

Colloquium

University of Notre Dame
Department of Mathematics

Tristan Ozuch - Massachusetts Institute of Technology

Speaker: Tristan Ozuch

Massachusetts Institute of Technology

Will give a lecture entitled

Einstein metrics and Ricci flow in dimension 4



Date: Thursday, January 26, 2023

Time: 4:00 PM

Location: 127 Hayes-Healy Hall

Zoom URL: www.google.com/url?q=https://notredame.zoom.us/j/91884190029?pwd%3D3Db0habW13VFpOT1hRNU55bkgxd1BWUT09&sa=D&source=calendar&ust=1670878231542693&usg=AOvVaw1esOV9HWkPJ8JkPdFufIti

Departmental Tea: Tea in Room 257 (lounge in Hurley Hall) at 3:30 p.m.

Abstract:

Einstein manifolds and Ricci flow were instrumental tools in answering long standing topological questions in dimension 3. It is now in dimension 4 that most open questions remain, and geometers hope that those same tools will provide some answers. However, Einstein 4-manifolds are still far from being fully understood and many 4-dimensional specific techniques have yet to be applied to Ricci flow. I will motivate Einstein metrics and the Ricci flow approach to topology and discuss what are some of the main difficulties and specificities of dimension 4. I will present my work on the degeneration of Einstein 4-manifolds, some of the questions it answers and the new directions it opens. I will finally discuss new aspects of a 4-dimensional-specific theory of Ricci flow.