UC Irvine Mathematics Welcomes Professor Yi Lai

Professor Yi Lai studies geometric analysis.

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Assistant Professor Yi Lai joins UC Irvine Department of Mathematics, bringing their expertise in geometric analysis to campus.

Picture Credit:
Stanford University

The UC Irvine Department of Mathematics welcomes Yi Lai, who joined the University this year as an assistant professor. Lai completed their undergraduate studies at Peking University in 2016 and received their Ph.D. in Mathematics from the University of California, Berkeley under the supervision of Professor Richard Bamler in 2021. Before arriving at UC Irvine, Lai held a postdoctoral position at Stanford University's Department of Mathematics from 2021-2024. Lai's research focuses on Ricci flows – a process that smooths out the shapes of geometric structures; her work helps mathematicians classify and understand the geometry and properties of shapes by providing insights into how geometric structures evolve. "I hope to achieve a complete classification of these solutions, explore the Ricci flow singularities modeled on these solutions, and investigate the possibility of performing a surgery to flow through these singularities," said Lai, who explained that "surgery" is a procedure that removes unique points on shapes, called singularities, and replaces them with simpler structures that allow the shapes to flow continuously. Lai's work could create applications of Ricci flow in problems concerned with shapes and how they can be stretched, twisted or bent without breaking or cutting them.

This article was written by Ph.D. student Jenny Tran from the UC Irvine Department of Mathematics. Tran is a 2024-2025 UC Irvine School of Physical Sciences Science Communication Fellow.

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