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Joint Geometric Analysis Seminar

(Part of MIST program)

From L^p to Metric Geometry Notions of Convergence for Riemannian Manifolds

Professor Brian Allen
University of Hartford

Abstract

When studying geometric stability questions it is common to obtain L^p estimates for a sequence of Riemannian manifolds as a first step. As a next step one often would like to improve from L^p estimates to Sormani-Wenger Intrinsic Flat (SWIF) and/or Gromov-Hausdorff (GH) convergence. We will discuss joint work with Raquel Perales and Christina Sormani which allows one to do just that. We will also present a Morrey type inequality which characterizes the p for which one should expect to obtain both GH and SWIF convergence versus when one should only expect SWIF convergence. An example will be given which shows that L^p convergence is not well suited for metric geometry and we will give many examples which compare and contrast these notions that will provide intuition for all of the theorems discussed.

Date: 24 September 2021 (Friday)
Time: 9:00am – 10:00am (Hong Kong time)
ZOOM link: https://cuhk.zoom.us/j/91805734715

All are Welcome