Stanford

Initiative Overview Stanford Science Fellows

FREDOM TO EXPLORE NEW PATS

The Stanford Science Fellows program brings exceptional scientists with diverse backgrounds and perspectives to Stanford. This program offers them a rare opportunity: the chance to follow their curiosity, wherever it may lead.

BRIDGING DISCIPLINES, MAKING DISCOVERIES

About Stanford Science Fellows

Curiosity, creativity, and bold new research directions are hallmarks of Stanford's approach to catalyzing discovery. The Stanford Science Fellows program brings a diverse group of talented scientists to our university and helps unlock their potential in the early stages of their careers.

Unlike a traditional postdoc program, Stanford Science Fellows gives postdocs the freedom to forge their own paths as scientists—paving the way for discoveries in fundamental science, while helping fellows to grow as academic leaders, researchers, and communicators. By allowing fellows to define their own research agenda and to work with faculty mentors across schools and disciplines, we accelerate their impact enabling them to make a mark in their field years earlier than they typically could.

The life experiences of scientists shape the way they see problems and can inspire new ways of thinking. Stanford Science Fellows supports scholars who bring diverse perspectives, identities, and backgrounds, including those from historically underrepresented groups. This benefits everyone, increasing the potential for discoveries fueled by new perspectives applied to old problems or even the emergence of new lines of inquiry.

Past and current cohorts include underrepresented minorities as well as first-generation, female, and international postdocs. The energy and experience these fellows bring to Stanford are advancing scientific research, enhancing interdisciplinary connections, and strengthening our scientific community.



JUDY JI

Judy Ji is working with applied physics faculty in the School of Humanities and Sciences to study quantum materials. Using machine learning and experimental tools, she is investigating the nature of electrons and developing quantum materials that could play a role in the development of quantum computers. Her work has appeared in the journals *Science* and *Nature Materials*.

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Cody McCoy is working at the intersection of materials science and marine biology. She applies cutting-edge tools in optics and photonics to understand how light stress is harming coral reefs, uncovering information that can improve ongoing conservation efforts. Her past work on biological adaptations related to light inspired new solar panel materials that are about 30 percent more efficient, and her research on coral reefs may offer similar inspiration. Her work has been featured in *Scientific American* and the *New York Times*.

DIPTARKA HAIT

Diptarka Hait's interests lie in computational quantum chemistry. For instance, he has conducted research into how scientists can use X-rays to better study chemical transformations. As a Stanford Science Fellow, Hait is using tools from physics and mathematics to advance our understanding of photocatalysts and chemistry in general.

RONG MA

Rong Ma works with faculty in the School of Medicine to pursue breakthroughs in immunotherapy and cancer immunology, blending chemistry and biophysics to investigate T cells, the white blood cells that defend against infections and cancer. Ma recently received the Michelson Prize for Human Immunology and Vaccine Research.

ZOE ZHU

Zoe Zhu works with faculty at SLAC National Accelerator Laboratory and the School of Engineering to investigate connections between condensed matter physics and climate systems to reveal the physical processes that drive climate change. She was part of the Event Horizon Telescope Collaboration that received the Breakthrough Prize in Fundamental Physics in 2019.

CALEB LAREAU

As a Stanford Science Fellow, Caleb Lareau has collaborated with researchers in the School of Medicine to understand genetic relationships among cells in the human body and investigate how cells respond to damage and disease. Caleb's work as a fellow helped him secure a National Institutes of Health Pathway to Independence Award.

STANFORD SCIENCE VISITING PROFESSORS

Every year, the Stanford Science Visiting Professorship program brings four outstanding natural science faculty to Stanford to participate in collaborative research and share their expertise with Stanford Science Fellows—broadening the fellows' exposure to different fields.

Visiting professors play an active role in the intellectual life of SSF, regularly giving seminars on their research, mentoring fellows and supporting their professional development, and collaborating with host faculty and others across Stanford and SLAC to advance scientific research.

To enhance the contributions of visiting professors, priority is given to faculty who contribute scientific or demographic diversity to the program, who bring a strong record of interdisciplinary collaboration, and who have extensive experience mentoring students and postdocs.

"I think a faculty with a mix of people from lots of different backgrounds is essential to the vitality of the university and to education in general. New ideas come from different backgrounds. That's one of the things the Stanford Science Fellows program brings we're adding diversity of experiences to the faculty. We accept applications from all over the world, we look at what they're going to do, and if it's innovative and exciting and we see the potential to succeed, then we want to go for it."

- PETER MICHELSON, Stanford Science Fellows faculty director and Luke Blossom Professor in the School of Humanities and Sciences



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We don't just measure success by what happens at Stanford—our impact is about creating knowledge and solutions that reach communities far beyond our campus. By investing in exceptional early-career scientists with a wide array of backgrounds, we are shaping the future of science.

Solutions felt by all require help from all—we can't do this alone. When we come together across disciplines, expertise, and life experience, we achieve more than we could ever hope to accomplish on our own.

Please join us. Learn more about SSF here: https://stanfordsciencefellows.stanford.edu/

