Title: *Metric Diophantine approximation - from continued fractions to fractal*

Abstract:

The metric theory of Diophantine approximation dates back to Èmile Borel (1909) and Khintchine (1924). Starting from Khintchine, we will give a survey of metric Diophantine approximation, with the occurrence of fractal structures in number theory playing a major part. Particular emphasis will be put on recent efforts to tackle major outstanding problems via two different avenues: One uses classical techniques from fractal geometry and number theory, while

the other uses methods from homogeneous dynamics.