# On the local maximizers of higher capacity ratios

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A conjecture due to Viterbo asserts that, on the space of convex bodies of volume one in a symplectic vector space, any symplectic capacity achieves its maximum precisely on the symplectomorphic images of the round ball. A theorem of Abbondandolo and Benedetti, extending earlier work of several authors in the special case of dimension 3, establishes the local version of the Viterbo conjecture: the round balls are local maximizers of any symplectic capacity over the space of smooth convex bodies of volume 1 endowed with the $C^3$ topology. In this talk, I will present a partial extension of this result for the higher Ekeland-Hofer capacities: on the space of 4-dimensional smooth star-shaped domains of volume one, endowed with the $C^3$ topology, the local maximizers of the k-th Ekeland-Hofer capacities are those domains symplectomorphic to suitable rational ellipsoids. The talk is based on joint works with Abbondandolo-Lange, and with Baracco-Bernardi-Lange.