Abstract
For two convex bodies K, E of the n-dimensional Euclidean space and a non-negative real number x, the volume of $K + xE$ is a polynomial of degree n in x, whose coefficients are important measures associated to both sets. This polynomial is called the (relative) Steiner polynomial of K (with respect to E), and here we are interested in geometric properties of the roots of this polynomial, e.g., their location, size, relation with other geometric magnitudes etc. In the talk I will summarize the known results on this topic, which had its starting point in a problem posed by Teissier in 1982, in the context of Algebraic Geometry.