Sandia National Laboratories

Exceptional service in the national interest

Sandia National Laboratories

PARTNERSHIP *Opportunities*

Partnering with Sandia

Sandia National Laboratories offers partners access to Sandia's science, people, and infrastructure. Collaborations with industry and small businesses support the Labs' primary missions and help companies bring exciting technologies to the marketplace as new and improved products.

Over the years, Sandia's missions relating to national security have expanded beyond weapons and defense. These missions include areas like energy, climate, and infrastructure security, because access to reliable, affordable, and sustainable sources of energy is essential for our modern economy and national security.

Expanded missions mean that Sandia, as a noncompetitive partner, can offer you access to a broad array of technologies and expertise in a number of disciplines, ranging from the life and physical sciences to microelectronics and information systems.

Partnership Opportunities

There are a number of ways you can partner with Sandia. On the following pages we briefly describe them and give examples.

Partnership Agreement Types

- Cooperative Research and Development Agreement
- Commercial License Agreement
- Funds-In Agreement / Work for Others
- Designated Capability Agreement
- Technology Development Center Agreement
- User Facility Agreement
- New Mexico Small Business Assistance Agreement

Places to Partner

- Sandia Science & Technology Park
- Livermore Valley Open Campus

What's in it for each partner?

Partnering brings benefits to industry and Sandia. Collaborations leverage each partner's resources to meet common or compatible goals.

For businesses, partnerships with Sandia can:

- Transform government investment and the Labs' research into improved products, new companies, and industry innovation.
- Give you access to specialized expertise and technology to meet your research needs.
- Help you stay competitive by commercializing new technologies.

For Sandia, partnerships with industry can:

- Help the Labs accelerate U.S. industry's innovation and development.
- Increase the Labs' intellectual property portfolio, leading to revenue from licensing and royalties, which can then be used to fund research programs.
- Enable the Labs to complete important projects based on grants and proposals which require industry involvement.

Technology transfer enhances the impact of science and technology discoveries made at Sandia. By applying Sandia capabilities to industrial problems, the Labs gain new perspectives on vitally important issues that help them meet their mission objectives. At the same time, industry is able to create more robust, new, and/or improved products, upgrading their competitiveness in the global market.

About Sandia

Since 1949, Sandia has developed science-based technologies that support our national security. Today, Americans depend on the Labs' technology solutions to solve national and global threats to peace and freedom. We seek collaborative partnerships on emerging technologies that support our missions.

Partnership Agreement Types

Cooperative Research and Development Agreement (CRADA)

Through a CRADA, Sandia and one or more partners from outside the federal government collaborate and pool the results from a research and development project that benefits the industry partner and enhances the mission of the U.S. Department of Energy (DOE), as well.

Information developed under a CRADA can be protected for five years; ownership and licensing of CRADA-generated intellectual properties are negotiated.

Goodyear

Goodyear is a long-term partner with Sandia, using a CRADA to enable cooperative work with Sandia's researchers who have expertise in computational simulation. Goodyear has been using the technology to quickly perform detailed tire simulations for almost every new product design. The Sandia/Goodyear partnership focuses on high-speed rolling, noise modeling, and fully coupled thermo/mechanical rolling simulations. The simulation tools have also been used to develop tires with minimum rolling resistance in order to improve cars' fuel economy.

Goodyear's strategic partnership with Sandia helps them bring innovative products to market more quickly, making the company more competitive.

Commercial License Agreement

Licensing permits Sandia to transfer intellectual property to industry for commercialization. Sandia can negotiate a variety of terms and conditions for its technology licenses.

See what technologies are available at **https://ip.sandia.gov.**

Abbott's WaveFront Sciences

Abbott continues to create new products based on wavefront sensing metrology. The company began licensing technology from Sandia in its early days as WaveFront Sciences, and this initial intellectual property is the seed which has enabled the continued evolution in optical measuring systems for everything from space telescopes to LASIK surgery. The iDesign Advanced Wavescan Studio Aberrometer is the latest in the company's ophthalmic product line, having recently received CE mark approval. It simultaneously measures the detailed structure of the eye, from the shape of the cornea all the way through the retina, and is used in treatment planning for laser refractive surgery.

Abbott estimates that one million patients have improved the quality of their vision thanks to its products.

Funds-In Agreement / Work for Others (WFO)

Sandia can conduct work for non-federal entities such as private industry, state and local government, and academia on a reimbursable basis. The work cannot compete with capabilities in the private sector.

This agreement allows sponsors to access Sandia's unique expertise, facilities, and equipment to validate or improve technologies.

GE Global Research

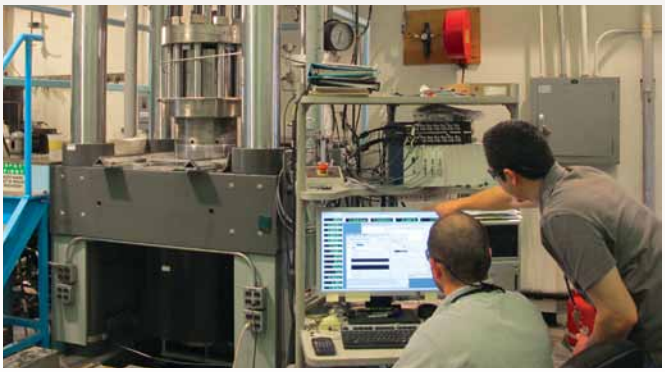
GE Global Research approached Sandia to collaborate on the evaluation of a photovoltaic converter designed to help large commercial and utility scale PV plants become more energy efficient. GE knows that the Labs' scientists have expertise in this area, and that Sandia's Distributed Energy Technologies Laboratory (DETL) is an internationally recognized and renowned facility with the equipment and expertise necessary to perform this evaluation. GE's new converter offers a unique way to get the most out of a solar energy PV plant. Evaluation by Sandia will give GE important feedback on the converter's performance and reliability, as well as its impact on PV plants' energy yield.

Testing GE's new converter at DETL will help GE evaluate its commercial viability and potential.

Designated Capability Agreement

A Designated Capabilities Agreement is a type of Funds-In Agreement. The participating Sandia organization has already prepared background paperwork and received DOE approval for its activities, reducing processing time. To access the designated capability, the participant signs a sub-agreement for specific work.

This agreement type allows Sandia to provide a quick response to customer requests.



Geomechanics Research, Development, and Applications

Industry can access the unique capabilities, expertise and facilities available at Sandia in Geomechanics Research, Development, and Applications. As a Designated Capability, an Umbrella Statement of Work is already written, reducing processing time for new partners. The Geomechanics Laboratory is recognized nationally and internationally as a center for excellence in rock mechanics. Sandia researchers have expertise in areas including underground energy storage, CO_2 sequestration, oil and gas reservoir analysis, and underground hazardous waste disposal. Experiments are conducted and constitutive models are developed to help sponsors understand phenomena such as large scale deformation of rock, fluid flow, and engineered systems involving porous, pressure sensitive or brittle materials as they relate to their particular research and development requirements.

Improved simulations of fractured oil and gas reservoirs save operators millions of dollars per year by reducing well failure rates.

Technology Deployment Center Agreement

Many of Sandia's unique research centers are available for use by U.S. industry, universities, other laboratories, state and local governments, and the scientific community in general. Technology deployment centers are a unique set of scientific research capabilities and resources.

Technology deployment centers allow access to DOE facilities by outside users, while they are concurrently being used for DOE programmatic needs.

The National Solar Thermal Test Facility (NSTTF)

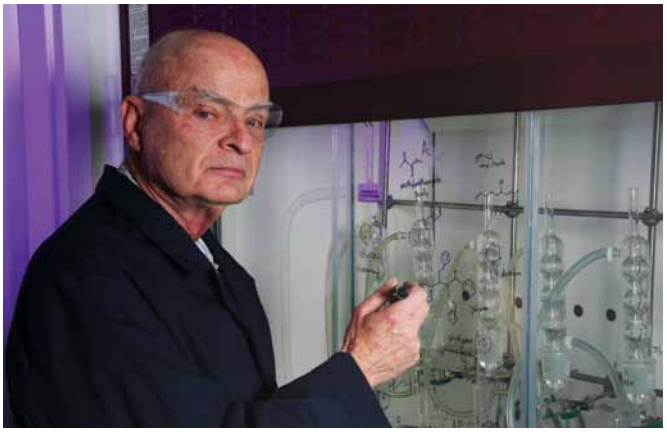
NSTTF is the only test facility in the United States of its type. It provides experimental engineering data for the design, construction, and operation of unique components and systems in proposed solar thermal electrical plants. SolarReserve, a solar energy project development company developing large-scale solar energy projects worldwide, utilizes the NSTTF (a.k.a. Solar Tower), via a Technology Deployment Center Agreement. They employ the NSTTF-developed Beam Characterization System to evaluate the tracking accuracy and beam profile of their heliostats on the face of the solar tower. SolarReserve has two full-time employees on site at the NSTTF to support their activities.

SolarReserve develops large-scale solar energy products worldwide and utilizes the NSTTF to develop, deploy, and test their heliostats.

User Facility Agreement

Sandia has facilities that can be accessed by private-sector companies, universities, and other laboratories through a User Facility Agreement.

Under a User Facility Agreement, Sandia and a company perform work together at a Sandia facility.



The Center for Integrated Nanotechnologies (CINT)

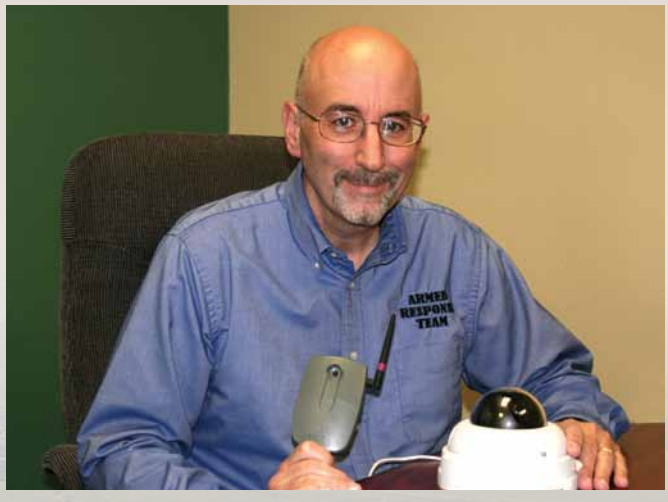
CINT is a DOE Office of Basic Energy Sciences Nanoscale Science Research Center operated as a national user facility by Sandia and Los Alamos National Laboratory (LANL). Through its Core Facility in Albuquerque and Gateway Facility in Los Alamos, CINT provides access to the capabilities and scientific expertise of its scientists, post-doctoral fellows, and technical support personnel. Together, CINT users and staff are establishing the scientific principles that govern the design, predict the performance, and enable the integration of nano-structured materials into the micro and macro worlds. Access is via peer-reviewed technical proposals, for independent or collaborative research, submitted in response to semi-annual calls for user proposals.

CINT Industrial User Ed Flynn has developed a less invasive and more precise method for detection of breast cancer using nano-particles, which he is preparing for commercial use.

New Mexico Small Business Assistance (NMSBA) Agreement

The NMSBA Program assists small businesses in New Mexico access cutting-edge technologies, solve technical challenges, and gain knowledge from experts at Sandia and LANL. Assistance is provided in the form of lab staff hours valued at up to $20,000 per calendar year for businesses located in rural counties, and up to $10,000 per calendar year for businesses located in an urban county (e.g. Bernalillo County).

The assistance is provided at no cost to small businesses.



Armed Response Team (ART)

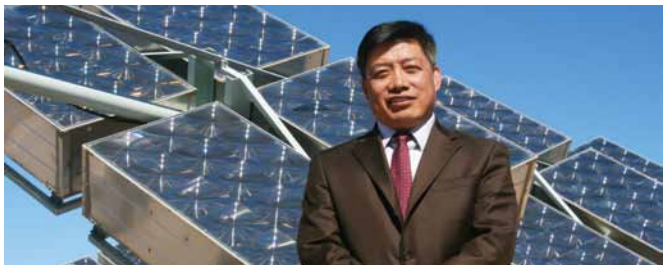
As an NMSBA client, ART has come up with a breakthrough way to watch electrical transformers without attaching to them. This new solution is cost-effective and is able to be installed easily and unobtrusively. Guidance from experts at Sandia in video analytics technology led to a solution which is helping ART grow locally and expand to other states. The new development is also saving businesses the expense of downtime related to this crime. Insurance companies are now considering offering discounts to businesses using ART technology.

ART is utilizing advice they've received from researchers at Sandia to solve an enormous local and national problem—copper wire theft from businesses.

Places to Partner

Sandia Science & Technology Park (SS&TP)

The SS&TP is a master-planned, high-tech campus with stunning mountain views, fiber optic communications, and a full-time team for support and customer service. From its landscaped medians, bike paths, and walkways, to pocket parks with shade structures and exercise stations, the Park provides an excellent blend of high-technology with quality-of-life features and amenities. Adjacent to the multibillion-dollar engineering and science facilities of Sandia and the Air Force Research Laboratory, mature companies and startups collaborate with these top laboratories on a broad assortment of technologies, products, and services.



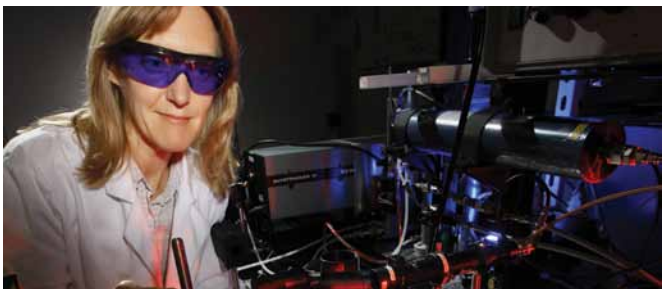
EMCORE Corporation

EMCORE, a leading provider of compound semiconductor-based components and subsystems for the fiber optic and solar power markets, established its photovoltaics business at the SS&TP in 1998 through a technology transfer of multi-junction solar cell technology from Sandia. In 2006 the company moved their headquarters from New Jersey to the SS&TP. More recently, Sandia and EMCORE have partnered on proposals to the DOE. The company has successfully used agreement types including licenses, WFO, NMSBA, and a CRADA to help grow its business. Currently EMCORE is engaged in a program using its expertise in the growth of solar cells for Sandia's microconcentrator Laboratory Directed Research and Development program.

EMCORE's close proximity to the Labs helps facilitate partnerships with Sandia.

Livermore Valley Open Campus (LVOC)

Through an exciting partnership between two DOE national laboratories, Sandia and Lawrence Livermore National Laboratory (LLNL), the LVOC was established in 2011 as a space for open, collaborative work in areas such as bioscience, combustion research, cyber security, energy technologies, and hydrogen applications. Collaborators can visit LVOC facilities for hours, days, weeks, or even months to work side by side with researchers. Facilities at the LVOC include the world-renowned Combustion Research Facility, managed by Sandia; the brand-new High Performance Computing Innovation Center, managed by LLNL; and other well-established, new, and planned facilities.



Combustion Research Facility (CRF)

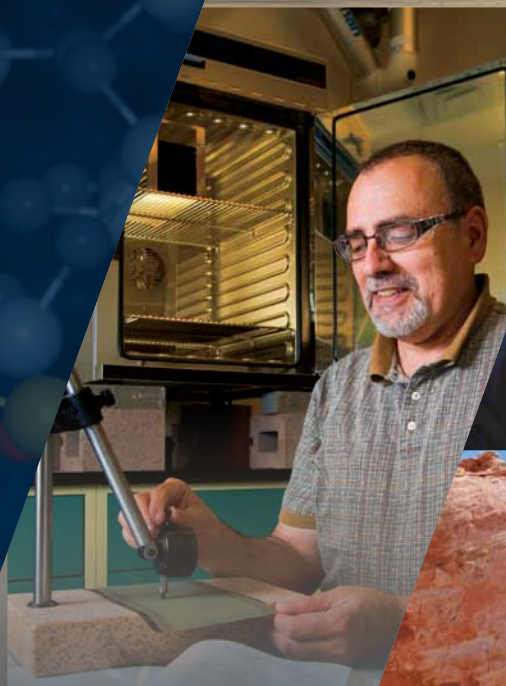
As a DOE Office of Science collaborative research facility, a key aspect of the Combustion Research Facility's mission is to encourage the direct involvement of individuals, or "collaborators," from the scientific community. The CRF also works with industrial partners on both precompetitive projects that are shared with the community and on proprietary projects that are wholly owned by the sponsor. Precompetitive projects typically involve cost sharing between DOE and industry; while proprietary projects are fully funded by the industrial sponsor. For example, the CRF has been working closely with U.S. engine manufacturers for more than 30 years to increase scientific understanding of internal combustion engine processes affecting efficiency and emissions.

At the CRF, advanced laser diagnostic techniques reveal the interplay of chemistry and gas mixing that controls combustion, enabling our partners to rapidly develop clean and efficient technologies.

To learn more about partnership opportunities with Sandia, please contact us at:

partnerships@sandia.gov
505-284-2001
www.sandia.gov/partnerships

For further information about all the partnership agreement types, download the "Doing Business with Sandia" brochure from the website.



U.S. DEPARTMENT OF ENERGY

NNSA National Nuclear Security Administration

Sandia National Laboratories is a multi-program laboratory managed and operated by Sandia Corporation, a wholly owned subsidiary of Lockheed Martin Corporation, for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-AC04-94AL85000. SAND No. 2012-9800P.

Sandia National Laboratories