

Not fundamental groups

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Resumen. In [1] de Jong and Esnault provided us with an arithmetic obstruction for a finitely presented group to be the topological fundamental group of a quasi-projective smooth complex algebraic variety. Later Breuillard found the first example of a group for which the obstruction occurs.

After reviewing the definition of *weak integrality* and some classical results about SL_2 -character varieties, we report a family of groups for which the obstruction takes place and contains Breuillard's example as a particular case.

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Palabras clave: Fundamental group; Weak integrality; Character variety; Rational point.

Referencias

- [1] J. de Jong, H. Esnault (2024). Integrality of the Betti moduli space. *Trans. Amer. Math. Soc.*, 377, 431–448.

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