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Trisections of Low Genus on Del Pezzo Surfaces of Degree 1

Let X be a del Pezzo surface of degree d (it can be understood as the blowup of $9-d$ points in $\mathbb{P}^1$ if $d \neq 8$). We are interested in the set of rational points over char 0 fields: Zariski-density and unirationality. Those properties are fairly well understood when the degree of X is 3 or more, but still partial in degree 2 and 1. In this talk, I recall what is known about these two properties, and present new results with V. Jovanovic when $d = 1$ or 2 that are based on the construction of a family of trisections of low genus on such del Pezzo surfaces satisfying technical assumptions.