## INSALATE DI MATEMATICA

presents

16/11/2022

## DAVIDE PEREGO

Growing Trees and Coding in a Hyperbolic Farm



Abstract: After introducing trees, we will define hyperbolic graphs as a slight generalization of them, together with their features. Then, we will see a couple of ways to associate trees to hyperbolic graphs and we will explore this connection in the case of hyperbolic groups. In particular, we will consider trees as languages, provide an idea of automata and use them for our geometric purpose.

**Keywords:** Trees · hyperbolic graphs · automata

Dipartimento di Matematica e Applicazioni Università degli Studi Milano Bicocca U5-2107 4 ρ.m. (CET)



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