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Topological moduli space for germs of holomorphic foliations II: universal deformations

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In memory of A. Haefliger

Abstract. This work deals with the topological classification of singular foliation germs on $(\mathbb{C}^2, 0)$. Working in a suitable class of foliations we fix the topological invariants given by the separatrix set, the Camacho-Sad indices and the projective holonomy representations and we prove the existence of a topological universal deformation through which every equisingular deformation uniquely factorizes up to topological conjugacy. This is done by representing the functor of topological classes of equisingular deformations of a fixed foliation. We also describe the functorial dependence of this representation with respect to the foliation.

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