

First results on Sturmian trees

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Abstract

We consider Sturmian trees as a natural generalization of Sturmian words. A Sturmian tree is a tree having $n+1$ distinct subtrees of height n for each n . As for the case of words, Sturmian trees are irrational trees of minimal complexity. We give various examples of Sturmian trees, and we characterize one family of Sturmian trees by means of a structural property of their automata.

This is joint work with Luc Boasson, Olivier Carton and Isabelle Fagnot.