Asymptotic results for the polarization problem in the hypersingular case
Sergiy Borodachov, Towson University

We obtain the leading term (as N gets large) of the maximal N-point Riesz s-polarization on a compact subset of the d-dimensional Euclidean space whose boundary has Lebesgue measure zero (s>d) as well as on a class of d-rectifiable subsets of a p-dimensional Euclidean space (d<p), which, in particular, includes compact subsets of d-dimensional C1 manifolds whose boundary relative to the manifold has zero measure. The weak star limit distribution of asymptotically optimal configurations is found as well. The weighted analogues of these results will also be presented (joint work with D. Hardin, A. Reznikov, and E. Saff).