

Funding Opportunities May 2, 2022

Department of Energy Traineeship in Computational High Energy Physics | Deadline: June 30, 2022

SUMMARY: The DOE SC program in High Energy Physics (HEP) hereby announces its interest in receiving applications for the DOE Traineeship in Computational HEP, which will provide support to train the next generation of scientists and researchers in this field. Up to two cooperative agreements may be awarded to provide funding to universities or teams of universities to support tuition, stipend, and travel costs for students enrolled in specific academic programs aimed at training graduate students in software and computing for particle physics and related fields, and to provide modest support for curriculum development and program administration. Award terms are expected to be up to five years, with the possibility of renewal for a second term.

Program Description: This DOE Traineeship program will support innovative, university-led applications for graduate level training that leverage DOE assets, capabilities, and strategic partnerships, and address emerging needs in graduate training to enable preparedness for STEM careers beyond academia in disciplines supported by DOE. This will be accomplished through a focused academic graduate program that delivers unique, innovative curriculum, coupled with a rigorous thesis or dissertation research requirement, in the desired scientific or technical discipline(s).

SC generally and HEP specifically provide support for the construction and operation of accelerators and detectors that enable discovery science experiments, and the research necessary to interpret their results. In HEP, these experiments are used to study the elementary constituents of matter and energy, probing the interactions between them, and exploring the nature of space and time. Sophisticated software and computing is employed throughout research supported by HEP to simulate, calculate, calibrate, analyze, and interpret these interactions and their complex signatures observed in experiments. As SC continues to support ever more advanced experiments requiring increasingly advanced software and computing to produce and interpret scientific results and support its mission, difficulties hiring qualified scientists and engineers are expected to deepen due to a lack of incoming young scientists and engineers that are being trained with the requisite expertise.

This Traineeship program will help address these shortcomings and enable continued success in domestic scientific discovery.

Estimated Number of Awards: Approximately four awards are expected from this FOA. The exact number of awards will depend on the number of meritorious applications and the availability of appropriated funds.

Anticipated Funding Amount: The total funding per award is anticipated to be \$500,000-\$1,000,000 per year.

The award size will depend on the number of meritorious applications and the availability of appropriated funds. This annual amount is approximate, includes new and continuing increments, and is subject to availability of funds.

Additional Information: <u>DE-FOA-0002743</u>

National Science Foundation

New Convergence Accelerator Funding | Deadline: LOI (required): May 31, 2022; Full Proposal: July 20, 2022

The NSF Convergence Accelerator has issued a new funding opportunity for three new research track topics aligned to the 2022 cohort. The funding opportunity track focuses include:

- Track H: Enhancing Opportunities for Persons with Disabilities: This track will
 converge a wide range of disciplines to include social sciences, behavioral sciences,
 engineering, computer science, ethics, and economics to develop use-inspired
 solutions to enhance the quality of life, employment access, and opportunities for
 persons with disabilities (PWDs).
- Track I: Sustainable Materials for Global Challenges: This track will converge
 advances in fundamental materials science with materials design and manufacturing
 methods with the goal to couple their end-use and full life-cycle considerations for
 environmentally and economically sustainable materials and products that address
 global challenges.
- Track J: Food & Nutrition Security: This track will converge a wide range of disciplines to address intertwined challenges in supporting population health,

combating climate change, and addressing the nutritional needs of the most vulnerable by empowering youth, women, and disadvantaged communities.

Participating in the NSF Convergence Accelerator: Selected teams begin in phase 1, participating in an accelerated 12 month planning effort, with grant funding up to \$750,000. Phase 1 teams participate in the program's innovation curriculum designed to strengthen each team's convergence approach and to further develop the solution concepts. At the end of phase 1, teams participate in a formal NSF pitch and proposal evaluation. Selected teams advance to phase 2 to continue developing sustainable, impactful solutions. Teams are eligible to receive up to \$5 million of funding during phase 2.

Additional Information/Submission Pathways: NSF-22-583; NSFBAA-CA22-02

Informational Webinar: May 4, 1-3 pm EST & May 5, 3-5 pm EST Register here.