Seminari Al@Bicocca



19 December 2019

Federico W. Pasini University of Western Ontario

2:30 p.m.

Room 3014 - U5 Department MatApp University of Milan-Bicocca Via R. Cozzi 55 Milano (IT)

Organizers: Ilaria Castellano Claudio Quadrelli

"The Boundary of Hyperbolic TDLC-groups"

GROUPS

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REPRESENT ATION

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Abstract: Geometric Group Theory is the branch of mathematics that aims at understanding the structural properties of a given group through the geometric properties of a space on which this group acts. One of the most spectacular advance in this direction is the theory of (discrete) hyperbolic groups, i.e. groups acting nicely on a proper hyperbolic metric space, or equivalently groups whose Cayley graphs are hyperbolic. Among many other properties, a hyperbolic group admits a metrizable boundary, which turns out to provide a compactification of its Cayley graph(s). M. Bestvina and G. Mess showed a tight relationship between the cohomological properties of a hyperbolic group and of its boundary. In this talk we show that, coupling the concept of Cayley-Abels graph with the rational discrete cohomology theory developed by I. Castellano and T. Weigel, Bestvina and Mess's result can be extended to the realm of totally disconnected locally compact (= TDLC) groups. This is a joint work with Ilaria Castellano.