hausdorff research institute for mathematics



TRIMESTER PROGRAM

January - April, 2025



Metric Analysis

Organizers:

Ursula Hamenstädt, Yevgeny Liokumovic, Andrea Mondino, Stephan Stadler, Stefan Wenger, Robert Young

In recent years, the development of analytic tools to study geometric questions in metric spaces beyond Riemannian manifolds has seen tremendous progress and led to many structural results which shed a new light even on classical questions. The goal of this HIM program is to further refine such tools and explore their applications, like the study of filling invariants, norms, volumes, energies, in various concrete geometric frameworks.

The program aims at bringing together researchers in analysis on metric spaces, geometric group theory, differential geometry, higher Teichmüller theory and low dimensional topology to isolate and enhance common core ideas and tie these strands to a more global theory, geared at making progress towards some well established open problems.

We will have the following activities:

Introductory Winter School "Analysis and geometry on groups and spaces" (January 27-31, 2025)

International Conference "Differential geometry beyond Riemannian manifolds" (March 24-28, 2025)

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Call for participation: The Hausdorff Research Institute offers visiting positions for the whole period of the trimester program (for senior scientists, postdocs and PhD students). The deadline for applications is **July 1, 2024**. Please send applications (including CV and, for postdocs and PhD students, a letter of recommendation) using our online application form at **https://him-application.uni-bonn.de/index.php?id=5701** In addition numerous fellowships for shorter periods are available.