

Holomorphic foliations on compact toric orbifolds

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Abstract:

We discuss results about holomorphic foliations of dimension and codimension one in compact toric orbifolds. We will present some results obtained on these varieties, including the Poincaré Problem for holomorphic foliations of dimension one as well as the classification of regular distributions on rational normal scrolls and weighted projective spaces.

References

- [1] Batyrev Victor V. and Cox David A. *On the Hodge Structure of Projective Hypersurfaces in Toric Varieties*. Duke Mathematical Journal. Vol. 75, No. 2, 293-338 (1995).
- [2] Corrêa Jr Maurício. *Darboux-Jouanolou-Ghys integrability for one-dimensional foliations on toric varieties*. Bulletin des Sciences Mathématiques. Vol. 134, No. 7, 693-704 (2010).
- [3] Cox David A. *The Homogeneous Coordinate Ring of a Toric Variety*. Journal of Algebraic Geometry 4, 17-50 (1995).
- [4] Esteves Eduardo. *The Castelnuovo-Mumford regularity of an integral variety of a vector field on projective space*. Math. Res. Letters 9, 1-15 (2002).
- [5] Jouanolou J. P. *Equations de Pfaff algébriques*. Lecture Notes in Math., Springer. Vol. 708 (1979).
- [6] Rodríguez P. A. Miguel. *The Poincaré Problem for Foliations on Compact Toric Orbifolds*. Geometriae Dedicata 215, 333-353 (2021).
- [7] Rodríguez P. A. Miguel. *On codimension one holomorphic distributions on compact toric orbifolds*. <https://arxiv.org/abs/2206.12079> (2022).