

TOWARDS ALGEBRAIC NIELSEN-THURSTON CLASSIFICATION FOR BRAIDS

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We attach to the braid group (more generally to any Garside group) a Gromov-hyperbolic graph on which the group acts by isometries: the additional length graph. For braids, this is meant to be an algebraic analog of the curve complex attached to the Mapping Class Group of the punctured disk. We will present positive results and open questions on a conjectured dictionary between Nielsen-Thurston classification and the classification of isometries of the additional length graph as a hyperbolic space.

Joint work with Bert Wiest (université de Rennes 1).