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Singular levels and topological invariants of Morse Bott integrable systems on surfaces

In this talk we shall classify (up to homeomorphisms) closed curves and eights of saddle points on orientable closed surfaces. This classification is applied to Morse Bott foliations and Morse Bott integrable systems to define a complete invariant. We also present a realization Theorem based in two transformations and one generator.

These results are part of a joint work with José Martínez-Alfaro (UV, Spain) and Ingrid Sarmiento-Mesa (IBILCE-UNESP, Brazil).