Department of Mathematics
University of Notre Dame

Pavel Mnev - University of Notre Dame

FELIX KLEIN SEMINAR

Speaker: Pavel Mnev
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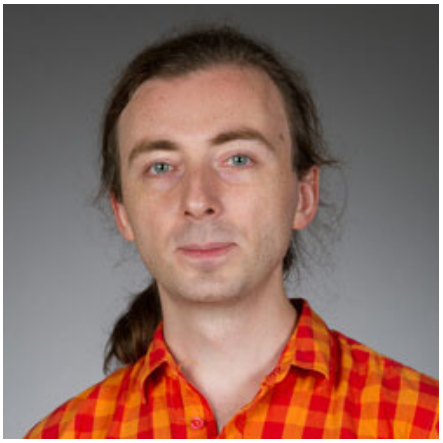

Date: Thursday, April 11, 2024
Time: 2:00 PM
Location: 125 Hayes-Healy Bldg
Zoom URL: NA

Lecture Title:

A gluing formula for heat kernels

Abstract

Let M be a Riemannian manifold split by a codimension 1 submanifold gamma into two manifolds with boundary M_1 and M_2. I will explain a formula allowing one to recover the heat kernel of the Laplacian on M in terms of heat kernels of Laplacians on M_1 and M_2 (with Dirichlet boundary condition on gamma) and the heat kernel on gamma itself. Time permitting, I will also explain a combinatorial counterpart (or "toy model") of this result, replacing manifolds with graphs; in this setup the gluing formula also admits a nice path-sum interpretation. The talk is based on a joint work with Konstantin Wernli https://arxiv.org/pdf/2404.00156.pdf.