SOCIEDADE BRASILEIRA DE MATEMÁTICA

ENSAIOS MATEMÁTICOS 2016, Volume **30**, 174–216



Braids and signatures

Jean-Marc Gambaudo Étienne Ghys

Originally published in Bulletin de la Societé Mathématique de France 133 (4), 2005, p. 541–579. Republication with permission from the Societé Mathématique de France.

Abstract. A braid defines a link which has therefore a well defined signature. This signature function defined on the braid group is not a homomorphism. Our goal is to describe the "defect of homomorphism" and to relate it to the Maslov cocycle associated to the classical Burau representation.

²⁰¹⁰ Mathematics Subject Classification: 57M25, 20F36.