Combinatorics of cactus groups and remarkable subgroups

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Abstract

Cactus groups Jn first appeared in the study of the structure of cobordism category by acting on tensorial products of objects of those categories. Then, they play an analogous role as braids groups in the braided categories.

Moreover they appear in the study of operads. Indeed, there is a surjective morphism from Jn to the symmetric group Sn whose kernel is the group of pur cactus PJn, which is the fundamental group of the Deligne-Mumford compactification of moduli spaces of curves of real genus 0 with n+1 marked points.

In this presentation I will start by describe cactus groups and some of their subgroups. In particular, I will use a result of J.Mostovoy to give some properties of these groups.

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