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Michele D'Adderio* (mdadderio@math.ucsd.edu), Department of Mathematics, University of California San Diego, 9500 Gilman Drive #0112, La Jolla, CA 92093-0112. *On Isoperimetric Profile of Algebras.*

Isoperimetric profile in algebras was first introduced by Gromov. In this talk we show the behavior of the isoperimetric profile under various ring theoretic constructions and its relation with Gelfand-Kirillov dimension and amenability. We show that the isoperimetric profile is a finer invariant than the lower transcendence degree, and we use it to answer a question of J. J. Zhang. (Received June 26, 2008)