CENTRO DE MATEMÁTICA
UNIVERSIDADE DO PORTO

GEOMETRY AND TOPOLOGY SEMINAR

Topological complexity of the Klein bottle

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Abstract. The notion of topological complexity of a space has been introduced by M. Farber in order to give a topological measure of the complexity of the motion planning problem in robotics. Surprisingly, the determination of this invariant for non-orientable surfaces has turned out to be difficult. A. Dranishnikov has recently established that the topological complexity of the non-orientable surfaces of genus at least 4 is maximal. In this talk, we will determine the topological complexity of the Klein bottle and extend Dranishnikov's result to all the non-orientable surfaces of genus at least 2. This is a work in collaboration with Daniel C. Cohen.

FRIDAY, SEPTEMBER 22 **15:30** **ROOM 1.09**

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