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UC San Diego Faculty Members Named 2020 Sloan Research Fellows



(Top left to right) Tarek Elgindi, Alex Frano, Cressida Madigan (Bottom left to right) Nadia Polikarpova, Amina Schartup, Wei Xiong

Each year, 126 of the brightest early career scientists in the U.S. and Canada are awarded the Alfred P. Sloan Research Fellowship. This year, six University of California San Diego researchers made the list, upping the total number of campus recipients to 136 since the fellowship was established more than six decades ago. The following UC San Diego faculty members were selected for the prestigious award:

- **Tarek Elgindi**, assistant professor of mathematics, whose research focuses on the mathematical analysis of models for incompressible fluids;
- **Alex Frano**, assistant professor of physics, whose research is focused on investigating strongly correlated electron systems using various x-ray scattering techniques;
- **Cressida Madigan**, assistant professor of molecular biology, whose research involves using genetic and imaging tools to study infection mechanisms related to inflammation and neurological injury;
- **Nadia Polikarpova**, assistant professor of computer science and engineering, who builds practical tools and techniques that make it easier for programmers to create secure and reliable software;
- **Amina Schartup**, assistant professor of marine chemistry at Scripps Institution of Oceanography, whose research specializes in tracing the chemical and biological cycles of metals, especially mercury, in the environment; and
- **Wei Xiong**, assistant professor of chemistry & biochemistry, who investigates charge dynamics and molecular conformations at interfaces, and molecular dynamics and ultrafast photonics of molecular systems under strong coupling conditions.

“It is rewarding to see a large number of Sloan Research Fellowships awarded to our faculty again this year. It affirms the quality of our university, our scholars and the research they undertake,” said Chancellor Pradeep K. Khosla. “I congratulate these young scholars, and I look forward to seeing the path they pave for our next generation of scientific leaders.”

According to the foundation, a Sloan Research Fellow is someone whose drive, creativity and insight makes them a researcher to watch. Additionally, their leadership and independent research achievements position them among the most promising researchers working today.

“To receive a Sloan Research Fellowship is to be told by your fellow scientists that you stand out among your peers,” says Adam Falk, president of the Sloan Foundation.

Selectivity for the distinction is high, with the 2020 cohort of fellows drawn from a diverse range of more than 60 institutions across the U.S. and Canada.

According to Daniel Goroff, director of the Sloan Research Fellowship program, there is a wide variety of winning institutions, but each one has successfully attracted, retained and nurtured truly promising junior faculty.

“The Alfred P. Sloan Foundation is proud to join with these institutions in recognizing and supporting scientific leaders of the future,” Goroff said.

Past Sloan Research Fellows include many prominent figures in science history, including physicists Richard Feynman and Murray Gell-Mann, and game theorist John Nash. Fifty fellows have received a Nobel Prize in their respective field, 17 have won the Fields Medal in mathematics, 69 have received the National Medal of Science and 19 have won the John Bates Clark Medal in economics, including every winner since 2007. A database of former Sloan Research Fellows can be found at <https://sloan.org/past-fellows>.

Open to scholars in eight scientific and technical fields—chemistry, computer science, economics, mathematics, computational and evolutionary molecular biology, neuroscience, ocean sciences and physics—the Sloan Research Fellowships are awarded in close coordination with the scientific community. Candidates must be nominated by their fellow scientists and winners are selected by independent panels of senior scholars on the basis of a candidate’s research accomplishments. The full list of this year’s recipients is accessible on the Alfred P. Sloan Foundation [website](#).

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