1120-37-135 **Dogan Comez** (dogan.comez@ndsu.edu) and **Mrinal K Roychowdhury*** (mrinal.roychowdhury@utrgv.edu). *Optimal quantization for infinite affine transformations on* $\mathbb{R}^2$.

Quantization of a probability distribution refers to the idea of estimating a given probability by a discrete probability supported by a finite set. In this paper, a probability distribution is considered which is generated by an infinite system of affine transformations S_{ij} on $\mathbb{R}^2$ associated with probabilities p_{ij} such that $p_{ij} > 0$ for all $i, j \in \mathbb{N}$ and $\sum_{i,j=1}^{\infty} p_{ij} = 1$. For such a probability measure P, the optimal sets of n-means and the nth quantization error are calculated for every natural number n. (Received February 18, 2016)