERI)
- TITANS: AutonomyNM, Cybersecurity, Math and Analytics, and software engineering

# Student Intern Group for Microelectronics Advancement (SIGMA) Intern Institute

## Science internships to change the world.

The CHIPS for America Act (2022) is revitalizing domestic semiconductor manufacturing. It will strengthen U.S. manufacturing, supply chains, and national security, and invest in research and development, science and technology, and the workforce of the future to keep the United States the leader in the industries of tomorrow.







Semiconductor manufacturing grants, research investments, and an investment tax credit for chip manufacturing will create nearly 115,000 high-paying jobs.

"The CHIPS Act will enable key investments and include necessary resources for safe and secure microelectronics manufacturing for our national security needs. Microelectronics are key to producing and sustaining state-of-the-art U.S. and allied warfighting capabilities for 21st century deterrence."

# Types of Postdoctoral Positions



## <u>Distinguished Fellowships</u>

<u>President Harry S. Truman</u> <u>Fellowship</u>

Lab Director Jill Hruby Fellowship

- Corporate Level
- Applications due September 12, 2023
- Three-year appointment, Fellow is 100% funded on their own research



## Foundation Fellowships

Barbara McClintock Fellowship in Bioscience

John von Neumann Fellowship

S. Scott Collis Data Science Fellowship

**Maxwell Fellowship** 

<u>Gil Herrera Fellowship in Quantum</u> Information Sciences

- Investment Area Level
- Applications typically due in fall/winter
- Generally 50% Postdocs own research, 50% on other related PI research



## <u>Postdoctoral Appointments</u>

- Department Level
- Applications ongoing, year round
- Funded by line organizations supporting PI projects



### **Key areas for post-docs:**

- Computer science/Computer Engineering
- Electrical Engineering
- Mechanical Engineering
- High-performance computing
- Microelectronics and microfluidics
- Nanotechnology
- Physics
- Chemistry/ Electro Chem
- Biosciences and biotechnology
- Radiation & electrical sciences
- Engineering sciences
- Pulsed power sciences
- Materials science & engineering

# Difference between Fellowships and Appointments

#### **Fellows**

- Do their own research
- Application process requires development of an independent research proposal
- Distinguished Fellowships 3 years, fully funded, open to all Sandia mission space
- Foundation Fellowships 2 years, half funded on own work, half on other ongoing projects, specific topic areas for each fellowship
- Have graduated within 3 years of application deadline and by the time the fellowship starts – Received PhD between September 2020 and October 2024
- Looking for a position well in advance posting cycle is once per year for the following Fiscal Year

## **Appointees**

- Positions are open year round
- Prefer to work on a project that is already ongoing
- Want to work in an area they are not currently an experience
- Have graduated within 5 years of application deadline

# Apply Online! sandia.gov/careers



Sign up for Automated Job Notifications!

> Mobile Job Applications







# Backup Slides

## Veterans

Recognizing that veteran capabilities and attributes complement our mission and values, we're intent on attracting the nation's top veteran talent to our company.

At Sandia, you'll find qualities and features that sustain your dedication to being part of something bigger:

- Colleagues who respect and need your combination of experience and education
- A community through Sandia's Military Support Committee
- Transitioning Service-members can participate in Sandia's SkillBridge Program
- Eligible Veterans may participate in the Exceptional Warrior Career
   Development Program which assists combat-injured veterans with employment, training, and education for a smooth transition to a civilian career
- Future: Local New Mexico Veterans seeking Student Internship opportunities may participate in Pathway to STEM







# Critical Skills Recruiting (CSR) Program

Sandia's Critical Skills Recruiting Program (CSR) is a special, entry-level hiring program which provides new or recent technical bachelor's degree candidates the opportunity to pursue a tuition-paid Master's of Science degree. The CSR program is designed to attract talent pursuing key disciplines aligned with Sandia's national security mission - CS/Cyber/CE, EE, or ME.

#### **Benefits:**

- Obtain a master's degree while remaining on-roll as a full-time Sandia employee and receive a competitive annual salary (paid biweekly)
- Annual stipend and regular employee benefits (except vacation accrual) while attending graduate school
- Paid eligible tuition and tuition-related associated costs
- Relocation benefits based on current Sandia policy
- Placement into technical/R&D staff position upon graduation and successful completion of the program

#### **Candidate Eligibility Criteria:**

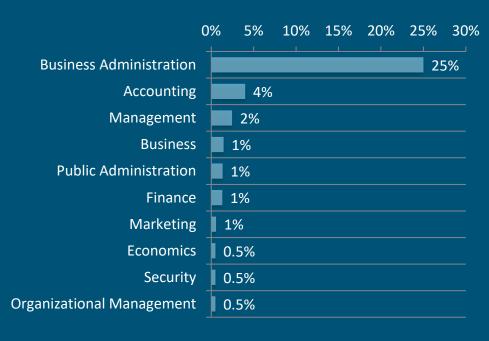
- Open to students finishing an undergrad degree in Computer Science, Cyber, Computer Engineering, Electrical Engineering, and Mechanical Engineering
- 3.0 GPA or higher
- Complete Bachelor's of Science degree by Spring 2024
- Able to start graduate program no later than **Fall 2024** (we recruit a year prior to starting the graduate program to ensure school acceptance)
- US Citizenship (for the purpose of obtaining a Dept. of Energy Security Clearance)
- Additional program requirements as indicated in the job posting

Apply online at sandia.gov/careers Search keyword "CSR" or by Job ID Deadline to apply is September 21, 2023

#### lob IDs:

691375 Critical Skills Recruiting Program - CS/Cyber/CE 691376 Critical Skills Recruiting Program – EE 691377 Critical Skills Recruiting Program - ME

# **Business & Operations Staff**



PhD Assoc. 3% 4% **Non-Degree** 12% 45% Master's 36% Bachelor's

Top 10 job families shown, Regular exempt non-management employees only

Degree levels for all our non-management professions including those not represented

## Our Culture – Giving Back

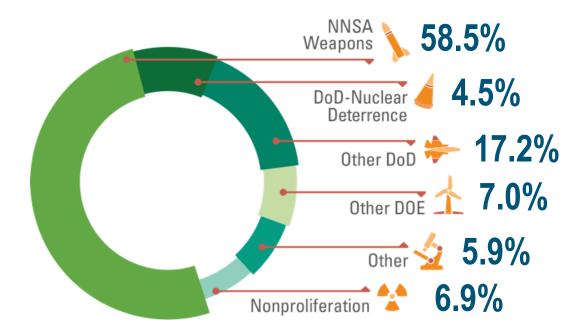
Sandia invests in the areas of Family Stability and Educational Success, recognizing that both are critical to a thriving community.

Here are a few areas where Sandians give back:

- K-12 STEM education outreach
- Help at food banks
- Provide life skills & job training
- Plant produce for local food pantries
- Animal Adopt-a-thons
- Coach sports teams
- Lead scouting troops
- Build homes
- Holiday gift drives
- Winter coat drive
- Feeding the hungry
- Provide shoes for kids



# Sandia's Funding ~ \$4.4 Billion





#### OTHER

Department of Homeland Security Other federal agencies | nonfederal entities CRADAs, licenses, royalties | inter-entity work



#### DoD

Air Force | Army | Navy Defense Threat Reduction Agency Ballistic Missile Defense Organization Office of the Secretary of Defense Defense Advanced Research Projects Agency Intelligence Community



#### **OTHER DOE**

Science
Energy Efficiency and Renewable
Energy
Nuclear Energy
Environmental Management
Electricity Delivery and Energy
Reliability
Other DOF



#### **NONPROLIFERATION**

NNSA/NA20 NNSA/NA80

## Sandia California - Livermore

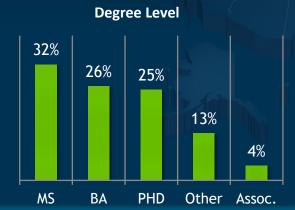


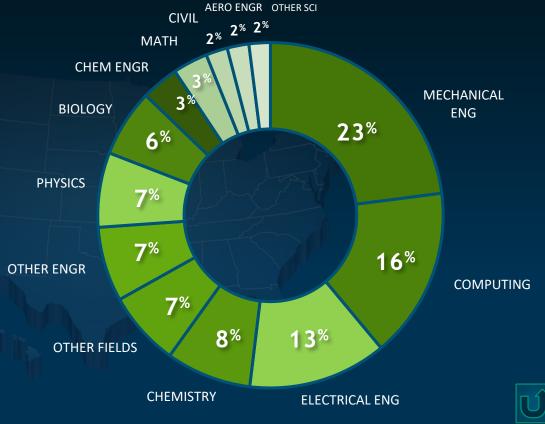
On-site workforce: ~2,000

R&D staff & technologists: ~1,000

Distinguishing research capabilities:

- Applied Biosciences
- Combustion Research
- Information Systems
- Micro & Nano Technologies and more





# Sandia New Mexico - Albuquerque

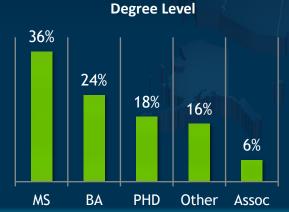


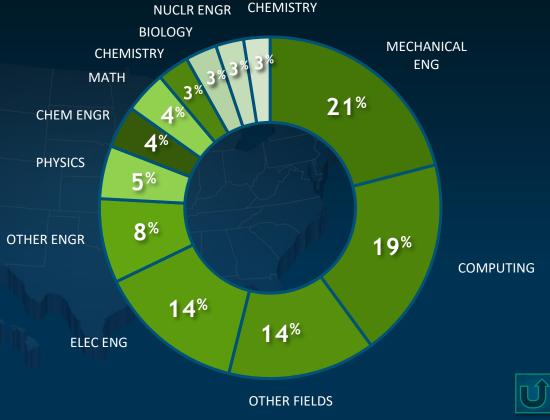
On-site workforce: ~14,700

R&D staff & technologists: ~7,300

#### Distinguishing research capabilities:

- Cybersecurity
- · Renewable Energy
- Micro-electronics/Semiconductors
- Homeland Security and more







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# Sandia's Brand Promise - Sandia's Employee Value Proposition

## • National Security Mission:

Your work contributes to the security, peace and freedom of our nation and the world

## • Uniquely Challenging and Important Work:

The work you do will be challenging, and amazing with real-world impact

## • Work with Great People:

You will work with extraordinary people, the top minds in their field

#### Research Facilities Like None Other:

You will have access to some of the best tools, equipment, and research facilities in the world

## • Healthy Lifestyle, Work-Life Balance:

You will experience a balance between your work life and personal life through flexible schedules, competitive benefits, and convenient amenities

### • Career Mobility:

You can have a full-life career at Sandia by working across multiple projects and areas of your interest

## **Employer Awards**

- Forbes America's Best Large Employers 2021 & 2023
- Forbes Best Employer for Diversity 2019 & 2023
- 2022 2020 Fairygodboss Best Company
- 2021 2020 Fairygodboss Top Rated CEO for Gender Diversity
- 2023 Sec. of Defense Freedom Award, nominated for exemplary support of the National Guard and Reserve Member employees
- 2022 & 2021 US Dept of Labor Hire Vets Platinum Award
- 2022 & 2023 Family Friendly Business Platinum Award
- "Top 20 Government Employers" Equal Opportunity Reader's Choice 2023 – Ranked #19
- "Top 20 Government Employers" Woman Engineer Reader's Choice 2023 – Ranked #10
- "Top 20 Government Employers" Careers & disabled Reader's Choice 2023 – Ranked #18
- "Top 20 Government Employers" Minority Engineer Magazine Reader's Choice 2023 – Ranked #19
- "Top 20 Government Employers" STEM Workforce Diversity Reader's Choice 2022 – Ranked #20 & 2023 – Ranked #19
- 2022 & 2023 "Top 50 Workplace" for Indigenous STEM professionals by American Indian Science and Engineering Society
- 2023 Summer & 2022 Black EOE Journal Best of the Best







\* FAIRYGODBOSS

BEST
COMPANY
- 2022 - \*\* FAIRYGODBOSS

BEST
COMPANY
- 2021 -

Preedom

2023 Recipient



\* FAIRYGODBOSS

TOP RATED
CEO
\* FAIRYGODBOSS
GENDER DIVERSITY 2021
TOP RATED
CEO









GENDER DIVERSITY 202









## Available Videos



Videos require wifi in order to play

Sandia Videos
Sandia Mission Video (4:36)
Sandia Our Roots (2:27)
Sandia Life (2:44)
Sandia Ethos (4:46)

Intern Videos
2019 Sandia Student Symposium(2:43)
Sandia's Center for Cyber Defenders(2:59)
Internships at Sandia Labs(19 Videos)

Location Videos

<u>Sandia New Mexico Location</u> (3:23)

Sandia California Location (3:41)

Diversity & Inclusion Videos
Abilities Champions of Sandia
American Indian Outreach
Asian Leadership Outreach
Black Leadership Outreach
Employee Resource Groups
Exceptional Warrior Video
Hispanic Leadership Outreach
Sandia Women's Action Network
Sandia Pride Alliance Network

For dowloadable video files, visit our Video library