Diophantine approximation in Kleinian groups: extremality and all that

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Abstract

The overall aim is to initiate a 'manifold' theory for metric Diophantine approximation on limit sets of Kleinian groups. In this talk, we investigate the notion of extremality and singular orbits within the Kleinian group framework. Also, we consider the natural analogue of Davenport's problem in which badly approximable limit points are restricted to a given subset of the limit set. Beyond extremality, we discuss potential Khintchine-type statements for subsets of the limit set. These can be interpreted as the 'manifold' strengthening of Sullivan's logarithmic law for geodesics.