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Dogan Comez (dogan.comez@ndsu.edu) and **Mrinal K Roychowdhury***, School of Mathematical and Stat Sciences, University of Texas Rio Grande Valley, 1201 West University Drive, Edinburg, TX 78539. *Optimal Quantization*.

Consider a Borel probability measure P on \mathbb{R}^d and a natural number $n \in \mathbb{N}$. Then, the n th *quantization error* for P is defined by:

$$V_n := V_n(P) = \inf\left\{ \int \min_{a \in \alpha} \|x - a\|^2 dP(x) : \alpha \subset \mathbb{R}^d, \text{card}(\alpha) \leq n \right\},$$

where $\|\cdot\|$ denotes the Euclidean norm on \mathbb{R}^d . A set α for which the infimum is achieved and does not contain more than n points is called an *optimal set of n -means* for the probability measure P . Recently, we have determined the optimal sets of n -means and the n th quantization error for different fractal probability measures. I will talk about it. (Received September 11, 2016)