
0979.32017**Mendes, Luís Gustavo****Kodaira dimension of holomorphic singular foliations.** (English)

Bol. Soc. Bras. Mat., Nova Sér. 31, No.2, 127-143 (2000). [ISSN 0100-3569]

The author introduces and studies numerical invariants of holomorphic singular foliations \mathcal{F} on surfaces M . The main invariant is a version of the Kodaira dimension which we now describe. The holomorphic tangent field of a singular foliation along its regular part has a unique extension to a holomorphic line bundle over M , denoted by $T_{\mathcal{F}}$. Associated to the $H^0(N, T_{\mathcal{F}}^{*\otimes n})$ is a meromorphic mapping ϕ_n of M to a projective space. One defines $\kappa(M, T_{\mathcal{F}}^*)$ as the maximum over n of the dimension of the image. It is proved that κ is a bimeromorphic invariant. Furthermore, $\kappa(M, T_{\mathcal{F}}^*) \leq 1$ if some leaf of \mathcal{F} is a generic fiber of an elliptic fibration, or if \mathcal{F} is transverse to a generic fiber of a fibration. If $\kappa(M, T_{\mathcal{F}}^*) = -\infty$ then either \mathcal{F} is birationally equivalent to a rational fibration or \mathcal{F} is not deformable.

*T.de Jong (Saarbrücken)**Keywords* : holomorphic singular foliations; Kodaira dimension; meromorphic mappings*Classification* :

- ***32S65** Singularities of holomorphic vector fields
- 37F75** Holomorphic foliations and vector fields
- 14J26** Surfaces (rational and ruled)
- 32H04** Meromorphic mappings on analytic spaces
- 14D06** Fibrations, degenerations

Cited in ...