DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE
UNIVERSITY OF SOUTHERN DENMARK, ODENSE

Mathematics seminar

Juhani Koivisto
IMADA, SDU

Non-amenability and visual Gromov hyperbolic spaces

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IMADA seminar room

Abstract

In 2000 Cao proved that a complete geodesic hyperbolic Riemannian manifold, or metric graph, with bounded local geometry and quasi-pole has strictly positive Cheeger constant (equivalently, is non-amenable) if its Gromov boundary consists of finitely many connected components of strictly positive diameter. His proof is based on a graph approximation of the so-called hyperbolic cone of the Gromov boundary. In this talk we will discuss the non-amenability of uniformly coarsely proper hyperbolic cones over any bounded metric space with finitely many uniformly coarsely connected components. This generalises the work of Cao to uniformly coarsely proper visual Gromov hyperbolic spaces (that are not proper or geodesic in general) and has applications to metric measure spaces and locally compact compactly generated groups.

Host: David Kyed