



STRENGTHENING OUR NATIONAL SECURITY *TOGETHER*



Purdue University stands at the forefront of national security innovation — partnering with the U.S. Department of Energy’s (DOE) national laboratories to advance the science and technology that protect our nation. From hypersonic systems to nuclear security, from energy resilience to advanced computing, Purdue’s collaborations with DOE national laboratories bring together top scientists, engineers and students in addressing critical national needs.

A LEGACY OF TRUSTED PARTNERSHIP

Beginning with the Manhattan Project, Purdue has worked closely with DOE national laboratories to accelerate breakthroughs in defense science, cybersecurity, energy systems and advanced manufacturing.

These collaborations combine Purdue’s world-class research infrastructure and deep research expertise with the labs’ mission-driven expertise and secure facilities. Together, they drive innovation that safeguards national security.



INNOVATING FOR NATIONAL SECURITY, SCIENCE AND ENERGY LEADERSHIP

Purdue and DOE researchers lead projects in semiconductors, AI and advanced computing, hypersonics, advanced energy and nuclear technologies, cybersecurity, energetics, quantum, and advanced manufacturing — areas critical to maintaining technological superiority. The university’s Hypersonics and Applied Research Facility (HARF), Zucrow Laboratories, Birck Nanotechnology Center and other facilities enable testing, modeling and materials development at scale that complement DOE capabilities.



TRAINING THE NEXT GENERATION

Through joint fellowships, internships and visiting scientist programs, Purdue and the national laboratories are cultivating the next generation of national security scientists and engineers. Students gain access to real-world missions, mentorships from experts, and experience working in classified and export-controlled research environments — preparing them to lead in government, academia and industry.

SCALE (semiconductors) and CERIAS (cybersecurity) are among leading workforce development programs at Purdue.





Purdue leadership meeting with the Los Alamos National Laboratory's Purdue partnership team and Purdue alumni who work at the lab. (Photo courtesy of Los Alamos National Laboratory)

WHERE INNOVATION MEETS NATIONAL MISSION

As global threats evolve, Purdue-DOE national laboratories collaborations ensure the nation remains secure, resilient and technologically ahead. Together, they embody the spirit of collaboration that transforms discovery into defense and research into real-world impact.

Lab	Joint Faculty Appointments	MOU	Master Research Agreement	Permanent Physical Presence at Purdue
Argonne National Laboratory (ANL)	✓	✓		
Fermilab	In process	✓	In process	
Oak Ridge National Laboratory (ORNL)	✓	✓		
Sandia National Laboratories (SNL)	✓	✓	✓	✓
Los Alamos National Laboratory (LANL)	✓	✓	✓	✓ Planned for 2026

“From our roots in the Manhattan Project to today’s frontiers of discovery, Purdue has worked shoulder to shoulder with Department of Energy researchers to safeguard and strengthen our nation. As we enter a new era shaped by AI, Purdue aspires to be the Department of Energy’s university partner of choice for optimizing the AI Tech stack. Together, we can advance AI in ways so transformative that this work may one day be remembered as the second Manhattan Project.”

RESEARCH FIELDS

Advanced Energy and Nuclear Technologies
AI and Advanced Computing
Advanced Manufacturing
Semiconductors
Hypersonics
Cybersecurity
Energetics
Quantum

NATIONAL LABS PARTNERED WITH PURDUE



MUNG CHIANG
President, Purdue University