



SCMS Colloquium

Dimensions of escaping and recurrent geodesics

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Time: April 28th, 16:00 - 17:00

Venue: Gu Lecture Hall, SCMS



Abstract:

In this talk, we investigate the asymptotic behavior of geodesics—such as escaping and recurrent trajectories—on Riemannian manifolds. Recurrent geodesics are characterized by their endpoints in the visual boundary, which correspond to conical limit points for the fundamental group. The Hausdorff dimension of (uniformly) conical points has been extensively studied, beginning with Patterson's work (1975) on Fuchsian groups, followed by Sullivan (1979) for geometrically finite Kleinian groups, and later Bishop-Jones (1996) for general Kleinian groups. In this talk, we extend these classical results by computing the Hausdorff dimensions of two other key subsets of the limit set: The Myrberg limit set (a distinguished subclass of non-uniformly conical points) and the non-conical limit set. This is based on joint work with Mahan Mj (TIFR).

About the speaker:

杨文元，2014年入职北京大学北京国际数学研究中心，目前任职长聘教授。曾获海外高层次青年人才计划支持。主要研究方向是几何群论与低维拓扑，已在 *Invent Math*, *Geometry & Topology*, *Crelle's journal*, *Journal of Topology*, *Math Ann* 等国际知名期刊发表论文多篇。

