

1048.37050

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On dicritical foliations and Halphen pencils. (English)

Ann. Sc. Norm. Super. Pisa, Cl. Sci. (5) 1, No.1, 93-109 (2002). [ISSN 0391-173X]

<http://www.sns.it/ClasseScienze/pubsci/>

The authors consider holomorphic foliations of the projective plane, study the problem of giving bounds for the number of singularities in terms of the degree of the foliation and provide information on their geometrical position.

As an application they show that certain foliations are in fact Halphen pencils of elliptic curves. The results follow from Miyaoka's semipositivity theorem, combined with recent developments on the birational geometry of foliations.

The paper deals also with the question of finding global first integrals for dicritical foliations, i.e., foliations having singularities with an infinite number of local separatrices.

Vladimir Rovenski (Nesher)

Keywords : holomorphic foliation; singularity; complex projective plane

Classification :

*37F75 Holomorphic foliations and vector fields

Cited in ...