A quantitative fractional isocapacitary inequality

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Abstract

In view of the fractional generalization of the Pólya-Szegö inequality, it is known that, sharing the same amount of Lebesgue measure, balls minimize the fractional (Newtonian) capacity. I would like to present a stability inequality which quantifies the deviation of the fractional capacity of a set from the capacity of the ball with the same volume. In particular, the measure of such variation is a notion of asymmetry of the set with respect to a ball. This is a joint work with E. Cinti and B. Ruffini.