Finite Galois quotients of bi-elliptic surfaces

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Let Y be a bi-elliptic surface and $\mathfrak{G}$ be a finite group of holomorphic automorphisms of Y. In [1] Yoshihara classifies the smooth quotient $Y/\mathfrak{G}$.

We study the singular quotients $Y/\mathfrak{G}$ by computing their fundamental group and by obtaining the Enriques-Kodaira type of their resolution of singularities X. It turns out that X can be a $K3$ surface, an Enriques surface or a rational surface.

References

[1] Yoshihara H., Smooth quotients of bi-elliptic surfaces, Beiträge zur Algebra und Geometrie 57 (2016) 765-769.

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