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**Mrinal Kanti Roychowdhury\*** (roychowdhurymk@utpa.edu), Dept of Mathematics, University of Texas-Pan American, Edinburg, TX 78539. *Quantization.*

Given a Borel probability measure  $\mu$  on  $\mathbb{R}^d$ , a number  $r \in (0, +\infty)$  and a natural number  $n \in \mathbb{N}$ , the  $n$ th *quantization error of order  $r$*  of  $\mu$  is defined by

$$V_{n,r}(\mu) := \inf\left\{ \int d(x, \alpha)^r d\mu(x) : \alpha \subset \mathbb{R}^d, \text{card}(\alpha) \leq n \right\},$$

where  $d(x, \alpha)$  denotes the distance from the point  $x$  to the set  $\alpha$  with respect to a given norm  $\|\cdot\|$  on  $\mathbb{R}^d$ . A set  $\alpha$  for which the infimum is achieved is called an *optimal set of  $n$ -means*. ‘Quantization dimension’ gives the speed how fast the specified measure of the error (also called the distortion or noise, between the quantized distribution and the original distribution) goes to zero as  $n$  goes to infinity. I will talk about it. (Received February 09, 2014)