

Welcome! Please answer the following question in the chat box:

Which of the 17 DOE National laboratories are the closest and farthest from you?

Office of Science Graduate Student Research Program (SCGSR)

Application Assistance Workshop 1
for 2026 Solicitation 2

September 3, 2026

"Through my SCGSR experience, not only have I unlearned, relearned, and learned in ways that have significantly shaped my development as a researcher, but I have also established connections with some of the finest people in the field."

SCGSR 2024 S2 Awardee



U.S. DEPARTMENT
of **ENERGY**

Office of
Science

[Energy.gov/science](https://energy.gov/science)

SCGSR Program

Foster advanced workforce development in areas critically important to SC mission

Supplemental funding to PhD candidates for doing part of their thesis research **at DOE National Laboratories**

3 – 12 months in collaboration with a DOE National Laboratory scientist

+ opportunity to conduct **6 week-long research visits to collaborating institutions abroad** (CERN, RIKEN)

- PhD candidacy at U.S. University
- U.S. citizens or Lawful Permanent Residents
- Alignment with priority research areas
- New research experiences (no prior work at the host lab), **BES: proximity restrictions**



<https://science.osti.gov/wdts/scgsr/How-to-Apply/Priority-SC-Research-Areas#BES>

Scientist in Residence

Build network and establish yourself in the field

**Not an
Internship!**

**Stipend: \$3,600/month
Travel Reimbursement: Up to \$3,000**



PhD Thesis

SCGSR Research Proposal

Collaborating Scientist
Resources
DOE National Laboratory

Time:

- When to start your project at the lab?
- How long? 3, 6, 9, 12 months?
Consider additional variables, e.g.:
 - Training time (up to 1 month)
 - International travel opportunities
(CERN, RIKEN, 6 weeks, optional)

Your Decisions!



U.S. DOE Office of Science Mission

Deliver scientific discoveries and major scientific tools to:

- transform our understanding of nature
- advance the energy, economic and national security of the United States

<https://science.osti.gov/>



- 129 Nobel Laureates affiliated to DOE
- 68 affiliated to DOE National Laboratories

<https://science.osti.gov/About/Honors-and-Awards/DOE-Nobel-Laureates>



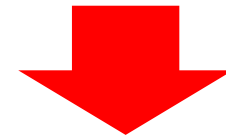
The SCGSR Program Supports

- **Hypothesis driven research:** Fundamental research (NOT applied research).
- **Method or instrument development:** when aimed to enable fundamental research, or if it is part of a large fundamental science experiment.

Examples of research not supported by SCGSR:

Exploratory work ❌

Human health ❌



**56 Priority
Research Areas**



<https://science.osti.gov/wdts/scgsr/How-to-Apply/Priority-SC-Research-Areas>



6 SC Research Programs → Priority Areas

Advanced Scientific Computing Research (ASCR)

World leading computational and networking capabilities

Biological and Environmental Research (BER)

Understand complex biological, earth, and environmental systems

Basic Energy Sciences (BES)

Understand, predict, and control matter and energy at the electronic, atomic, and molecular levels

Fusion Energy Sciences (FES)

Build the scientific foundations for a fusion energy source

High Energy and Nuclear Physics (HENP)

Understand how the universe works at its most fundamental level

Isotope R&D and Production (IRP)

National preparedness for isotope production and distribution



SC Research Program Managers

Dr. David Rabson, Dr. Xujing Davis – ASCR

Dr. Justin Hnilo – BER

Dr. Christopher Fecko – BES

Dr. Nirmol Podder – FES

Dr. Paul Sorensen – HENP

Dr. April Gillens - IRP

Meet them later in the Breakout Rooms!!!



DOE National Laboratories: A Unique Asset for Training and Scientific Discovery

Created as a home for large-scale, costly scientific facilities that universities cannot afford.



DOE National labs employ
>30,000 scientists and engineers

World leading scientific user
facilities, expertise, and resources

Large multidisciplinary research programs
not available in universities or industry

SCGSR is ON SITE at the host DOE National Laboratory

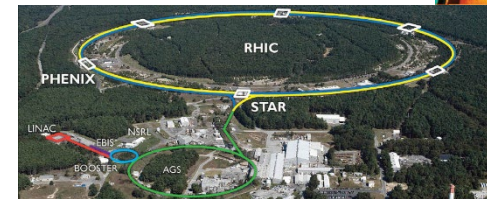
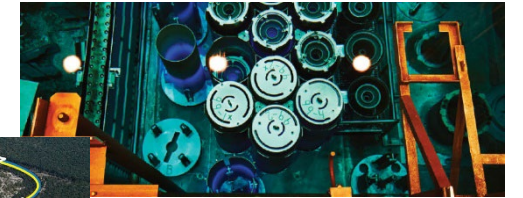
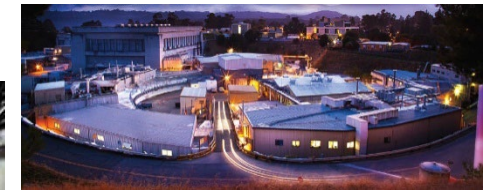
From an awardee in theoretical HEP:

“Work of this kind, where the correct next step is usually identified in discussion, benefits disproportionately from being physically co-located.”



28 Scientific User Facilities

- High Performance Computing: ALCF, OLCF, NERSC, Esnet
- X-Ray Light Sources: ALS, APS, NSLS-II, LCLS, SSRL
- Neutron Scattering: HFIR, SNS
- Nanoscale Science Centers: CFN, CINT, CNM, CNMS, TMF
- Earth System Modeling: ARM
- Biomolecular Characterization: EMSL, JGI
- Plasma Confinement: DIII-D, NSTX-U
- Particle Accelerators: FAC, FACET-II, ATF, ATLAS, CEBAF, FRIB, RHIC



**Over 38,000
users per year**

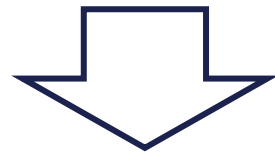
If you want to use them: SEPARATE PROPOSAL!!!



The Basic Question for SCGSR:

WHAT RESEARCH TOOLS ARE YOU MISSING AT YOUR UNIVERSITY?

- Specific advanced instrumentation?
- Specialized devices or codes?
- Unique libraries, datasets, sample collections, or materials?
- Special facilities?
- Advanced techniques?
- Theoretical frameworks?
- Expertise/Training?
- Participation in ongoing large-scale projects: DUNE, ATLAS, E3SM, QIS...



Find a DOE National Lab that has them!



7 Ways of Finding the Right DOE National Lab Scientist

1. **Scientific literature** – check author affiliations in the papers relevant to your work (*i.e.*, papers that have the specialized tools or resources you need)
2. **Your advisor and their network**
3. **Searchers:** ISI Web of Science, SciFinder, Google Scholar... – search by topic -> refine by institution
4. **National Laboratories websites** <https://www.energy.gov/national-laboratories> 
5. **SCGSR website: list of potential collaborating scientists**
<https://science.osti.gov/wdts/scgsr/How-to-Apply/Identifying-a-Collaborating-DOE-Laboratory-Scientist> 
6. **SCGSR website: list of publications**
<https://science.osti.gov/wdts/scgsr/SCGSR-Awards-and-Publications> 
7. **Email us** (SC.SCGSR@doe.gov) or the Managers of each Program Office (emails in the last slide)



Contacting National Lab Scientists

They are very interested in collaborating! However, they get **A LOT** of spam, so:

1. Use your **school's email address**
2. Subject: "Interest in collaborating on a DOE SCGSR project on xxx" (**your topic in 3-4 words!**)
3. Cc your **advisor**
4. Brief description of the SCGSR program. (Essential information: **No cost to them!**)
5. **Brief summary** of the work you want to do.



Set Things Clear Upfront with Your Collaborator

1. Is there an **overlap of interests**?
2. Do they have **time** for working with you?
3. What type of **instrumentation/expertise** is available?
4. How **accessible** are equipment or computing resources? Is there a schedule?
5. Do you need to build/make some specialized **adaptations** for the equipment?
e.g., specialized cells, set two instruments in tandem/parallel, etc.
6. Do you need to **apply for using specific facilities**?



SCGSR Application

No supplementary materials after the deadline!!!

Only COMPLETE applications submitted by the deadline will be considered!

Due November 4, 2026, **5:00 PM ET**

1) All required fields of the Application System

2) Official graduate transcripts

Remove SSN or dates of birth from transcripts, otherwise they will be *immediately eliminated from the system and deemed non-compliant (keep your name though!)*

3) Letter confirming Ph.D. Candidacy

Must confirm at least that the applicant has:

- Completed all the required coursework of the PhD program
- An PhD thesis topic officially approved by their PhD committee

4) Research Proposal (*3-pages maximum*)

5) “Letters” of Support:

- Thesis advisor
- Collaborating DOE National laboratory scientist



<https://wdts.ornl.gov/scgsr/Account/Login>



Application System

Steps

Completed and saved

Incomplete, not saved

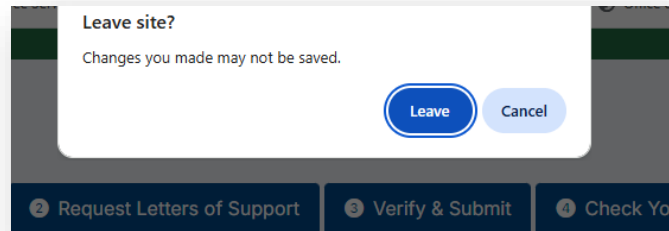
- **Gray text** – need to **fill prior sections**
- **E-mails** for advisor and collaborating scientist are **sent from the system**
 - => you must upload their contact information
 - Remind them **not to wait till the last minute**

The screenshot shows the SCGSR (Office of Science Graduate Student Research) application system. At the top, there's a navigation bar with 'WDTS SCGSR Home', 'FAQ', and 'Logout'. Below this is the 'SCGSR' logo and 'Office of Science Graduate Student Research'. A progress bar shows four steps: 1. Complete Your Application (active), 2. Request Letters of Support, 3. Verify & Submit, and 4. Check Your Status. A yellow alert banner at the top states: 'The SCGSR application will close in 75 days.' The main content area is divided into two columns. The left column, 'APPLICANT PROFILE', lists sections: General Information (checked), Address (gray), Citizenship / Eligibility (gray), Demographics (checked), Undergraduate Institutions (gray), Graduate Education Status (gray), Current Graduate Institution (gray), Additional Graduate Education (gray), Primary Graduate Thesis Advisor Information (gray), Graduate Thesis Abstract (gray), Prior Scientific Research Experience (gray), and Scientific Publications and Presentations (gray). The right column, 'Program Information', contains 'Eligibility' questions and a 'Save' button. A red arrow points from the 'Completed and saved' text to the 'General Information' section. Another red arrow points from the 'Incomplete, not saved' text to the 'Address' section. A red arrow points from the 'E-mails' list item to the 'Primary Graduate Thesis Advisor Information' section. A red arrow points from the 'ALERTS & GUIDANCE' text to the yellow alert banner.

ALERTS & GUIDANCE



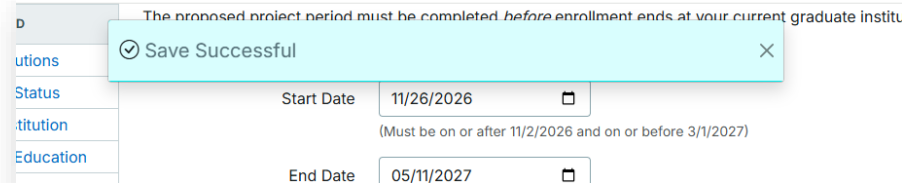
Other Alerts in the System



Leave site?
Changes you made may not be saved.

Leave Cancel

2 Request Letters of Support 3 Verify & Submit 4 Check Your Application



The proposed project period must be completed *before* enrollment ends at your current graduate institution.

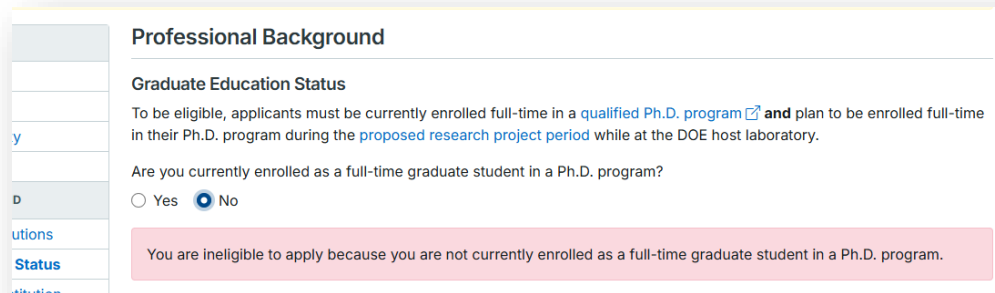
Save Successful

Start Date 11/26/2026

(Must be on or after 11/2/2026 and on or before 3/1/2027)

End Date 05/11/2027

Placeholders – type in TEXT or upload blank PDFs if you don't have everything at hand, **remember to come back and replace them** when ready!



Professional Background

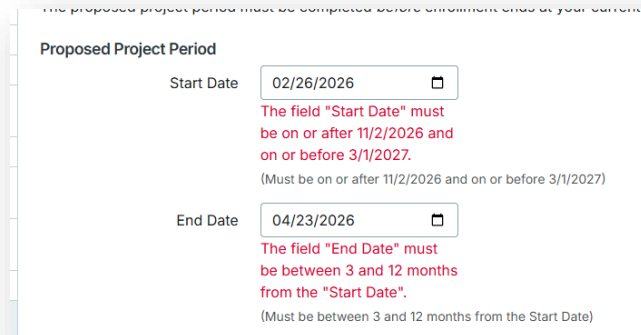
Graduate Education Status

To be eligible, applicants must be currently enrolled full-time in a [qualified Ph.D. program](#) and plan to be enrolled full-time in their Ph.D. program during the [proposed research project period](#) while at the DOE host laboratory.

Are you currently enrolled as a full-time graduate student in a Ph.D. program?

☐ Yes ☒ No

You are ineligible to apply because you are not currently enrolled as a full-time graduate student in a Ph.D. program.



The proposed project period must be completed *before* enrollment ends at your current graduate institution.

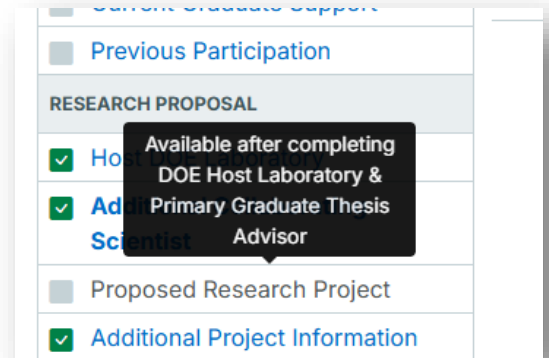
Proposed Project Period

Start Date 02/26/2026

The field "Start Date" must be on or after 11/2/2026 and on or before 3/1/2027.
(Must be on or after 11/2/2026 and on or before 3/1/2027)

End Date 04/23/2026

The field "End Date" must be between 3 and 12 months from the "Start Date".
(Must be between 3 and 12 months from the Start Date)



RESEARCH PROPOSAL

☒ Host Laboratory

☒ Additional Primary Graduate Thesis Advisor

Available after completing DOE Host Laboratory & Additional Primary Graduate Thesis Advisor

☐ Proposed Research Project

☒ Additional Project Information



“Letters” of Support

The letters are actually **FORMS**! ⇒ Tell them:

- 1) not to spend time preparing a letter!!!
- 2) not to wait until the last minute!!!

Remember: **due 11/4/26 at 5:00 pm ET**

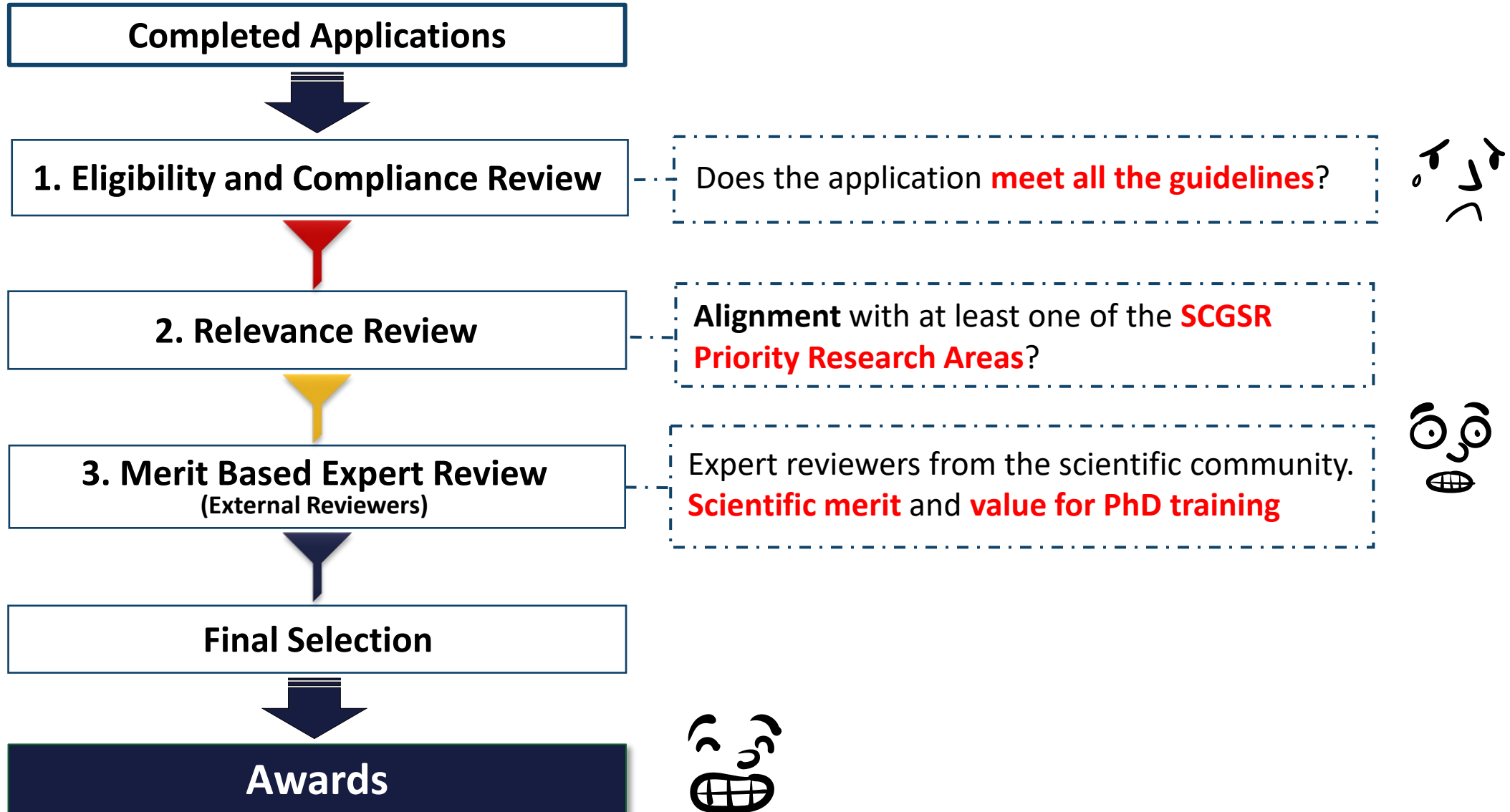
Form will ask them to provide their contact information, and fill entries elaborating on specific topics, *e.g.*:

- How long and in what capacity have they known you
- Your skills, background, work discipline, preparedness
- Importance of your proposed project
- The likelihood that you will effectively reach the goals

- ☐ 4 topics for thesis advisor
- ☐ 5-6 topics for collaborating scientist

The screenshot shows a web form titled "Middle Name" with a text input field. Below this, there are three distinct sections, each with a heading and a text area for comments. The first section is titled "Please provide comments to address each of the following:" and asks to "Describe how long you've known the applicant, where, and in what capacity." The second section asks for "substantive comments (preferably with specific examples) about the applicant's preparedness for the proposed SCGSR research project at the collaborating DOE laboratory." The third section asks for "substantive comments on the importance of the proposed SCGSR research project at the DOE laboratory to the applicant's overall doctoral thesis work." Each section includes a rich text editor with standard formatting tools (bold, italic, underline, link, etc.) and a character count indicator at the bottom of the text area. The form is designed to collect detailed feedback from thesis advisors and collaborating scientists.

Selection Process



1. Eligibility and Compliance Review

- U.S. Citizen and/or Lawful Permanent Residents (Green Card holders)
- Accredited U.S. University
- New Research Experience: <3 Months work at the proposed National Lab
- PhD Candidacy

Official Transcript

YES: Name, official document, may have a watermark ✓

NO: SSN, Date of Birth, unofficial grade report, academic record, etc. ✗

Letter from Department Chair or Registrar's Office.

Letter **MUST** include at least confirmation that the applicant already has:

- a. completed all required courses of their PhD program
- b. a PhD thesis topic officially approved by their official PhD thesis committee
(include date of approval)



E/C Review: BES Eligibility

Can the collaboration happen without SCGSR support?

University – National Lab Distance	PhD Advisor and Lab Scientist co-funded on the project in which the applicant is doing research?	Eligible
$x \leq 5$ miles	Yes or No	No
$5 \text{ miles} < x \leq 50 \text{ miles}$	Yes	No
$5 \text{ miles} < x \leq 50 \text{ miles}$	No	Yes
$x > 50$ miles	Yes or No	Yes



2. Relevance Review

Alignment with research priority areas

- Summary in the application system
 - Proposal Abstract
 - Proposal
- Talk later today with PMs
 - Send us an email
 - Office hours



<https://science.osti.gov/wdts/scgsr/How-to-Apply/Priority-SC-Research-Areas>

Broader DOE and SC Mission, Initiatives

e.g. Genesis Mission

<https://genesis.energy.gov/>

Accelerating scientific discovery by leveraging AI

AI is not a magic term, if included must be in a thoughtful intentional and useful way



3. Merit Review: SCGSR Proposal

- Developed by **yourself** in collaboration with the DOE national laboratory scientist and in consultation with your thesis advisor
- The **part of your PhD thesis work** that you will conduct at your host DOE national laboratory/facility
- Aims should address at least one of the **SCGSR Priority Research Areas**
- Describe how you will take advantage of the **DOE national laboratory/facility's research capabilities and assets**



Citing a reviewer:

"The strongest SCGSR proposals outline both sides of the student-Lab relationship in a balanced manner."

<https://science.osti.gov/wdts/scgsr/how-to-apply/research-proposal-guidelines/>



Merit Review Criteria



1. Scientific and/or Technical Merit of the Proposed Research (Score 0 – 6)

- 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 **sufficiently 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?

2. Relevance of the Proposed Research to Graduate Thesis Research and Training (Score 0 – 4)

- a. Does the proposed research have the potential to make a **significant contribution to the applicant's PhD thesis** research project?
- b. Will the proposed research enhance the applicant's **training and research skills**?



Key Dates

At the submission deadline, the application system will close, and no additional materials will be accepted. **The online application system closes at 5:00 PM Eastern Time**

Applications Due (including all letters of support)

November 4, 2026, 5:00 PM ET

Offer Notification Period

Early April 2027

Earliest Start Date for Proposed Project Periods

June 7, 2027*

Latest Start Date for Proposed Project Periods

October 4, 2027*

*Projects are 3 to 12 consecutive months long, **depending on the applicant's proposed work.**

*Awardees can choose the start dates within the window above.

Exercise for Kickstarting your Application

1. What is your **thesis topic** about? Summarize your central idea
2. **Wish list:** What resources do you need to advance this topic that are not available at your university?
 - Specific expertise
 - Equipment/instrumentation
 - Techniques
 - Theoretical methods
 - HPC
 - etc.
3. Homework: Are these resources available at a **national lab**? In which one(s)?

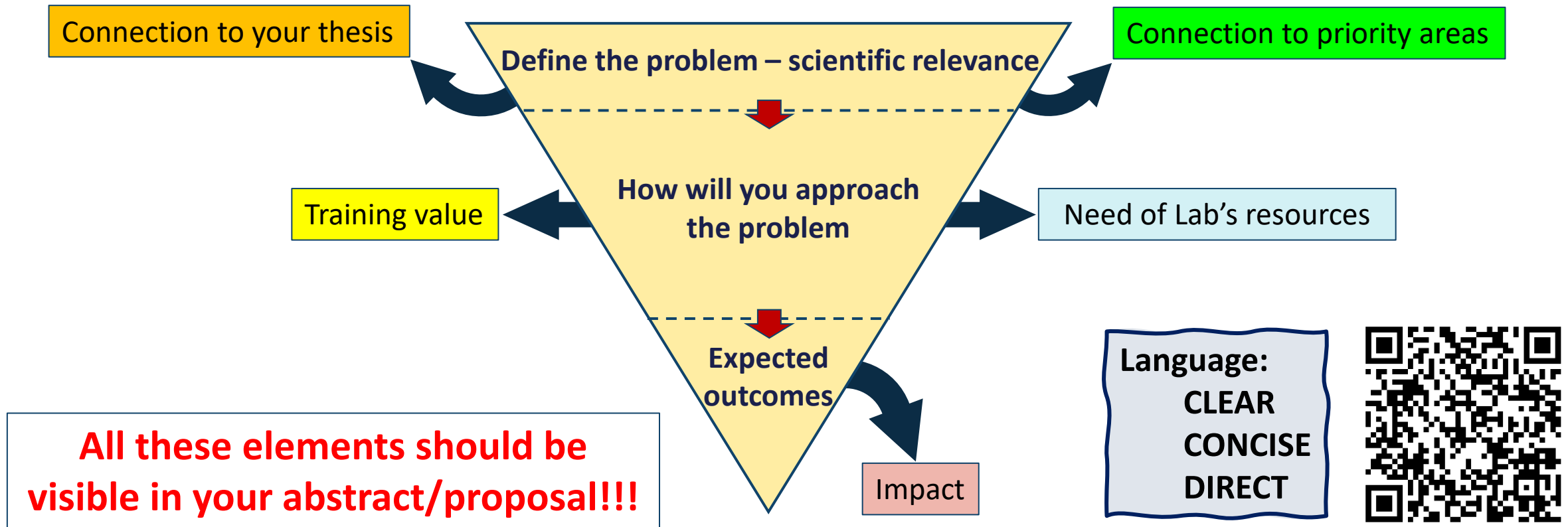
Remember: **FUNDAMENTAL RESEARCH!**



Your Sales-Pitch to the Program

→ The Seed of Your Proposal

Make a brief paragraph describing what you want to do



Proposal structure and guidelines: <https://science.osti.gov/wdts/scgsr/how-to-apply/research-proposal-guidelines/>



Abstract Sample

MDSD Simulation of Impurities in α -Iron

Through the combination of molecular dynamics and spin dynamics techniques, time-dependent properties of metallic alloys and transition metals may be studied using computer simulation. A model for α -Iron has been developed using an embedded atom interaction potential and a coordinate-dependent exchange interaction. This project will investigate the effect on the system of real-world conditions such as external magnetic fields and impurities in the lattice through measurement of the dynamic structure factor and the diffusion coefficient. These results may be compared to experimental and ab initio data. The MDSD technique is general and through collaboration with Dr. Content Blocked/Edited Out, it may be used to investigate and test new forms of the system Hamiltonian. His expertise in high performance computing will yield insight into the viability of this code for large-scale parallelization. This collaboration will lay groundwork for future investigation of improved model interactions and for improved simulational techniques later in my thesis work.

What about clarity?

Connection to thesis

Outcomes?
Impact?

Connect to Thesis

Define Problem

Connect to Priority Areas?

Training?

Approach

Need of Lab resources

Outcomes

Impact

Problem?

Approach?

Need of
lab res.



A More Polished Version...

Accurately predicting the coupled atomic and magnetic dynamics of metallic materials under realistic conditions remains an important challenge in computational materials physics. Understanding how magnetic fields and lattice impurities affect these dynamics is central to my thesis on molecular dynamics–spin dynamics (MDSD) methods and addresses the DOE BES priority area Physical Behavior of Materials through the study of atomic and spin responses to external stimuli. I have developed an MDSD model for α -iron combining an embedded-atom potential with a coordinate-dependent magnetic exchange interaction. I will use this model to investigate external magnetic fields and impurities through dynamic structure factors and diffusion coefficients, comparing results with experimental and *ab initio* data. While smaller-scale simulations can be performed at my university, investigating sufficiently large systems and long timescales, and establishing the parallel scalability of MDSD, requires computational resources and expertise not available there. In collaboration with Dr. X at Y National Laboratory, I will use YNL’s high-performance computing capabilities to test alternative Hamiltonians and evaluate large-scale MDSD simulations. This collaboration will provide essential training in high-performance computing and parallel simulation methods. The resulting validated, scalable framework will enable more realistic simulations of magnetic materials and provide the computational foundation for subsequent research in my dissertation.



SC Research Program Managers

Dr. David Rabson – ASCR (David.Rabson@doe.gov)

Dr. Xujing Davis – ASCR (Xujing.Davis@doe.gov)

Dr. Justin Hnilo – BER (Justin.Hnilo@doe.gov)

Dr. Christopher Fecko – BES (Christopher.FECKO@doe.gov)

Dr. Nirmol Podder – FES (Nirmol.Podder@doe.gov)

Dr. Paul Sorensen – HENP (Paul.Sorensen@doe.gov)

Dr. April Gillens – DOE IRP (April.Gillens@doe.gov)



Thank You!

Q&A



- Breakout Rooms: **Program Managers of the SC Research Offices**
- After the breakout session: **Feedback Poll**
- Next Workshop: **October 1, 2026, 2:00 – 4:30 pm ET** → Register at

Q&A, Proposal Tips, Meet Scientists and Former Awardees

- Office Hours: Every Friday 1-2 pm ET starting tomorrow September 4 at →



**Don't forget to return to the main room after the
breakout to complete a SURVEY!**