
0986.32015**Brunella, Marco; Gustavo Mendes, Luís****Bounding the degree of solutions to Pfaff equations.** (English)

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The authors investigate an old question asked by Poincaré: Given a foliation \mathcal{F} of degree d on an n -dimensional complex projective space and an \mathcal{F} -invariant projective hypersurface V , is it possible to bound the degree of V by a number depending only on d and not on \mathcal{F} ? This question has been studied by various authors in the context of classical theory of foliations, e.g. by *E. Ballico, M. Brunella, M. M. Carnicer, D. Cerveau* and *A. Lins Neto*.

In the present paper the authors work with Pfaff equations which are more general than foliations. Under a natural assumption that the ambient space X is a complex projective manifold with $\text{Pic}(X) = \mathbb{Z}$ they give a positive answer to the above question in the case when V is a normal crossing hypersurface. At the end of the paper they discuss to which extent the normal crossing hypothesis can be weakened.

*Z. Hajto (Kraków)**Keywords* : Pfaff equation; foliation; Poincaré problem; normal crossing hypersurface*Classification* :***32S65** Singularities of holomorphic vector fields**32C15** Complex spaces**58A17** Pfaffian systems**35A30** Geometric theory for PDE, transformations

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