“Group Theory International”
Online Seminar

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“Cayley graphs of relatively hyperbolic groups"

Thursday, February 20, noon (New York Time)

Abstract:
Let G be a finitely generated group hyperbolic relative to a family of abelian groups. In this talk I will discuss the following result: there is a finite generating set X of G and a constant K such that

- the Cayley graph of G with respect to X has the falsification by fellow traveler property (i.e. every non-geodesic path K-fellow travels with a shorter path with the same end points),
- if U and V are cyclic geodesic words over X representing conjugate elements of length greater than K, then, up to cyclic shifts of U and V, there is a conjugator of length less than K.

This result implies, for example, that the growth of (G,X) is rational, the geodesic language is regular and conjugacy geodesic language is also regular.
This is a joint work with Laura Ciobanu.

Next presentation: Mar 6, Rémi Coulon *(Vanderbilt University)*

Algebraic Cryptography Center