Insalate di Matematica *presents*

Automorphism groups of regular trees as topological groups



Università degli Studi di Milano-Bicocca



14:00 - 12/05/2022 U5 - Room 3014 and Webex meeting

Università di Milano Bicocca

Abstract

A connected graph without closed paths is called a tree and a tree is said to be d-regular if every vertex has exactly d adjacent vertices. The automorphism group of such a combinatorial object can be endowed with a topology that turns it into a locally compact group, and the aim of the first part of the talk will be to describe such a topology. The target is then to play a bit further with the automorphism groups of infinite regular trees in order to construct a few more topological groups: they will provide some of the most relevant examples of totally disconnected locally compact groups we are aware of. Indeed the second part of the talk will be devoted to a brief overview of the theory of this class of locally compact groups.



Keywords:

regular tree \cdot automorphism group \cdot totally disconnected locally compact group

"Obvious" is the most dangerous word in mathematics. - Eric Temple Bell