

The Erdős–Szekeres Theorem for Split Polygons

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Abstract

The famous and still open *Erdős–Szekeres Conjecture* (1935) states that every set of at least $2^{k-2} + 1$ points in the plane with no three being collinear contains k points in convex position, that is, k points that are vertices of a convex polygon. We prove several new results around this conjecture. In particular, we prove a relaxed version of the Erdős–Szekeres Conjecture where the value $2^{k-2} + 1$ is exactly the right threshold.

This is a joint work with Jineon Baek.