

Ehrhart, Minkowski and the Cube

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(joint work with M. Henk and A. Schürmann)

The Ehrhart polynomial counts the lattice points of lattice polytopes, and is one of the most fascinating objects in Geometry of Numbers. For a better understanding one investigates its coefficients, its zeros and other polynomials, which are closely related to the Ehrhart polynomial. Usually it suffices to consider the integer lattice where the unit cube plays a central role. Here we restrict ourselves to centrally symmetric convex lattice polytopes, and show that there are surprising relations between Minkowski's Successive Minima and the zeros of the Ehrhart polynomial.