

Institut für Geometrie

Gastvortrag

Di 19.11.2013, 16:00

Seminarraum 2, Inst. f. Geometrie, Kopernikusgasse 24

Lattice Polygons and Real Roots

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It is known from theorems of Bernstein, Kushnirenko and Khovanskii from the 1970s that the number of complex solutions of a system of multivariate polynomial equations can be expressed in terms of subdivisions of the Newton polytopes of the polynomials. For very special systems of polynomials Soprunova and Sottile (2006) found an analogue for the number of real solutions. In joint work with Ziegler we could give a simple combinatorial formula and an elementary proof for the signature of foldable triangulation of a lattice polygon. Via the Soprunova-Sottile result this translates into lower bounds for the number of real roots of certain bivariate polynomial systems.

Johannes Wallner