1127-37-100 **Mrinal K Roychowdhury*** (`mrinal.roychowdhury@utrgv.edu`), School of Mathematical and Statistical Scienc, University of Texas Rio Grande Valley, 1201 West University Drive, Edinburg, TX 78539. *Optimal Quantization.*

Let $\mathbb{R}^d$ denote the d-dimensional Euclidean space, $\|\cdot\|$ denote the Euclidean norm on $\mathbb{R}^d$ for any $d \geq 1$, and $n \in \mathbb{N}$. Then, the nth *quantization error* for a Borel probability measure P on $\mathbb{R}^d$ is defined by

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

where the infimum is taken over all subsets α of $\mathbb{R}^d$ with $\text{card}(\alpha) \leq n$. If $\int \|x\|^2 dP(x) < \infty$ then there is some set α for which the infimum is achieved. Such a set α for which the infimum occurs and contains no more than n points is called an *optimal set of* n*-means*, or *optimal set of* n*-quantizers*. Recently, we have determined the optimal sets of n-means and nth quantization error for some singular and nonsingular continuous probability measures. I will talk about it. (Received January 26, 2017)