

The non-degeneracy invariant of Enriques surfaces: a computational approach

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For an Enriques surface S , the non-degeneracy invariant $\text{nd}(S)$ retains information about the elliptic fibrations of S and its projective realizations. While this invariant is well understood for general Enriques surfaces, it becomes challenging to compute when specializing our Enriques surface. In this talk, we introduce a combinatorial version of the non-degeneracy invariant that depends on S along with a configuration of smooth rational curves, and gives a lower bound for $\text{nd}(S)$. We also provide a SageMath code that computes this combinatorial invariant and we apply it in several examples where $\text{nd}(S)$ was previously unknown. This is joint work with Riccardo Moschetti and Franco Rota.

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