Colloquium

University of Notre Dame
Department of Mathematics
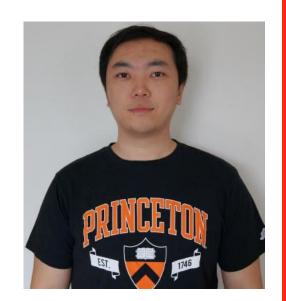
Speaker: Ruobing Zhang

Princeton University

Will give a lecture entitled
Metric geometric aspects of Einstein manifolds

Date: Thursday, November 16, 2023
Time: 4:00 PM
Location: 127 Hayes-Healy Bldg

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

Zoom URL: notredame.zoom.us/j/94209026501?
pwd=d0hDdmRua0JETFV6MkpPSWFJZkZDQT09. Meeting ID: 942 0902 6501 Passcode:
596816

Abstract:

This lecture concerns the metric Riemannian geometry of Einstein manifolds, which is a central theme in modern differential geometry and is deeply connected to a large variety of fundamental problems in algebraic geometry, geometric topology, analysis of nonlinear PDEs, and mathematical physics. We will exhibit the rich geometric/topological structures of Einstein manifolds and specifically focus on the structure theory of moduli spaces of Einstein metrics. My recent works center around the intriguing problems regarding the compactification of the moduli space of Einstein metrics, which tells us how Einstein manifolds can degenerate. Such problems constitute the most challenging part in the metric geometry of Einstein manifolds. We will introduce recent major progress and propose several open questions in the field.