

Ana C. Silva

(Ghent University, Belgium)

The universal groups for trees travelling to other geometrical universes

Universal groups for trees were defined by Burger and Mozes in 2000 and they are subgroups of the automorphism group of regular trees whose local actions are prescribed by a finite permutation group. Endowed with the compact-open topology, these groups are examples of simple totally disconnected locally compact (t.d.l.c.) groups.

In this talk we consider the idea behind the definition of the universal groups for trees and we transport it to the broader class of right-angled buildings. If the building is regular then its universal groups are also examples of t.d.l.c. groups and we can describe in which conditions they are simple.

Travelling slightly more in universes, we will present the concept of local action in locally finite polygonal complexes and explain how universal groups of such polygonal complexes, which will also be examples of t.d.l.c. groups, can be defined.