

Foliations by curves on threefolds

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We show that codimension two foliations with at most isolated singularities on certain smooth projective 3-folds with rank one Picard group have stable tangent sheaves. For non generic foliations by curves, we also provide a formula to count the number of connected components of the pure 1-dimensional scheme consisting of non-isolated singularities. Next, we focus on the projective space \mathbb{P}^3 and provide a full classification of foliations by curves of degree 1, plus a classification of foliations of degrees 2 and 3 of local complete intersection type. This is joint work with Alana Cavalcante and with Mauricio Correa and Simone Marchesi.