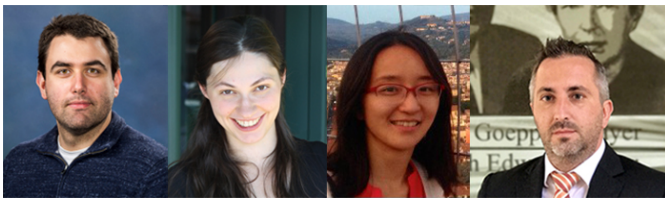


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Promise of UC San Diego Junior Faculty Gains Attention of Sloan Foundation

Four early-career scientists at the University of California San Diego have been recognized for their outstanding promise in the fields of physics and computational and evolutionary molecular biology. The Alfred P. Sloan Foundation, known for its support of original STEM research and those who use it to improve the world, has chosen the following UC San Diego faculty members as 2018 Sloan Research Fellows:



From left: Ludmil Alexandrov, Elena Koslover, Tongyan Lin and Tenio Popmintchev.

- [Ludmil Alexandrov](#), assistant professor of bioengineering, who focuses on understanding mutational processes in human cancer through the use of mutational signatures.
- [Elena Koslover](#), assistant professor of physics, whose research centers on the multi-scale physics of intracellular soft matter

—from biopolymers to membranes to fluids.

- [Tongyan Lin](#), assistant professor of physics, whose research aims to address basic questions about dark matter, such as its non-gravitational interactions.
- [Tenio Popmintchev](#), assistant professor of physics, whose research interests are focused on extreme nonlinear optics and attosecond science.

The university’s faculty members are among the 126 fellows selected each year by the foundation in recognition of distinguished performance and unique potential to significantly impact their respective fields of research. Each fellow receives \$65,000 as part of his or her prestigious two-year fellowship.

“We are so proud of our Sloan Research Fellows, who are being recognized for their outstanding work and their promising future in their fields,” noted Chancellor Pradeep K. Khosla. “These scholars are at the cutting-edge of their disciplines, and they exemplify our ethos of pushing the frontiers of knowledge to transform and improve people’s lives.”

This can be seen in the type of attention-getting research activities of the UC San Diego fellows. Koslover's research group, for example, uses theoretical techniques to explore the movement and mechanics of cellular components and their biological consequences. Alexandrov recently demonstrated that mutational signatures have potential use in cancer prevention by identifying the signatures associated with tobacco-smoking. Lin uses theoretical and computational methods to develop new ways of testing properties of dark matter, whether by astrophysical observations, direct detection experiments or at colliders. And Popmintchev created a tabletop X-ray laser—essentially a Swiss army knife made of light—which is a unique tool for discoveries at the space-time resolution extreme.

“I am honored to be one of the Sloan Fellows for 2018,” Popmintchev said. “This award is a great recognition for my work and encouragement to continue expanding the classical and quantum capabilities of the extreme light tools I have been working on.”

The Sloan Foundation began encouraging early-career researchers with fellowships in 1955, recognizing more than 5,000 outstanding researchers over the years. Originally awarded in physics, chemistry and mathematics, the Sloan Research Fellowships have expanded to include the support of early-career researchers in a total of eight scientific and technical fields. The fellowships are awarded in close coordination with the scientific community. Candidates must be nominated by their fellow scientists and winning fellows are selected by an independent panel of senior scholars in their field on the basis of a candidate's research accomplishments, creativity and potential for leadership in his or her field. The UC San Diego fellows represent the [Division of Physical Sciences](#) and the [Jacobs School of Engineering](#) on campus.

“The Sloan Research Fellows represent the very best science has to offer,” says Sloan President Adam Falk, “The brightest minds, tackling the hardest problems, and succeeding brilliantly—Fellows are quite literally the future of twenty-first century science.”

Past Sloan Research Fellows include scientific giants such as physicists Richard Feynman and Murray Gell-Mann, and game theorist John Nash. More than 40 former fellows have received a Nobel Prize in their respective fields, 16 have won the Fields Medal in mathematics, 69 have received the National Medal of Science and 17 have won the John Bates Clark Medal in economics, including every winner since 2007.

[Full list of the 2018 Sloan Research Fellows](#)

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