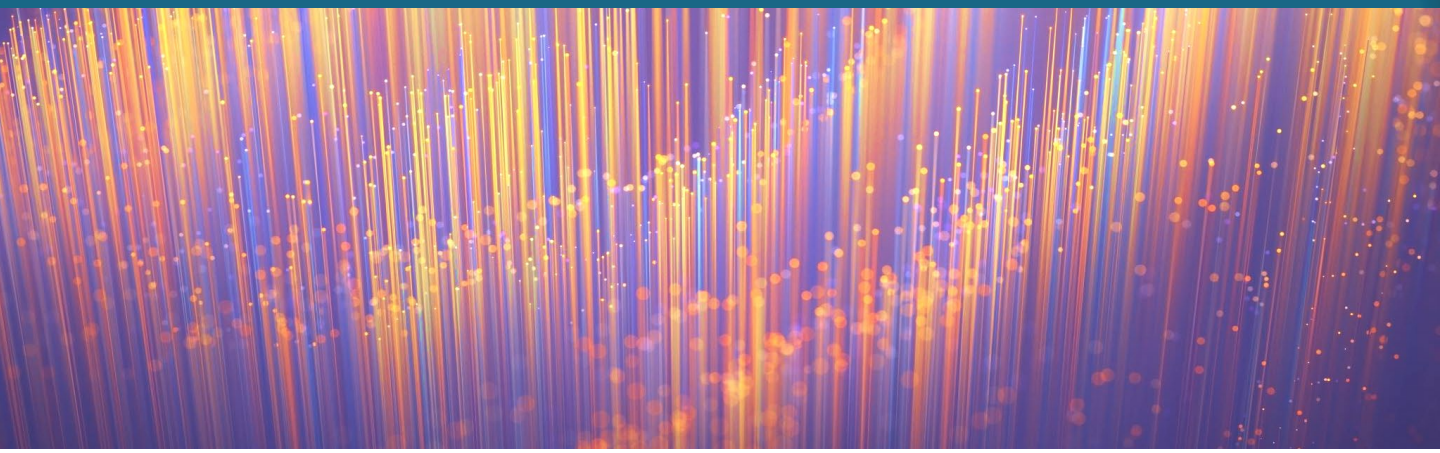


Volume 1 | Issue 4
Fall 2025

SANDIA SYNERGY

A Newsletter Empowering Postdoctoral Associates to Advance Science & Technology at Sandia National Labs

Connecting Science to Society

Dear Readers,

In this Fall issue of *Sandia Synergy* we celebrate SNL's postdoctoral talent - revealing where postdocs over the past 10 years are currently employed on page 2, and inviting you to **Postdoc Appreciation Week** -a curated set of events listed on page 3 which spans the SLAM kickoff; Elevator Pitch Practice; and a Postdoc Alumni Industry Panel, hosted by SNL's Postdoctoral Office in collaboration with the Universities Research Association.

In the spirit of empowering you, see the schedule for the new **Mentoring Up Lunch & Learn Series** for Postdocs on page 4!

Live virtual workshops at the **National Academies of Sciences, Engineering, and Medicine (NASEM)** are linked on page 5 to discuss current scientific understanding on a range of research areas including observing extreme warm-season rainfall and hydrologic modeling; synthetic genomics and data security; and multiple interdependent factors involved in human-AI teaming.

In case you missed it: Recaps of Sandia Postdoctoral Fellows Day and Science Communication Series workshops are also included.

Happy Reading!

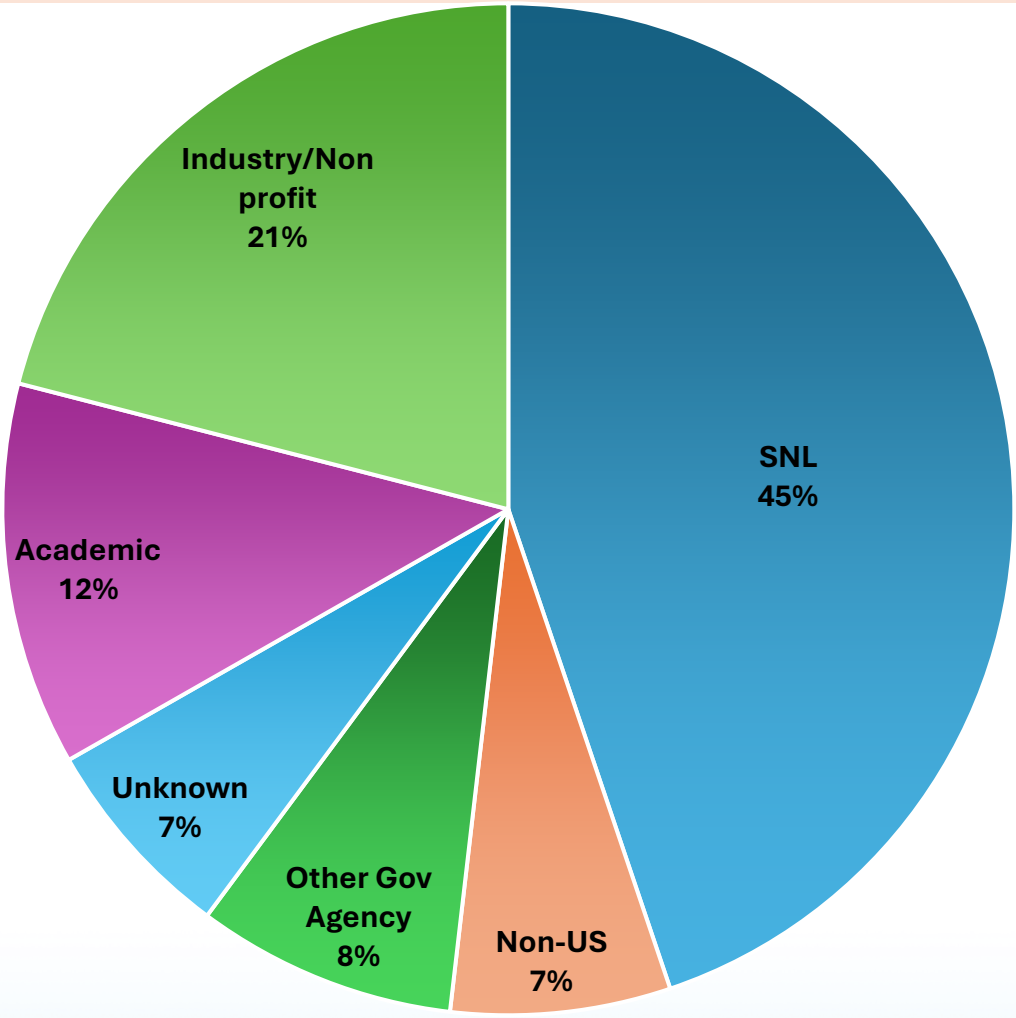
Contents

Sandia National Laboratories is a multimission laboratory managed and operated by National Technology & Engineering Solutions of Sandia, LLC, a wholly owned subsidiary of Honeywell International Inc., for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-NA0003525. SAND2025-07363N

Sandia's Postdoctoral Alumni Trends
Where are they now?

Over the last decade:

- Just under half of the postdocs training at Sandia National Laboratories were retained. A small percent were employed at other DOE national labs and government agencies primarily other national labs, indicating that *over 50% of Sandia's trainees returned to support the DOE's scientific enterprise.*
- Approximately one fifth of postdocs went on to organizations across the non-profit and for-profit industry sector. High frequency industry positions include Intel, Google, and Northrup Grumman.



The chart above shows the distribution of employment sectors at which Sandia postdoctoral researchers entered between 2013 – 2024; n=1167. Data source: SNL Postdoctoral Office.

Monday, September 15	11:30am-12:15pm MT	From the Hiring Lens: Fostering a Career Mindset Through Your CV	Virtual
	1:00pm - 2:30pm MT	Postdoc Appreciation Week Kickoff and SLAM	Virtual
Tuesday, September 16	9:30am - 10:45am MT & PT	Networking with Sandia Postdoc Development Association	CA: 915 Patio NM: IPOC/1375
	11:00am - 12:30pm	Building Confidence: Enhancing Your Interview Preparation	Virtual
Wednesday, September 17	All Day	Mock Interviews	Virtual
	10:00am-11:00am MT	Resume Tips (Not CV)	Virtual
	1:30pm - 3:00pm MT	Elevator Pitch Practice	Virtual
Thursday, September 18	All Day	Mock Interviews	Virtual
	10:00am-11:00am MT	2nd DOE National Laboratories Postdoc Leadership Meeting	Virtual
	2:00pm - 3:30pm MT	SNL Postdoc Alumni Industry Panel	Virtual

Join Us for the Mentoring Up Lunch & Learn Series for Postdocs!

We are excited to announce the upcoming **Mentoring Up Lunch & Learn Series**, designed specifically for postdocs looking to enhance their mentoring relationships. This series consists of five engaging one-hour workshops held over the lunch hour (12-1 PM MT) on a variety of topics aimed at helping postdocs learn how to "Mentor Up."

What is Mentoring Up?

"Mentoring up" is a proactive approach where mentees take ownership of their mentoring relationships to ensure mutual benefit and achieve desired outcomes. It involves actively engaging with the mentor, contributing to the relationship, and driving its direction. This concept, adapted from the business idea of "managing up," encourages mentees to be active participants, not just passive recipients, in the mentoring process.

Register Now!

Postdocs interested in participating in the Lunch & Learn Series should reach out to the postdoc office.

Don’t miss this opportunity to enhance your mentoring skills and take an active role in your professional development!

We look forward to seeing you there!

Lunch & Learns Topics

The content for these Lunch & Learns has been adapted from the Center for the Improvement of Mentored Experiences in Research (CIMER), a trusted leader in mentor-mentee relationships, higher education, and workforce development. CIMER was created in 2015 to sustain and expand nationwide efforts to improve research learning experiences and mentoring relationships.

CIMER's researchers and practitioners are recognized experts in mentor-mentee relationships and have served as advisors to federal agencies, research organizations, and policy advisory groups. Their breadth of expertise uniquely positions them to advance large-scale transformations in mentorship culture.

Date	Workshop Title
September 30	Introduction to Mentoring
October 7	Aligning Expectations
October 21	Assessing Understanding
October 28	Fostering Independence
November 4	Promoting Professional Development

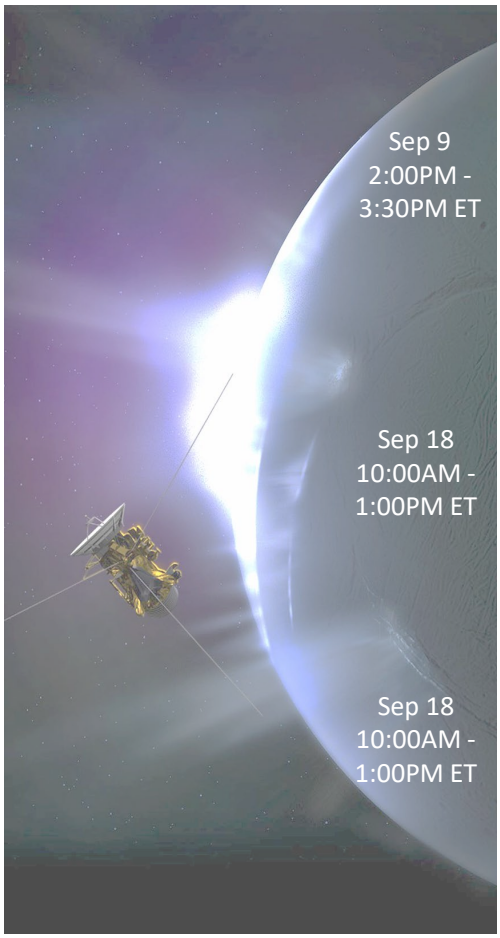
National Academies of Sciences, Engineering, & Medicine

ATTEND A NATIONAL ACADEMIES MEETING VIRTUALLY

Convenings are held in person at the Washington DC location as well as virtually. Click on the events below, which are accessible to online audiences.

The National Academies of Sciences, Engineering, and Medicine was created to provide independent, objective advice to inform the Government on science policy, spark progress and innovation, and confront challenging issues for the benefit of society.

Subject matter experts from academia, industry, and the government convene from across the spectrum of the S&T enterprise. NASEM provides expert advice and insights through rigorous studies and reports, addressing critical issues in science, engineering, and health.



Performance Optimization in Human AI Teams

Biological Threats in the Age of Emerging Biotechnology

Extreme Rainfall in Mountainous Terrain: Modeling & observational challenges

Sandia Postdoctoral Fellows Day
Celebrating Innovation and Collaboration

On August 6, 2025, the 4th annual Fellows Day was held, bringing together our distinguished and foundational postdoctoral fellows and the Sandia community. The day featured networking opportunities, a research symposium, and facility tours, all aimed at showcasing innovative research.

Research Symposium Highlights

The highlight of the day was the Research Symposium, which featured presentations from our esteemed fellows. Director Reno Sanchez hosted the event and emceed the symposium, guiding attendees through an impressive lineup of cutting-edge research topics, including:

Ravyn Malatesta
(Hruby Fellow)
- *Nanoscale Generation and Control of High Dimensional Photonic States*

David Vargas (John von Neumann Fellow)
- *Parallel-in-Time for Chaotic Systems*

Matthew Barry
(Truman Fellow)
- *Data-Driven Design of High Entropy Alloys Using the Voxelized Atomic Structure Framework*

Josey McBrayer
(Truman Fellow)
- *Understanding How Ion Implantation Changes LLZTO Performance in Lithium Metal Batteries*

Samantha Jaszewski
(Hruby Fellow)
- *Effects of Heavy Ion Irradiation on the Structural and Electrical Properties of Ferroelectric Hafnium Zirconium Oxide Capacitors*

Max Flynn (Maxwell Fellow)
- *A Validation Problem for Modeling Triggered Gas Switches Using the Particle-in-Cell Method*

Jonathan Paras
(Truman Fellow)
- *A Thermodynamics Perspective on the Features and Challenges of Advanced Metal Manufacturing*

Kathleen Oolman
(Gil Herrera Fellow)
- *CMOS-Compatible Quantum Memory for On-Chip Single Photon Manipulation*

Sam Peana
(Truman Fellow)
- *Wafer Scale Single Photon Emitters @ MESA*

Alejandro Diaz
(S. Scott Collis Fellow, Data Science)
- *Data-Driven Reduced-Order Models Using Reproducing Kernel Hilbert Spaces*

Adam Darr
(Maxwell Fellow)
- *Applying Theory to Understand New HERMES-III Configurations*

Facility Tours

The afternoon featured tours of the Laser Applications (LAZAP) Facility, the MEMS Characterization Lab, and the MESA Fabrication Facilities, where two of our fellows led the tours, providing a firsthand look at the innovative work being conducted in their labs. Fellows Day was a wonderful opportunity to celebrate the achievements of our fellows and strengthen connections within the Sandia community. We look forward to future events that continue to inspire collaboration and innovation!

Seeking Applicants for the Prestigious

Harry S. Truman

Distinguished Postdoctoral Fellowships

Exceptional service in the national interest

Sandia National Laboratories

A GATEWAY TO GROUNDBREAKING RESEARCH

The prestigious **President Harry S. Truman Fellowship** in National Security and Engineering is designed for fellows to conduct groundbreaking, independent research that directly supports Sandia's national-security mission. As a Truman Fellow, you will:

- **Work in Albuquerque, NM or Livermore, CA**
- **Advance Cutting-edge Science and Technology**
- **Access State-of-the-Art Facilities**
- **Collaborate with Leading Experts**
- **Receive Dedicated Mentorship**

Qualifications: PhD completion between October 1, 2023 and October 1, 2026 | Strong academic record, technical skills, leadership, and teamwork ability | Submission of a strong research proposal relevant to national security | Ability to obtain and maintain DOE security clearance

Sandia's competitive wage and benefits package includes:

- An annual salary of $123,300 NM ($139,600 CA)
- Flexible work arrangements
- 13 paid holidays and three weeks of vacation
- Health, vision, and dental insurance
- A 401(k) savings plan with company match

In addition to full salary and benefits for three years, fellows also receive yearly allowance of $50K for computational projects or $100K for experimental projects that can be used for research equipment, additional personnel, and travel.

EMAIL: trumanfellowship@sandia.gov

Applications accepted through
October 1

Learn more and apply now
https://direc.to/njPG

Sandia National Laboratories ENERGY NNSA

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All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, disability, or veteran status and any other protected class under state or federal law.

SAND2025-08968M

Seeking Applicants for the Prestigious

Jill Hruby

Distinguished Postdoctoral Fellowships

Exceptional service in the national interest

Sandia National Laboratories

CULTIVATING FUTURE LEADERS IN NATIONAL SECURITY

The prestigious **Laboratory Director Jill Hruby Postdoctoral Fellowship** in national security science and engineering is designed to empower early career researchers while nurturing their potential for technical leadership. As a Hruby Fellow, you will:

- **Work in Albuquerque, NM or Livermore, CA**
- **Pursue Independent Research**
- **Engage in Leadership Development:**
  - Serving on internal research proposal selection committees
  - Engaging with government relations to understand national decision-making processes
- **Access Cutting-Edge Facilities**
- **Receive Expert Mentorship**

Qualifications: PhD completion between October 1, 2023 and October 1, 2026 | Strong academic record, technical skills, leadership, and teamwork ability | Submission of a strong research proposal relevant to national security | Ability to obtain and maintain DOE security clearance

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EMAIL: hrubyfellowship@sandia.gov

Applications accepted through
November 3

Learn more and apply now
https://direc.to/njNw

Sandia National Laboratories ENERGY NNSA

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Science Communication Series:
Transforming Technical Topics into a Story

In our May Science Communication workshop, Bobby Broccoli, aka Kevan MacKay, photonics researcher and Youtuber shared insights into his journey as a science communicator and filmmaker. He has dedicated himself to creating documentaries that appeal to audiences who may not typically engage with scientific topics. His approach centers on storytelling, using compelling narratives to draw viewers in while educating them about scientific concepts. McKay's latest documentary, "**17 Pages**" explores a dramatic scandal in immunology, showcasing his ability to intertwine science with engaging narratives. He emphasizes the importance of adapting content for different platforms, distinguishing between long-form documentaries on YouTube and short-form videos on TikTok and YouTube Shorts.

A Unique Approach to Science Communication	Focus on creating science documentaries aimed at audiences who typically do not engage with science. Strategy involves telling compelling stories that begin with a hook and incorporate scientific concepts, making the content accessible and engaging for a broader audience.
Monetization Strategies	There are various revenue streams for online creators, including ad revenue from YouTube, Patreon support, and partnerships with platforms like Nebula. Aspiring creators should be patient, as it can take years to generate significant income from content creation.
Low Barrier to Entry	Starting a YouTube channel requires minimal investment, with affordable equipment and free editing software available. Newcomers should experiment with content creation without overspending, and the initial focus should be on developing engaging content rather than on high-end production values.

Kevan MacKay,
Youtuber and Documentarian
https://youtube.fandom.com/wiki/BobbyBroccoli

"The hook is very, very important. You need people to want to watch the rest of the story, so I spend a lot of time writing and structuring my scripts to have this general flow: a very exciting beginning, most of the technical content in the middle, and then another very interesting cliffhanger at the end. Another thing that I use throughout my work are very strong visual lines, very key graphics. I like to anchor my stories. I animate a lot in 3D, so there is generally a physical 3D space that a camera is panning around and for the most part there's one main graphic in the middle that anchors the entirety of the video."

Science Communication Series:
Preparing a Press Release on Published Works

In our June Science Communication workshop, Dr. Andrea Stathopoulos, Senior Communications Advisor at Spire Communications guided participants in a workshop on strategies for sharing the significance of their published research in press releases prepared for the news. Andrea emphasized the need to translate complex scientific information into accessible narratives that resonate with diverse audiences, highlighting the role of storytelling in bridging the gap between academia and the public. Read the highlights below and the recording linked in case you missed it.

Science Storytelling

Emphasizing the importance of translating complex scientific concepts into accessible narratives, Andrea highlighted the need for effective communication tailored to diverse audiences, moving away from jargon-heavy academic language.

Diverse Career Opportunities

Various career opportunities in science communication, including roles in government, private sector, and media were discussed, encouraging attendees to explore these paths as viable alternatives to traditional academic roles.

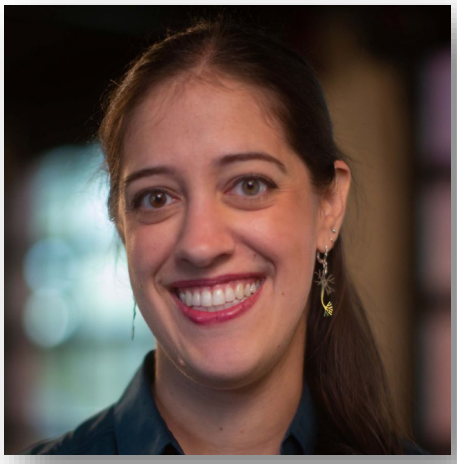
Engagement with Audiences

Andrea discussed the significance of understanding one's audience when communicating science, using relatable analogies and clear language to make complex topics engaging and understandable.

Practical Writing Skills

Her presentation provided insights into different writing styles for various platforms, such as social media, press releases, and educational content, emphasizing the need for adaptability in communication strategies

"Let's be honest, when you're reading something on a computer or your phone, you're going to scroll and scan and not read every detail of a long piece of writing. So we want to make sure that people get the important information as close to the top of the story as possible. Today, ARPA-H is announcing $24 million for the a project to train the immune system to fight cancer and other diseases. If you don't read anything past that single first sentence, at least you've gotten something important from the whole press release. Press releases do have to be objective, just the way science writing is. However, press releases have the opportunity for inclusion of quotes, and that's where you can be a little bit more emotive and offer space for speculation and some some flair."



Dr. Andrea Stathopoulos
Senior Communications Advisor,
Spire Communications

Science Communication Series: Teaching to Learn

In our July Science Communication workshop, Dr. Anirban Mazumdar, Assistant Professor of Mechanical Engineering and recipient of a teaching award shared tips on preparing teaching talks. He emphasized integration of research and education, and the importance of connecting theoretical knowledge with practical applications through hands-on learning and real-world research examples to enhance student engagement.

Teaching Philosophy	Integrate research with education to incorporate real-world research examples and enhance student learning and engagement. By showcasing innovative projects, you can demonstrate the relevance of your research in various applications.
Faculty Interview Process	Candidates should craft teaching statements articulating a unique teaching vision that highlights their past experiences and integrates their research, and also identify existing courses they could teach.
Innovative Educational Experiences	Encourage students in hands-on learning to engage with real hardware and learn from the challenges they may face in practical applications. This experiential learning approach helps students bridge the gap between theory and practice, especially in robotics education.
Collaborative Research and Teaching	By allowing students to contribute to research projects, they gain valuable experience and can even become co-authors on publications, enhancing their academic credentials.

Dr. Anirban Mazumdar
Assistant Professor of Mechanical Engineering, Georgia Institute of Technology

"I think mentorship outside the classroom is also a key part of of training the next generation. This is actually something I've been passionate about since I was in Graduate School. My students made a real impact on my research.

In fact, they were both co-authors on publications and we've kept in touch. The kind of mentorship I strive for is sustained interactions and impact. So in that vein, I continue to encourage undergraduates from my course to join research in my lab. So we have a number of students as Sandia interns right now, and then a few more who work there full time."

OPPORTUNITIES

Searching for full-time permanent positions at Sandia National Laboratories?

Search by the term "Early Career" to find postings that might be more relevant.

https://sandia.jobs/jobs/

Published a paper recently, received a funding award, or have celebratory career news to share?

Send us the details at this link so that we can highlight your success.

A collaboration between Sandia's Postdoctoral Program Office and the Universities Research Association

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