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Figalli received his master degree in mathematics from the Scuola Normale Superiore di Pisa in 2006, and earned his doctorate in 2007 under the supervision of Luigi Ambrosio at the Scuola Normale Superiore di Pisa and Cédric Villani at the École Normale Supérieure de Lyon. In 2007 he was appointed Chargé de recherche at the French National Centre for Scientific Research, in 2008 he went to the École polytechnique as Professeur Hadamard. He has been a professor at University of Texas at Austin since 2009. Starting from 2013 he holds the R. L. Moore Chair. Amongst his several recognitions, Figalli has won an EMS Prize in 2012, he has been awarded the Peccot-Vimont Prize 2011 and Cours Peccot 2012 of the Collège de France, and has been appointed Nachdiplom Lecturer in 2014 at ETH Zürich. His main research interests include Partial Differential Equations and Calculus of Variations.

From Isoperimetry to Random Matrices

Abstract
The optimal transport problem consists in finding the cheapest way to transport a distribution of mass from one place to another. Apart from its natural applications in economics, optimal transport maps provide "efficient" changes of variables that have been used to investigate the stability of minimizers to geometric/functional inequalities. However, in some cases, optimal maps may not alway been the "right" choice and other changes of variables may be more suitable. For instance, this happens to be the case in the study of universality in random matrix theory. In this talk I'll give an overview of these results.