Application Assistance Workshop
for the Visiting Faculty Program (VFP)

Program Manager: Dr. Brandi Toliver

Program inquiries: sc.vfp@science.doe.gov
Breakthroughs at the DOE National Laboratories

- **Advanced Supercomputing** - The National Labs operate some of the most significant high performance computing resources available, including 32 of the 500 fastest supercomputers in the world. The Summit supercomputer at Oak Ridge National Laboratory is capable of 200 petaflops, or 200,000 trillion calculations per second.

- **Put the Jolt in Volt** - Chevy’s Volt would not be able to cruise on battery power were it not for the advanced cathode technology that emerged from a National Lab (specifically, Argonne National Lab).

- **Decoded DNA** - In 1990, the National Labs joined with the National Institutes of Health and other laboratories to kick off the Human Genome Project, an international collaboration to identify and map all of the genes of the human genome.

- **Brought the web to the U.S.** - National Lab scientists, seeking to share particle physics information, were first to install a web server in North America, kick-starting the development of the worldwide web as we know it.

- **Unmasked a dinosaur killer** - Natural history’s greatest whodunit was solved in 1980 when a team of National Lab scientists pinned the dinosaurs’ abrupt extinction on an asteroid collision with Earth. Case closed.

- **World’s First Video Game** - Before there was Atari or Nintendo, there was Tennis for Two, which may have been the first video game ever created, Brookhaven National Lab scientists built the pioneering system to entertain visitors to the Lab in 1958.

- **Launched the LED lighting revolution** - In the 1990s, scientists at a National Lab saw the need for energy-efficient solid-state lighting and worked with industry to develop white LEDs. Today, white LEDs are about 30 percent efficient, with the potential to reach 70 percent to 80 percent efficiency.

- **3D Printing Bigger and Better** - A large-scale additive manufacturing platform developed by a National Lab and an industry partner printed 3D components 10 times larger and 200 times faster than previous processes. So far, the system has produced a 3D-printed sports car, SUV, house, excavator and aviation components.

- **Discovered 22 elements** - To date the National Labs have discovered: technetium, promethium, astatine, neptunium, plutonium, americium, curium, berkelium, Californium, einsteinium, fermium, mendelevium, nobelium, lawrencium, rutherfordium, dubnium, seaborgium, flerovium, moscovium, livermorium, tennessine and oganesson.

Additional breakthroughs are available at https://www.energy.gov/downloads/75-breakthroughs-americas-national-laboratories
Office of Science at a Glance
(https://science.osti.gov/)

- Lead federal agency supporting fundamental scientific research for energy and the largest supporter of basic research in the physical sciences in the United States
- FY 2023 Funding Requested: $7.799B

Largest Supporter of Physical Sciences in the U.S.

Funding at >300 Institutions, including 17 DOE Labs

~29,000 Researchers Supported

~34,000 Users of 28 SC Scientific Facilities

~35% of Research to Universities

Research:
~42.8%, $3.334B

Facility Operations:
~34.5%, $2.689B

Projects/Other:
~22.6%, $1.776B
The 17 DOE National Laboratories comprise a preeminent federal research system, providing the Nation with strategic scientific and technological capabilities.

SC stewards 10 DOE laboratories that provide essential support to the missions of the SC science programs.
DOE Office of Science – Scientific User Facilities

FY 2023
28 scientific user facilities
~34,000 users
The Office of Science Research Portfolio

https://science.osti.gov/Programs/

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>Advanced Scientific Computing Research</td>
<td>• Delivering world leading computational and networking capabilities to extend the frontiers of science and technology</td>
</tr>
<tr>
<td>Basic Energy Sciences</td>
<td>• Understanding, predicting, and ultimately controlling matter and energy flow at the electronic, atomic, and molecular levels</td>
</tr>
<tr>
<td>Biological and Environmental Research</td>
<td>• Understanding complex biological, earth, and environmental systems</td>
</tr>
<tr>
<td>Fusion Energy Sciences</td>
<td>• Building the scientific foundations for a fusion energy source</td>
</tr>
<tr>
<td>High Energy Physics</td>
<td>• Understanding how the universe works at its most fundamental level</td>
</tr>
<tr>
<td>Nuclear Physics</td>
<td>• Discovering, exploring, and understanding all forms of nuclear matter</td>
</tr>
<tr>
<td>Isotope R&amp;D and Production</td>
<td>• Supporting National Preparedness for isotope production and distribution during national crisis</td>
</tr>
<tr>
<td>Accelerator R&amp;D and Production</td>
<td>• Supporting new technologies for use in SC’s scientific facilities and in commercial products</td>
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</table>
DOE workforce development mandates

Energy Reorganization Act of 1974

Dept. of Energy Organization Act, 1977

DOE Science Education Enhancement Act, 1990

“...The Secretary is authorized to establish programs to enhance the quality of [STEM] education. Any such programs shall be operated at or through the support of Department research and development facilities, shall use the scientific resources of the Department...”
Workforce Development for Teachers and Scientists (WDTS)

- DOE has a more than 60-year history of training and educating scientists, engineers, and technicians in the United States.

- As a collaborative partner of the SC Workforce Development ecosystem, WDTS strives for a sustained pipeline for the science, technology, engineering, and mathematics (STEM) workforce to support DOE mission. WDTS programs expand the reach of SC Workforce Development efforts by:
  - Leading a national-level portfolio of laboratory-based workforce training programs in partnership with all 17 DOE national labs (~1,400 participants at DOE laboratories annually)
    - **Science Undergraduate Laboratory Internship (SULI):** open to 2-/4-year undergraduate students
    - **Community College Internship (CCI):** dedicated to undergraduates enrolled at community colleges or 2-year accredited institutions
    - **Visiting Faculty Program (VFP):** open to faculty under-represented institutions in STEM, including all HBCUs
    - **Office of Science Graduate Student Research Program (SCGSR):** open to graduate students with research interest in the SC mission priority areas
  - Promoting science/energy literacy and academic achievements in STEM
    - **National Science Bowl® (NSB):** coordinate on regionals, host the National Championships final
    - **Albert Einstein Distinguished Educator Fellowship (AEF):** K–12 STEM teachers, hosted by SC/WDTS, Congressional Offices, and other federal agencies (established under P.L. 103-382)
The Visiting Faculty Program (VFP) is designed to provide an opportunity for faculty members from institutions historically marginalized in STEM to enhance research capabilities and strengthen STEM education and learning practices to develop talent to contribute to the Department of Energy (DOE) research areas. This is accomplished through two tracks: (1) VFP Research Invigoration Track and (2) VFP Teaching Initiative Track.

**VFP Research Invigoration Track**
- Seeks to increase the research competitiveness of faculty members and their students at institutions historically underrepresented in the research community to expand the workforce vital to the DOE mission areas.
- Prior collaboration not required to have previously participated.

**VFP Teaching Initiative Track**
- Seeks to enhance STEM teaching capacities of faculty members at institutions historically underrepresented in the STEM research enterprise through research collaboration with DOE national laboratories.
- Prior collaboration in VFP is required.

- As a component of VFP, selected university/college faculty members collaborate with DOE laboratory research staff on a research project of mutual interest.
- Faculty participants may invite up to two students (one of which may be a graduate student) to join the project in the summer terms.

**3 Terms Annually: Summer, Fall, and Spring**
- 2023 Summer Term – Application Due 5:00 p.m. Eastern Time on January 10, 2023

Full details: [https://science.osti.gov/wdts/VFP/](https://science.osti.gov/wdts/VFP/)
Eligibility Requirements for Faculty

- **Citizenship**: Must be a United States Citizen or Lawful Permanent Resident at the time of applying.

- **Faculty Appointment**: Must be a full-time faculty member at an accredited U.S. degree granting, postsecondary institution of higher education historically underrepresented in the U.S. research community. This includes 2-year and 4-years institutions of higher education. Note: Adjunct and visiting faculty are not eligible for VFP.

- **Institution of Higher Education Classification**: The applicant cannot be a faculty member at a university categorized as either “Doctoral Universities: Very High Research Activity” or “Doctoral Universities: High Research Activity” as reported in the Carnegie Classification for Institution [link](http://carnegieclassifications.iu.edu/index.phpns of Higher Education). Note: Full-time faculty members at Historically Black Colleges/Universities (HBCU’s) are eligible to apply regardless of research activity classification.

- **Disciplines Recommendation**: Must be a full-time faculty member in an area (but may not be limited to) of physics, chemistry, biology (non-medical), engineering, environmental sciences, geology or geosciences, mathematics, materials sciences, or computer or computational sciences.

- **Previous Appointment Requirement**: For faculty submitting an application to the VFP Teaching Initiative Track, you are required to have previously participated in VFP or FaST.

- **Participation and Application Limit**: Faculty are limited to participation in VFP for five appointments. Additionally, faculty can apply to VFP a maximum of eight times.

The first step in submitting a successful application is meeting the eligibility requirements.
Eligibility Requirements for Undergraduate Students

- **Citizenship** - Must be a United States Citizen or Lawful Permanent Resident at the time of applying.
- **Age** - Must be 18 years or older at the time the internship begins.
- **Enrollment** - Must be currently enrolled as a full-time student at an accredited two-year or four-year college and completed at least one semester at the time of applying. Note: Applicants who will complete their undergraduate degree prior to starting their internship may apply as a "Graduating Senior", if (1) the applicant has not yet started a program of graduate study and will not matriculate as a graduate student prior to completing the VFP term, and (2) the time period between receipt of an undergraduate degree and starting the VFP term is less than one year.
- **High School Diploma or GED** - Must have earned a high school diploma or General Educational Development (GED) equivalent at the time of applying.
- **Grade Point Average (GPA)** - Must have an undergraduate cumulative minimum Grade Point Average (GPA) of 3.0 on a 4.0 scale for all completed courses taken as a matriculated student at the applicant's current (or recently-graduated) institution and at any undergraduate institutions attended as a matriculated postsecondary student during the 5 years preceding the start of the current enrollment. *College courses completed during high school are not required to be reported.*
- **Invitation to Apply** - Must be invited to participate by the applying faculty member.
- **Approval by Host Lab** - Subject to final approval by the DOE laboratory research advisor.
- **Participation and Application Limit** - Applicants are limited to participation in VFP to no more than two internships. Applicants can apply to the VFP a maximum of four times.

The first step in submitting a successful application is meeting the eligibility requirements.

Eligibility requirements: [https://science.osti.gov/wdts/vfp/Eligibility](https://science.osti.gov/wdts/vfp/Eligibility)
### Key Dates

<table>
<thead>
<tr>
<th>VFP Term:</th>
<th>Summer 2023</th>
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</thead>
<tbody>
<tr>
<td>On-line Application Opens</td>
<td>October 18, 2022</td>
</tr>
<tr>
<td><strong>Applications Due</strong></td>
<td>January 10, 2023 5:00 PM ET*</td>
</tr>
<tr>
<td>Offer Notification Period Begins</td>
<td>February 1, 2023</td>
</tr>
<tr>
<td>All DOE Offers and Notifications Complete</td>
<td>On or around April 10, 2023</td>
</tr>
</tbody>
</table>

***The Application System closes at 5:00 PM Eastern Time. Materials will not be accepted after the system has closed.***

More details available [https://science.osti.gov/wdts/vfp/Key-Dates](https://science.osti.gov/wdts/vfp/Key-Dates)
Application Requirements

Completed applications must be submitted by 5:00 p.m. ET on January 10, 2023.

- All applications must be completed online through the online application system. Faculty applicants will register and submit applications [here](#).

- As soon as you have decided on the national laboratory to which you will apply and have identified your laboratory co-investigator, email the [laboratory’s VFP point of contact](#) to request that a “WARS account” be created for your co-investigator. This should be completed as soon as possible.

- Only complete applications submitted by the deadline will be considered for evaluation and placement.

- The application system is not compatible with smartphones. Completion of applications and letters of recommendation requires use of a computer and web browser.

How to apply: [https://science.osti.gov/wdts/vfp/How-to-Apply](https://science.osti.gov/wdts/vfp/How-to-Apply)
Navigating the Application

To apply for VFP Faculty Summer 2023, complete these four steps before the application deadline of 1/10/2023 11:59 PM Eastern Time:

1. Complete Your Application
   Provide all the required information in the application form.
   Complete Your Application

2. Request Recommendations
   Make requests for recommendations as soon as possible, then verify that they have been received on the status page.
   Request Recommendations

3. Verify & Submit
   Verify that all information is complete and correct, then submit your application. After submittal, you will be able to un-submit and edit your application until the application deadline. If you un-submit, you must resubmit your application before the deadline to be considered. After the application deadline, you will only be able to update your contact information in the applicant profile, but you can remove yourself from
Components of the “Complete Your Application” Menu

- Applicant Profile
- Professional Background
- Program Information
- Research Project

ANL
https://www.anl.gov/education/department-of-energy-visiting-faculty-program
Accessed 1/9/2019
Applicant Profile
Are you a U.S. citizen or U.S. permanent resident?
What is your primary language?
Response “No” Not Eligible
Professional Background
Eligibility is limited to full-time faculty as defined by the Internal Revenue Service (IRS).
Professional Background: Curriculum Vitae (CV)

Professional Background

Curriculum Vitae of Applicant

Please upload a copy of your current curriculum vitae (CV).

Replace File

Curriculum Vitae of Co-Investigator

Please upload a copy of the current curriculum vitae (CV) for the Co-Investigator.

View Transcript

Curriculum Vitae must be redacted to remove Social Security Numbers and dates of birth. The system will scan your files for potential instances of this Personally Identifiable Information (PII). You will have the option of letting the system automatically redact specific information from your file, but you are still responsible for ensuring that it does not contain Personally Identifiable Information. Applications that include this Personally Identifiable Information will be rejected.
Program Information

LBNL
Program Information: Eligibility

Eligibility

Have you previously participated in 5 VFP Faculty appointments?

Yes  No

You previously selected No
Program Info: Indication Previous Participation in the Program

Answer to this question will determine your eligibility for a specific track.
You will see this view only if you have previously participated in VFP. Therefore, you’re eligible for the Research and Teaching Track.
**Program Info: Select a Track Preference**

**This will be your view if you have not previously participated in VFP and eligible for the Research Collaboration Track only.**
Program Info: Host DOE Lab Preference

Program Information

Host DOE Laboratory

Which host DOE laboratory are you proposing to collaborate with for your research project?
- Ames National Laboratory (AMES)

Please enter the requested co-Principal Investigator (PI). This individual must be the co-PI listed on your proposal, and must also be located at the same host DOE laboratory selected above.
- Mitchell Amundson

If the name of your co-Principal Investigator is not listed here, please enter the name of your co-PI and then click the Contact Laboratory button. The Laboratory will request a co-PI account which will add your co-PI's name to this list. Once this request has been fulfilled, your co-PI's name will display in the dropdown list and you will be able to complete this section of the application.

Please enter the name of the requested co-Principal Investigator (PI).
Guidance for Selecting a Host Lab

- Learn about the research happening at the DOE national labs and identify topics which align with your interests.
  - Refer to the [WDTS website](#) for more details to assist with selecting a host laboratory

- After a research topic is identified which aligns with the DOE mission, [contact the laboratory](#) to inform them of your desire to collaborate with a DOE scientist through VFP.
Research Project
Guidance for Developing a Research Project

- The following requirements should be met before developing the research project.
  - A research topic is identified which aligns with the DOE mission
  - Confirmation that the laboratory research staff are available to serve as the co-Principal Investigators

- The research project proposal must be developed with the laboratory research staff.

- The project proposal must be uploaded by the application deadline.
Research Project: Proposal Format

<table>
<thead>
<tr>
<th>Element</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>File type</td>
<td>Adobe Acrobat PDF document with “.pdf” extension after filename</td>
</tr>
<tr>
<td>Page margins</td>
<td>One-inch margins on all sides</td>
</tr>
<tr>
<td>Font size</td>
<td>12 point</td>
</tr>
<tr>
<td>Font type</td>
<td>Times or Times Roman; use symbolic font for math notation</td>
</tr>
<tr>
<td>Text spacing</td>
<td>Single spacing</td>
</tr>
<tr>
<td>Page headers and footers</td>
<td>Left-side header: Your proposal title</td>
</tr>
<tr>
<td></td>
<td>Left-side footer: The faculty applicant’s name</td>
</tr>
<tr>
<td></td>
<td>Right-side footer: Page numbers</td>
</tr>
<tr>
<td>Figures</td>
<td>Proposals may contain embedded figures, but the entire proposal should be legible when printed in black and white; color figures that are not clear or understandable in black and white should be avoided. Figures must fit within the stated page limit.</td>
</tr>
</tbody>
</table>

Additional proposal format details available [here](#).
Research Proposal Guidance for VFP Research Collaboration Track

- Prepare a proposal with the following elements:
  - **Cover page** which includes (one-page limit)
    - *Proposal title and abstract*
    - *Experimental Team*
    - *Scientific facilities*
  - **Proposal Body** which includes (six-page limit)
    - *Background*: Define the context for the proposal by relating it to other work, at the host laboratory and elsewhere, including any preliminary studies. Explain how the proposal is innovative and advances the state-of-the-art in the field.
    - *Hypotheses and research objectives and goals*: Concisely define your research goals and describe how accomplishment of the research goals would help to validate the hypothesis and bridge one or more gaps in the knowledge.
    - *Key deliverables*: List the key deliverable(s) you expect to accomplish and scientific and technical impact.
    - *References cited*: Not a part of the six-page limit.
  - **Curriculum Vitae** (limit of two-pages per investigator): Must be submitted for the national laboratory co-investigator as well as for the applying faculty member.

More details for VFP Research Collaboration proposal are [here](#).
Research Proposal Guidance for VFP Teaching Initiative Track

- Prepare a proposal with the following elements:
  - **Cover page** which includes (one-page limit)
    - Proposal title and abstract
    - Experimental Team
    - Scientific facilities
  - **Proposal Body** which includes (six-page limit)
    - **Background:** Define the context for the proposal by relating it to other work, at the host laboratory and elsewhere, including any preliminary studies. Explain how the proposal is innovative and addresses challenges in STEM education at home institutions through collaborations with DOE national laboratories.
    - **Project objectives and goals:** Concisely define your research goals and describe how accomplishment of the goals contribute to student engagement and learning in STEM at the home institution.
    - **Project Approach and Outcomes:** Different from the proposal submitted to the VFP Research Collaboration Track, 1) discuss the extent which the project and approach supports, advances, or integrates content and skills on key DOE research areas into undergraduate and/or graduate education curriculum or training at home institution should be a major and clearly described, and 2) describe a plan for assessing the outcomes on STEM teaching at the home institution as a direct result of the proposed project.
    - **Key deliverables:** List the key deliverable(s) you expect to accomplish and scientific and technical impact.
    - **References cited:** Not a part of the six-page limit.
  - **Teaching Statement** (limit of two-pages per investigator): The teaching statement reflects the faculty member's current approaches and achievements to teaching at their home institution.
  - **Curriculum Vitae** (limit of two-pages per investigator): Must be submitted for the national laboratory co-investigator as well as for the applying faculty member.

More details for VFP Teaching Initiative Track proposal are [here](#).
All applicants must submit a research project proposal. This proposal will be uploaded on this page.
Hosting students in VFP are optional.

If your project includes students, you must provide their details so they can be invited to submit an application to the VFP student application portal.
Research Project: Student Participation Continued

Research Project

Add Student Participant

It is expected that the invited students hold promise as young researchers and will make substantive contributions as a member of the research team. Please identify each student and explain why you selected them and what contributions you anticipate they will make to the research project.

**NOTE:** Students will immediately receive an invitation by email with directions for applying to the VFP Student program.

- **First Name**
- **Last Name**
- **Email**
- **Student Status**
- **Selection Explanation**

[Add Student and Send Email] [Cancel]
Student Participant Application Process

- Students must follow the details provided in the invitation e-mail to access the application portal. Complete this step as soon as possible.

**Application requirements**

- Contact and Education Information
  - Transcripts: All personal identifiable information must be redacted. Additionally, students must submit transcript and enrollment details for colleges/universities attended within 5-years of starting enrollment at the current academic institution.

- Citizenship Status

- Laboratory/facility choice and research interests

- Essays

- Two letters of reference

**Student applications are due 5:00 p.m. on January 10, 2023.**
Faculty Applicants: Letters of Recommendation
Letters of Recommendations

• A completed application requires recommendations from two individuals familiar with the applicant’s education, training, experience, aptitude, or promise relevant to VFP.

• An applicant will be asked to provide contact information for individuals indicated in the online application system. **Applicants are encouraged to make the requests for recommendations as soon as possible.**

• **Reminder:** Applicants to the VFP Teaching Experiencing Track must submit at least one recommendation from their department head or dean.

• Letters of reference must be submitted through the application portal by the application deadline (i.e. 5:00 p.m. Eastern Time on January 10, 2023 for the Summer 2023 term).
Selection and Notification

- **Eligibility and Compliance Check** - All applications must pass eligibility and compliance check.

- **Merit Review** - Assessment by first and second choice labs selected by the applicant.
  - Applications will be assessed based upon research proposal, research, training, and experience in STEM, the applicant's background, experience, accomplishments, and interests as they relate to the host laboratories.

- **Notifications** - Offers are made by a Laboratory Education Directors (not research mentors) via e-mail. The offer package will provide details regarding the stipend, housing, travel, program orientation, identify of the research advisor and research project, the institutional setting, any special requirements.

All appointments are contingent upon proof of citizenship or citizenship status and the outcome of a formal background check.
Faculty Obligations

- Commit to 10-weeks (40 hrs/week) in the program.
- Maintain health insurance during the appointment.
- Complete deliverables
  - Pre-survey
  - Post-survey
  - Oral presentation
  - Project report (6-page limit)
- Participating students' deliverables

More details: https://science.osti.gov/wdts/vfp/Participant-Obligations
Benefits to Participating in VFP

- Contribute to exciting, real world, innovative, ongoing projects in the DOE national laboratories.
- Build professional networks and collaborations with laboratory research staff and other VFP participates.
- Enrichment opportunities through professional development and technical seminars.
- Access to world-class scientific facilities.
- Provide training for students.
- Grow research capabilities at your home institution.
Don’t forget!!

- The application deadline is **January 10, 2023 at 5:00 p.m. Eastern Time.**
- Contact potential host lab as soon as possible.
- If hosting students, send an invitation as soon as possible.
- Plan early. Submit your application ahead of the deadline.
After this session, e-mail us sc.vfp@science.doe.gov if you have questions.

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- Office of Workforce Development for Teachers and Scientists (WDTS)

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