

On algebraic and geometric properties of spectral convex bodies

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Let K be a convex body that is symmetric with respect to permuting coordinates. The spectral convex body associated to K is the set of real symmetric matrices with spectrum contained in K . As the name suggests, spectral convex bodies are convex and spectrahedral whenever K is a polytope. In this talk I will survey the most prominent algebraic and geometric properties of spectral convex bodies, based on joint work with James Saunderson.