

**Mendes, L. G.; Sebastiani, M.**

**On the density of the Pfaffian systems without algebraic solution.** (Sur la densité des systèmes de Pfaff sans solution algébrique.) (French) [Zbl 0792.58001](#)

*Ann. Inst. Fourier* 44, No. 1, 271-276 (1994).

Let  $M$  be an analytic surface. *A. Lins Neto* [*J. Differ. Geom.* 26, 1-31 (1987; [Zbl 0625.57012](#))] introduced a topology in the set  $\Pi(M)$  of holomorphic foliations with isolated singularities on  $M$ .

$\Omega \in \Pi(M)$  is “rigid” if it is an isolated point of  $\Pi(M)$ . In our paper it is proved that if  $M$  is a projective rational surface non-isomorphic to  $\mathbb{P}_2(\mathbb{C})$  then there exists  $\Omega \in \Pi(M)$  rigid and having algebraic leaves.

The case of  $\mathbb{P}_2(\mathbb{C})$  has been considered by *J. P. Jouanolou* [‘Equations de Pfaff algébriques’ (1979; [Zbl 0477.58002](#))].

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**MSC:**

- [58A17](#) Pfaffian systems
- [57R30](#) Foliations in differential topology; geometric theory
- [32S65](#) Singularities of holomorphic vector fields and foliations
- [32S05](#) Local complex singularities
- [37C85](#) Dynamics induced by group actions other than  $\mathbb{Z}$  and  $\mathbb{R}$ , and  $\mathbb{C}$

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**Keywords:**

holomorphic foliations; projective rational surface

**Full Text:** [DOI](#) [Numdam](#) [EuDML](#)

**References:**

- [1] A. LINS NETO, Construction of singular holomorphic vector fields and foliations in dimension two, *J. Differential Geometry*, 26 (1987), 1-31. · [Zbl 0625.57012](#)
- [2] J.-P. JOUANOLOU, Equations de Pfaff algébriques, *Lecture Notes in Math.* Springer Verlag, vol. 708, 1979. · [Zbl 0477.58002](#)
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- [4] C. CAMACHO et P. SAD, Invariant varieties through singularities of holomorphic vector fields, *Ann. of Math.*, 115 (1982), 579-595. · [Zbl 0503.32007](#)

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