



**Harvard John A. Paulson
School of Engineering
and Applied Sciences**

**Perform cutting-edge research in
world-class laboratories**

**Collaborative projects in computer
science, materials science,
bioengineering, biology and math,
physics, robotics, computational
science, nanotechnology, and bio-
inspired engineering**

\$6,000 program stipend

Free on-campus housing provided



Scan here for our
website, detailed
application information,
and how to contact us!

Apply by February 1, 2023

Eligibility Requirements:

*Citizen or Permanent Resident of the
United States (Wyss and Rowland
Institutes excepted)*

*Currently enrolled undergraduate not
graduating before December 2023*

RESEARCH EXPERIENCE FOR UNDERGRADUATES

June 5 – August 11, 2023

SUMMER 2023 RESEARCH AREAS

When you apply, your application will be available to research mentors for all funding sources listed below:

NSF National Nanotechnology Coordinated Infrastructure (NNCI) at the Center for Nanoscale Systems at Harvard

cns.fas.harvard.edu

Participate in research in photonics and optical computing, biomimetics, diamond-based nanoscale sensors and computing elements, and more at our world-class nanofabrication, characterization and imaging facility.

The Wyss Institute for Biologically Inspired Engineering

wyss.harvard.edu

Discover the engineering principles that nature uses to build living things, and harness these insights to create biologically inspired materials and devices to revolutionize healthcare and create a more sustainable world. Projects include adaptive material technologies, bioinspired soft robotics, 3D organ engineering, bioinspired therapeutics and diagnostics, living cellular devices, immuno-materials, molecular robotics, and synthetic biology.

The Rowland Institute at Harvard

rowland.harvard.edu

Study experimental science over a broad range of disciplines. Research in physics, chemistry, and biology has an emphasis on interdisciplinary work and development of new experimental tools. *Positions contingent on funding.*

NSF Materials Research Science and Engineering Center (MRSEC)

mrsec.harvard.edu

The MRSEC's two interdisciplinary research groups (IRGs) seek to create new classes of soft functional materials and to provide new insights into the behavior of mechanically soft systems far from equilibrium. IRG I, which focuses on programmable multiscale and multi-material control of functional matter, is aimed at fundamental advances in materials synthesis, modeling, and 3D printing that enable the creation of functional soft materials that augment human performance. New classes of soft materials that sense, actuate, and communicate are being developed for use in wearables, haptic interfaces, and artificial muscles to enhance future work at the human-technology frontier. IRG II, with a focus on non-equilibrium phenomena in mechanically soft systems, is pursuing new insights into the behavior of mechanically soft systems that are subjected to perturbations far from equilibrium. By combining data-rich experiments, theory, and artificial intelligence, the research will contribute greatly to harnessing the data revolution to applications in soft materials.

NSF REU Site in Biomaterials & Bioengineering (BRIDGE)

Conduct research in biomaterials, including drug delivery, tissue engineering, microfluidics, and cells as materials.

Summer Program at Harvard in Earth and Environmental Research (SPHEER)

The proposed Summer Program at Harvard in Earth and Environmental Research (SPHEER) focuses on investigation of the drivers and consequences of Earth system change, which across multiple timescales, from decades to millions of years. Experimental, modeling, and computational projects will probe the interplay of atmospheric, water, and land systems. The program is designed to help students understand the interplay between field research, laboratory research, data analysis, and modeling in the study of environmental change, while incorporating diverse cultural perspectives.

Privacy Tools Project and Open Differential Privacy

privacytools.seas.harvard.edu

opendp.org

Join a multidisciplinary effort to help enable the collection, analysis and sharing of personal data for research in social science and other fields while providing privacy for individual subjects. *Positions contingent on funding.*

Additional Opportunities

Additional projects in a variety of areas may become available as funding is received. Additional summer research programs at Harvard can be found at www.gsas.harvard.edu/diversity/outreach-programs.

We believe that the best science and engineering solutions come from teams with diverse experiences and backgrounds. We also believe that science and engineering research careers should be accessible regardless of culture, race, ethnicity, age, economic status, religion, disability, gender identity or expression, sexual orientation, or other dimensions such as military service. We encourage students who identify as being members of groups who have traditionally been underrepresented in science and engineering to apply!



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Materials for BRIDGE



MRSEC, BRIDGE, NNCI, SPHEER, and Privacy Tools are supported through the auspices of the National Science Foundation.

Information on other NSF undergraduate research opportunities can be found at: www.nsf.gov/home/crssprgm/reu/index.jsp.