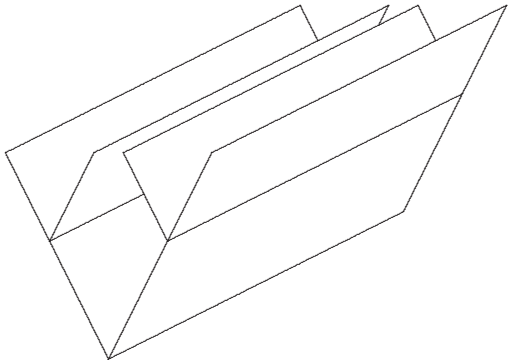
Brownian motion and harmonic functions on treebolic space

THU/BE01
17:00–17:20

*Wolfgang Woess** (TU Graz), *Alexander Bendikov* (Univ. Wroclaw), *Laurent Saloff-Coste* (Cornell Univ.), *Maura Salvatori* (Univ. Milano)

Treebolic space is a two-dimensional complex, the *horocyclic product* of hyperbolic upper half plane and a homogeneous tree. It is made up of strips from hyperbolic plane that are pasted together in a tree-like way.



On this space, one can define a family of Laplacians with two drift parameters. Their precise construction and proof of essential selfadjointness is a complicated task.

For these Laplacians, we can describe all positive harmonic functions and describe the induced stochastic process, in particular rate of escape convergence to the geometric boundary at infinity.