

Design Physics

John S. Foster, Jr. Postdoctoral Fellowship
Harold Brown Postdoctoral Fellowship



The Foster and Brown Postdoctoral Fellowships at Lawrence Livermore National Laboratory (LLNL) are in the Weapons and Complex Integration (WCI) Directorate. Named after two renowned physicists, Dr. John S. Foster, Jr. and Dr. Harold Brown, these fellowships recognize individuals whose research aligns with the Laboratory's national security mission. These prestigious postdoctoral fellowships will allow you to take your skills to the next level and apply them to solving the nation's most pressing science and engineering challenges. [Download FY2023 Flyer.](#)

Dr. Harold Brown was a nuclear deterrence pioneer and a former LLNL director, as well as Secretary of Defense under President Jimmy Carter. An intellectual giant who led development of technologies that modernized nuclear deterrence and played integral roles during the most dramatic moments of the Cold War, Dr. Brown's life was indelibly intertwined with national security. Dr. John S. Foster, Jr. was a key figure in establishing LLNL as essential to the nation's defense. He helped invent and then spearheaded the innovations that led to the modern stockpile, as well as introduced many important programs at the Laboratory that continue to this day.

The purpose of these fellowships is to pursue groundbreaking science and to stimulate ideas for cross fertilization. The Foster and Brown Fellows will participate in creative and independent research in an aspect of science and engineering relevant to the competencies at LLNL. The Foster and Brown Fellows participate in experimental, computational, and/or theoretical work, and will have access to LLNL's extensive computing facilities, talent pool, specialized laboratory facilities and field equipment.

We invite PhD graduate applicants from a variety of STEM fields including, but not limited to, the various physics disciplines, engineering, experimental science, computational sciences, planetary science, chemistry, or material science. We will work with successful candidates to tailor a postdoctoral project and select a mentor to support each individual's development. This opportunity is intended for individuals who have finished their PhD and wish to further develop their skills, knowledge, and/or abilities to better position themselves for a future staff position within the Design Physics Division or elsewhere in LLNL.

Recent projects have involved the physics of inertial confinement fusion, turbulence and fluid instabilities, atomistic and continuum models of transport, planetary defense, diagnostic development, computational solid and fluid dynamics, chemical physics, particle and radiation transport algorithm development, and uncertainty quantification.

The deadline for application is October 2, 2023.

Eligibility:

Applicants must either be in the process of completing their Ph.D. (within one year) or have received their Ph.D. A verifiable Ph.D. is required prior to starting as a Foster or Brown Fellow with LLNL. Employment is expected to begin between August and October of 2024.

Eligible candidates must have the ability to maintain a U.S. DOE Q-level security clearance which requires U.S. citizenship and be prepared to provide required information and documents should they be selected as a potential fellow.

Process:

The application is web-based and includes a resume, statement of interest, three letters of recommendation, and transcripts. Between July 1 and October 2, a link will appear below for the Foster and the Brown Fellowships job postings. Before applying, please read through this section for information you will be required to provide.

Initial application submission requires only personal information, a resume, and 3 named references — please complete at your earliest convenience. Do not attach a cover letter or any other materials in the first stage. Within a few days, you will receive an email acknowledgement. It will provide instructions and a request for additional items.

Application will Include:

After initiating the application, you will receive an acknowledgement via email which will provide instructions for additional items. These materials must be completed and uploaded by October 2 to receive full consideration.

- **Project Relevance Statement.** Using no more than three or four sentences, describe the scientific significance and potential impact of your proposed research. This section should clearly state why your work is important. In addition, state how your work is relevant to LLNL's national security mission. Be succinct and use plain language that can be understood by a general, lay audience.
- **References.** Provide names and email addresses for three references (one must be your thesis advisor and the other two should be scientists or employers who can speak with authority on your research and work performance). You are allowed to provide contact information for more than three references, but please be mindful that the review committee has hundreds of applications to read through. Additional references are only recommended if you feel the extra letter provides key information that won't be captured in the first three.
When you submit the names and contact information for the individuals who will provide recommendation letters, we will automatically send a request to each person via email, with instructions regarding how to submit the letters. These letters are a critical part of the committee's evaluation of applications. We highly recommend that you contact these references to confirm their availability to provide us with a letter on your behalf by the deadline. Application packages that do not include all reference letters will not receive full consideration. Reference letters are due by October 9.
- **Transcripts.** Digital copies of transcripts are preferred. If you are unable to obtain an electronic copy of your transcripts, hard copies can be scanned and uploaded with the application.
- **Statement of Interest (see below):** This is your research proposal. In this six-page document, describe the background, the aims and/or goals of the proposed research, why it is important, and how you plan to do it at LLNL. In addition, specify areas that would be of most interest during your fellowship in [Weapons and Complex Integration](#).

You are welcome to include figures, graphs, and references in your statement of interest. The only formatting guideline is to keep your statement to six pages or less, including references.

(You may want to limit your references to approximately ten items.) You will have the option to add your statement as plain text or as a PDF. Please be advised that a PDF document is preferred.

Since the selection committee is composed of scientists from many different science disciplines, the statement is to be understandable to a broad technical audience, and also include sufficient details to satisfy experts in your field. It is important to convey why your research is important, why the work should be done at LLNL, and how you will carry out the research. Because of the emphasis that the committee places on the potential impact of your proposed work, it is recommended that you lead with the scientific and technological impact to LLNL's national security mission. The committee is looking for candidates with a vision, a plan, and a track record that indicates that the candidate will succeed. When writing your interest statement, it is important to be concise, clear, and readable. Remember to include a title. You can view an example of an interest statement submitted by a previous applicant who was awarded the LLNL Lawrence Fellowship.

Selection Process Timeline

10/2	Application deadline
10/9	Reference letter deadline
October - December	Committee reviews candidates and identifies a short list of finalists
January - February	Interviews with finalists
February - March	Final committee deliberations
April	Selected candidates notified

If Selected as a Finalist

Selected finalists will be notified of their finalist status and invited to LLNL for interviews and will be required to give a seminar regarding their current research.

Employment Offer

A pre-employment security background check must be completed for finalists before an employment offer can be made. Once the security background check is approved, the selected candidate will be contacted by an LLNL Recruiting and Employment representative with an offer of employment. Only the representative from LLNL's Human Resources division is authorized to extend an official employment offer.

If you have any questions regarding the Foster or Brown Postdoctoral Fellowships, contact Amber Bowers, the WCI Academic Collaboration Team Administrative Specialist, at bowers31@llnl.gov