

FELIX KLEIN SEMINAR

Speaker: Stephen McKeown
University of Texas at Dallas



Date: Thursday, February 20, 2020

Time: 2:00 PM

Location: 258 Hurley Hall

Lecture Title:

Scattering on Singular Yamabe Spaces

Abstract

Scattering theory on asymptotically hyperbolic manifolds has been fruitfully applied to Poincare-Einstein metrics to define the conformally invariant powers of the Laplacian and conformal fractional Laplacian, study Q-curvature, and shed light on the meaning of renormalized volume. We carry out the parallel program for singular Yamabe metrics, obtaining extrinsic versions of the GJMS operators and Q-curvatures, including for odd index. We relate the operator to the renormalized volume and derive a new form of the Graham-Gursky Gauss-Bonnet formula. This is joint work with Sun-Yung Alice Chang and Paul Yang.