

Foliations on Complete Intersections

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Abstract: We prove that, under mild restrictions, the space of codimension-one foliations of degree one on a smooth projective complete intersection has two irreducible components of logarithmic type. We also prove that the same conclusion holds for any smooth hypersurface of dimension at least three that is not a quadric three-fold. The proofs of these results follow essentially from a more general structure theorem for foliations on manifolds covered by lines. If time permits, we will discuss what happens for degree-two foliations on smooth quadrics.