

Deformation of rational curves along foliations

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Abstract. Deformation of morphisms along leaves of foliations define the tangential foliation on the corresponding space of morphisms. We prove that codimension one foliations having a tangential foliation with at least one non-algebraic leaf are transversely homogeneous with structure group determined by the codimension of the non-algebraic leaf in its Zariski closure. As an application, we provide a structure theorem for degree three foliations on \mathbb{P}^3 .

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