DOE Office of Science Graduate Student Research (SCGSR) Program

> **The SCGSR Program provides supplemental awards to outstanding graduate students to spend 3 to 12 months conducting part of their doctoral thesis/dissertation research at a host DOE national laboratory/facility in collaboration with a DOE laboratory scientist.**

- Graduate students must apply online through the online application system.
- The application requires a research proposal and letters of support from both the graduate student's thesis advisor and the collaborating DOE laboratory scientist.
- Student's research and proposed SCGSR project must be aligned with one of the identified SCGSR priority research areas defined by the SC Program Offices and specified in the solicitation.
- Applications proposing to use an SC user facility must apply for user facility time separately.

Award Benefits:

- A monthly stipend of up to $3,000/month for general living expenses
- Reimbursement of inbound/outbound traveling expenses to/from the host DOE laboratory/facility of up to $2,000

(Award payments are provided directly to the student)

Eligibility:

- U.S. Citizen or Lawful Permanent Resident
- Qualified graduate program & Ph.D. Candidacy
- Graduate research aligned with an SCGSR priority research area
- Establishment of a collaborating DOE laboratory scientist at the time of application

2020 Solicitation 2 – Application Due November 12, 2020, 5::00 PM ET

Full details, requirements, FAQs, and link to application at: https://science.osti.gov/wdts/scgsr/

Key Dates for 2020 - 2021

At the submission deadline (shown in red), the online application system will close after which no additional materials will be accepted.

The online application system closes at 5:00 PM Eastern Time.

	2020 Solicitation 1 (Most Recent)	2020 Solicitation 2 (Ongoing)	2020 Solicitation 2*** (Upcoming)
On-line Application Opens	February 13, 2020	August 20, 2020	February 2021
Applications Due (including all letters of support)	**May 20, 2020** **5:00 PM ET**	**November 12, 2020** **5:00 PM ET**	**May 2021**
Offer Notification Period *Begins on or around*	August/September 2020	April/May 2021	August/September 2021
*Earliest** Start Date for Proposed Project Periods	November 9, 2020	June 14, 2021	November 1, 2021
*Latest*** Start Date for Proposed Project Periods	March 1, 2021	October 4, 2021	February 28, 2022

*Proposed project periods may not begin before this date, and may be 3 to 12 consecutive months in duration.
** Proposed project period must begin no later than this date, and may be 3 to 12 consecutive months in duration.
*** All Dates are tentative.

SCGSR Program: Priority Research Areas for 2020 Solicitation 2

https://science.osti.gov/wdts/scgsr/how-to-apply/priority-sc-research-areas/

Convergence Research Topical Areas
  (a) Microelectronics (ASCR, BES, HEP, NP)
  (b) Data Science (ASCR, BES, BER, FES, HEP, NP
  (c) Conservation Laws and Symmetries (BES, HEP, NP)
  (d) Accelerator Science (ASCR, BES, BER, FES, HEP, NP)

Advanced Scientific Computing Research (ASCR)
  (a) Applied Mathematics
  (b) Computer Science

Basic Energy Sciences (BES)
  (a) Accelerator and Detector R&D
  (b) Nuclear Chemistry and Radiochemical Separations
  (c) Neutron Scattering Research and Instrumentation
  (d) Materials Science and Chemistry for Microelectronics
  (e) Fundamental Electrochemistry for Chemical and Materials Sciences
  (f) Crystal Growth
  (g) Ultrafast Materials and Chemical Sciences
  (h) Electron and Scanning Probe Microscopy Research and Instrumentation
  (i) Basic Geosciences
  (j) Gas Phase Chemical Physics
  (k) Radiation Effects in Materials
  (l) Catalysis Science with NMR Spectroscopy**,** Neutron Scattering, and X-ray Absorption Spectroscopy Techniques
  (m) Highly Ionizing Radiation in Chemistry
  (n) Energy Transfers in Large Proteins and Protein Complexes
  (o) Quantum Information Science for Experimental Condensed Matter Physics
  (p) Quantum Information Science for Theoretical Condensed Matter Physics
  (q) Data Science for AI Applications to Chemical, Geological, Biochemical, and Materials Sciences

Biological and Environmental Research (BER)
  (a) Computational Biology and Bioinformatics

Biological and Environmental Research (BER) Cont'd
  (b) Biomolecular Characterization and Imaging Science
  (c) Plant Science for Sustainable Bioenergy
  (d) Soil Microbiology
  (e) Environmental Systems Science
  (f) Atmospheric System Research
  (g) Earth System Modeling
  (f) Regional and Global Model and Analysis

Fusion Energy Sciences (FES)
  (a) Burning Plasma Science & Enabling Technologies
  (b) Discovery Plasma Science

High Energy Physics (HEP)
  (a) Theoretical and Computational Research in High Energy Physics
  (b) Advanced Accelerator and Advanced Detector Technology Research and Development in High Energy Physics
  (c) Experimental Research in High Energy Physics

Nuclear Physics (NP)
  (a) Medium Energy Nuclear Physics
  (b) Heavy Ion Nuclear Physics
  (c) Fundamental Symmetries
  (d) Nuclear Structure and Nuclear Astrophysics
  (e) Nuclear Theory
  (f) Nuclear Data and Nuclear Theory Computing
  (g) Accelerator Research and Development for Current and Future Nuclear Physics Facilities
  (h) Quantum Information Science for Experimental and Computational Nuclear Physics
  (i) Artificial Intelligence and Machine Learning for Nuclear Physics
  (j) Advanced Detector Technology Research and Development in Nuclear Physics
  (k) DOE Isotope Program (**Office of Isotope R&D and Production**)

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New Category - Convergence Research Topical Areas

- **Forward looking, reflecting SC emerging areas and strategic priorities, and trans-disciplinary research germane to SC and integral to the DOE laboratory complex are of interest.**

- **By nature, convergence research topics bring together people from different academic disciplines and/or different sub-areas represented in the Office of Science, and are formed for achievements possible only through such integration.**

- **The convergence research topical areas represent cross-cutting research themes and shared interests across Office of Science's research program offices.**

  - Applications submitted in this category must address research topic(s) of interest to at least two of the participating SC programs.

  - If applicants are not certain if they should submit an application to a convergence area or a non-convergence area under a single program office, it is recommended to submit it to the convergence area first.

Merit Review Criteria

1. Scientific and/or Technical Merit of the Proposed Research[*]

a. Is the proposed research well-conceived, and does it demonstrate a clear understanding of the scientific and technical challenges involved?

b. Is the proposed method and approach for the proposed research appropriate?

c. Is the applicant (graduate student) sufficiently well prepared to conduct the proposed research?

d. Are the DOE laboratory resources adequate? If applicable, has the necessary access to a scientific user facility been secured by the DOE laboratory collaborating scientist?

2. Relevance of the Proposed Research* to Graduate Thesis Research and Training

a. Does the proposed research have the potential to make a significant contribution to the applicant's (graduate student's) thesis research project?

b. Will the proposed research enhance the applicant's graduate training and research skills?

[*] Research proposed is explicitly the scope of the research proposed to be conducted by the applicant (graduate student) at the DOE Laboratory/Facility.

Application Requirements

All applications to the SCGSR program must be completed through the online application system. Only complete applications submitted by the deadline will be considered.

A Complete SCGSR Application includes:

- All required fields of the Online Application System, *including:*
  - Contact information of the graduate applicant, primary graduate thesis advisor, and collaborating DOE laboratory scientist
  - Academic information, including undergraduate and graduate study
  - Professional information, including scientific publications and awards, research experiences, etc.
  - Alignment of proposed research to one of the SCGSR Priority Research Areas
    https://science.osti.gov/wdts/scgsr/how-to-apply/priority-sc-research-areas/

- A **SCGSR Research Proposal** (*3-page maximum including references, full guidance provided online*).
  https://science.osti.gov/wdts/scgsr/how-to-apply/research-proposal-guidelines/

- Official graduate transcripts and proof of Ph.D. Candidacy.
  https://science.osti.gov/wdts/scgsr/how-to-apply/graduate-transcripts/

- Two Letters of Support, one by primary graduate thesis advisor, and the other by collaborating DOE laboratory scientist. https://science.osti.gov/wdts/scgsr/how-to-apply/Letters-of-Support/