![IPAM logo] **ipam** institute for pure & applied mathematics

Green Family Lecture Series

Professor Alessio Figalli

Alessio Figalli, born in Rome in 1984, is an Italian mathematician. After receiving his bachelor's and master's degrees in mathematics from the University of Pisa, he obtained a joint Ph.D. in mathematics between Pisa and Lyon. He held faculty positions in France and the United States before joining ETH Zurich in 2016 as a full professor. Since 2019, Figalli has been the director of the Institute for Mathematical Research at ETH Zurich.

Figalli has received numerous prestigious awards, most notably the 2018 Fields Medal "for contributions to the theory of optimal transport and its applications in partial differential equations, metric geometry, and probability."

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Optimal Transport: From A to B… and Beyond

Ever wonder what the most efficient way is to move something from here to there? That's precisely the question Gaspard Monge took on back in the 18th century. Fast forward to today, and the theory of Optimal Transport (OT) has evolved into a surprisingly versatile framework used in areas as diverse as economics, data science, and the natural sciences. In this talk, we'll take a friendly tour through the fundamentals of OT, showing how it elegantly tackles "moving" problems big and small. We'll also dive into a few fascinating applications, offering a glimpse of why OT has become such a central tool in modern mathematics and beyond.

📅 Monday, May 19, 2025   🕐 5:00 pm

📍 Royce Hall 314

This lecture will be accessible to a general public audience.
Reception immediately following at IPAM.

Exploring Stability in Geometric and Functional Inequalities: OT and Beyond

Geometric and functional inequalities have long been foundational in analysis, shaping our understanding of numerous mathematical and physical phenomena. Recently, attention has turned to questions of stability: if a function is nearly optimal in a known inequality, can we quantify just how close it is to a genuine minimizer? In this talk, I will discuss how Optimal Transport offers a potent framework for tackling these stability questions—while also noting scenarios where OT may not be the ideal tool…

📅 Tuesday, May 20, 2025   🕐 4:30 pm

📍 Royce Hall 314

This lecture is intended for a scientific audience.