

Delsarte-Yudin LP method and universal lower bounds on energy

Peter Dragnev

(Indiana University – Purdue University Fort Wayne)

Abstract

We derive universal lower bounds for the potential energy of spherical codes, that are optimal in the framework of Delsarte's linear programming approach adapted for energy bounds by Yudin. Our bounds are universal in the sense of both Levenshtein and Cohn and Kumar; i.e., they are valid for any choice of dimension and code cardinality and that they apply to any absolutely monotone potential.

This is a joint work with P. Boyvalenkov, BAS; D. Hardin and E. Saff, Vanderbilt University, M. Stoyanova, Sofia University.