

SINGULAR LEVELS AND TOPOLOGICAL INVARIANTS OF MORSE–BOTT FOLIATIONS ON NON-ORIENTABLE SURFACES

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ABSTRACT. We investigate the classification of closed curves and eight curves of saddle points defined on non-orientable closed surfaces, up to an ambient homeomorphism. The classification obtained here is applied to Morse–Bott foliations on non-orientable closed surfaces in order to define a complete topological invariant.

1. Introduction

Global invariants of conjugated flows, foliations or functions by means of a homeomorphism and defined on surfaces have been investigated since a long time ago and with a wide variety of techniques and tools. For instance see [4], [17], [19], [20] and the references therein. In this paper studies how the topological aspects of the singularities can be used to define complete invariants. To be more precise we need to introduce some notations and definitions.

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