

1040-20-86

Victor Gerasimov* (victor.gerasimov@gmail.com), Rua Barroso Junior, 66/204, Bairro: Sao Jose, Belo Horizonte, MG 31275-110, Brazil. *Convergence group actions and relatively hyperbolic groups.*

Firstly we give an introduction to the theory of convergence actions of locally compact groups on general compacta.

Then the ideas from the theory of visibility in the hyperbolic space, being appropriately stated, are applied to the study of a convergence group action. We characterize geometrically finite actions as those that act cocompactly on the space of pairs of distinct points. Then we prove the analog of Floyd's theorem for general convergence groups.

Finally, certain applications to relatively hyperbolic groups are presented. We generalize some known results and answer to some open questions. (Received January 26, 2008)