

Paper ID: IT-15**Sampling and Reconstruction via Frames: From Theory to Applications****Invited Talk**

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Abstract

In this talk, we study sampling and reconstruction in shift-invariant spaces using frame-theoretic methods, including convolution and average sampling schemes. Random average sampling is analyzed via probabilistic techniques, yielding sampling inequalities and stable reconstruction results, along with selected applications.

Keywords: Frame theory, sampling and reconstruction, shift-invariant spaces, average sampling, stable reconstruction