Meroni, *Effective polynomial approximation of starshaped sets*

The Bourgain slicing conjecture (now a theorem as of December) has, over the last decades, motivated extensive research on slices of convex bodies and their volumes. This inspires a joint work with Jared Miller and Mauricio Velasco, where we aim to solve or approximate similar optimization problems for general starshaped or convex bodies. We introduce and study the class of polystar bodies, namely starshaped sets whose gauge or radial functions are polynomial, which we use as approximators. Beyond establishing theoretical results based on spherical harmonic decompositions and convolution operators, we also develop practical tools for the effective computation of polystar approximations, achieving asymptotically optimal approximation rates.