



# Sam Houston State University

*A Member of The Texas State University System*

## DEPARTMENT OF MATHEMATICS AND STATISTICS

### **Constrained Quantization and Conditional Quantization**

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The University of Texas Rio Grande Valley

Date: October 30, 2024

Time: 1:00 – 1:50 pm

Location: LDB 431

#### ***Abstract***

Constrained quantization for a Borel probability measure refers to the idea of estimating a given probability by a discrete probability with a finite number of supporting points lying on a specific set. The specific set is known as the constraint of the constrained quantization. A quantization without a constraint is known as an unconstrained quantization, which traditionally in the literature is known as quantization. Constrained quantization has recently been introduced by us (Pandey and Roychowdhury). With the introduction of constrained quantization, quantization now has two classifications: constrained quantization and unconstrained quantization. Further, we have introduced another new idea in quantization which is known as conditional quantization in both constrained and unconstrained cases. After the introduction of constrained quantization, and then conditional quantization, the quantization theory is now much more enriched with huge applications in our real world.

*The talk will be focused on and accessible to graduate students. All are encouraged to attend.*