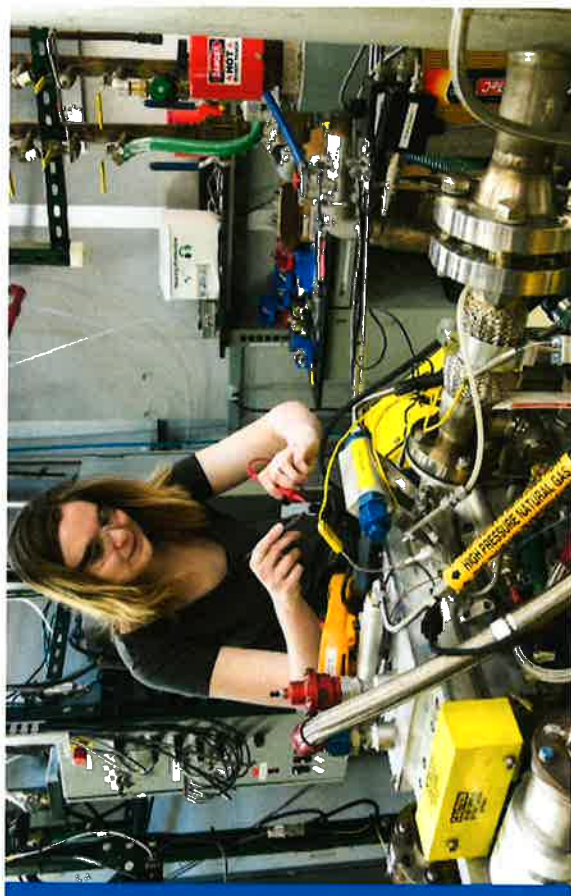


SBIR/STTR ENGAGEMENTS WITH ARGONNE NATIONAL LABORATORY



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SCIENCE AND TECHNOLOGY PARTNERSHIPS & OUTREACH

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BACKGROUND AND CONTEXT

DOE National Labs and the DOE SBIR Program

- Framework of engagement
 - MOU executed 2013 describes the purpose of the engagement and outlines roles and responsibilities for the SBIR Program and the partnering Labs
- DOE National Laboratories have a dual mission:
 - Cutting edge S&T, talented people, unique facilities
 - Impact: to society, economic and energy security
- Technology transfer is a significant method to deliver impact
 - Recognition of the importance of the Small Businesses
 - Prime Contract language for Patent Rights and for Tech Transfer clauses
- Opportunity for the small business:
 - leverage Laboratory technology specific to an SBIR or STTR call
 - after the SBIR/STTR award, collaborate with the Laboratory (under subcontract from their award) for work performance

DEPARTMENT OF ENERGY NATIONAL LABORATORIES



Science Labs

Energy Labs



Weapons Labs



ARGONNE BY THE NUMBERS (FY17)



OPERATING
BUDGET



EMPLOYEES



SCIENTISTS &
ENGINEERS



POSTDOCTORAL
RESEARCHERS



FACILITY
USERS

RESEARCH INTERESTS

NUCLEAR &
PARTICLE
PHYSICS

TRANSPORTATION
& COMBUSTION

PROTEIN
CHARACTERIZATION

IMAGING

NANOMATERIALS

ENERGY SYSTEMS
ANALYSIS

CHEMICAL
ENGINEERING

CHEMISTRY

MATERIALS
FOR ENERGY

GLOBAL
SECURITY

OIL AND GAS

INFRASTRUCTURE

ANALYSIS

ACCELERATOR
TECHNOLOGY

ENERGY STORAGE

HIGH-PERFORMANCE
COMPUTING

NUCLEAR
ENERGY

BIOLOGY &
ENVIRONMENT

COMPUTATIONAL
SCIENCE

BIG
DATA



COLLABORATE ON SCIENCE AND TECHNOLOGY: USER FACILITIES



Advanced Photon Source



Argonne Leadership Computing Facility



Center for Nanoscale Materials



Argonne Tandem Linear
Accelerator System



Atmospheric Radiation Measurement
Southern Great Plains Site

ARGONNE AND THE SBIR/STTR PROGRAM

Roles of each entity

- SBIR/STTR operates the program, determines scope, domain areas.
- SBIR/STTR Programs Office issues a call for technologies to be developed under this program
 - DOE Programs provide input based on appropriateness of the technology being developed further. If it is, it will be included in a FOA
- Argonne responds to the RFIs with candidate technologies reviewed internally for fit with parameters of the program
 - Readiness for further development
 - Hold on technologies under review until Phase I calls are issued
- Argonne agrees to provide technical and other information as needed to prospective SB applicants to FOA in a fair and equal way
 - SB outreach and information
- Argonne agrees to provide a standard option agreement to license the technology

BENEFITS TO SMALL BUSINESSES

Argonne's work with SBs is a part of our portfolio for enhanced impact through technology commercialization

- Leverage DOE funded technologies specific to SBIR/STTR call
 - Access to one-of-a-kind User Facilities
- Collaborate with Argonne to deliver on key performance milestones
 - Argonne is a sub-contractor under the award and any of our standard contracting mechanisms can be used
- Avenue for ongoing R&D collaboration
 - Phase I collaborations
 - Phase II for proto-type development
 - Beyond Phase II
- Numerous success stories e.g. Forge Nano, Boulder CO - surface engineering for advanced materials development
 - SBIR sub-contract to Argonne
 - We have sub-contracted out to them part of work for another customer
 - They have licensed a key piece of their portfolio from Argonne

OFFER PRODUCTS AND/OR SERVICES TO THE LABORATORY

<https://www.anl.gov/work-us/small-business>

- Small business Program office (part of Argonne Procurement)
- As part of our Prime Contract (between DOE and the University of Chicago, Management & Operations Contractor for Argonne National Laboratory), the laboratory has contractual goals for various types of small businesses in the following categories:
 - Small Business (SB)
 - Small Disadvantaged Business (SDB)
 - Woman-Owned Business (WOB)
 - Certified Historically Underutilized Business (HUBZone)
 - Veteran-Owned Business (VOB)
 - Service-Disabled Veteran-Owned Business (SDVOB)
- Argonne is subject to the laws and regulations governing subcontracting contained in the Small Business Act, 15 USC 637 and Federal Acquisition Regulation (FAR), Part 19.

COLLABORATE ON SCIENCE AND TECHNOLOGY: SPONSORED RESEARCH



Sponsored Research

- Cooperative research (CRADA) or Argonne performs tasks solely (SPP)
- IP terms negotiable
- Funding options available

Licensing

- Argonne-owned IP
- Exclusivity is typically an option
- Focus is on commercialization/impact

Technical Service Agreement

- Short-term technical assistance
- Full-cost recovery
- Agreement executed 5-10 business days for well-defined activity

USER FACILITIES IN THE PUBLIC EYE

Some recent examples

Watching How Rare, Meteoric Diamonds Form

“In a first-of-its-kind collision chamber at Argonne National Laboratory, physicist Yogendra Gupta of Washington State University and his colleagues mimicked a meteorite impact by firing a lithium fluoride bullet at a graphite disk at 5.1 kilometers per second. Extremely bright x-rays ‘photographed’ the event at 150 ns/frame.”

December 25, 2017

<https://www.scientificamerican.com/article/watching-how-rare-meteor-diamonds-form/#>

Scientists Just Solved a Major Piece of the Opioid Puzzle

“... report for the first time the structure of the kappa opioid receptor while it's bound to a drug molecule, a discovery that could accelerate the discovery of less-addictive—and less deadly—opioids.”

January 8, 2018

<https://www.wired.com/story/scientists-just-solved-a-major-piece-of-the-opioid-puzzle/>

USER FACILITY ACCESS

<https://www.anl.gov/user-facilities>

- Process: Register, Submit user proposal
 - Peer-review evaluation
 - User agreement (UA) executed
- We have two flavors of UAs
 - Non-proprietary: the results of the experiments are expected to become part of the public domain (typically this means the results are expected to be published). There is no charge for nonproprietary use of the facility.
 - Proprietary: researchers keep the intellectual property rights and do not expect the results to become part of the public domain (typically this means that the results are not expected to be published. The User Facility charges users for proprietary use of the facility.
- User agreements define rights and responsibilities in areas such as
 - Intellectual property rights
 - Indemnification
 - Liability
 - Obligations to conform with environmental and safety requirements
- Information on User Agreements can be found at:

<https://www.aps.anl.gov/Users-Information/Legal-Financial/Argonne-User-Facility-Agreements>