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Title: Tight Frames and Unitary Representations.

Abstract: Considerable amount of research has been done in group representation theory and frames. In this talk we will discuss group representations on \mathbb{C}^k that form tight frames for the Hilbert space M_k . Using these frames for M_k , we will find techniques to construct frames for \mathbb{C}^k and \mathbb{C}^{k^2} .

For insight into applications, we will measure the correlation between the frame elements of representations and will derive bounds for the maximum correlation.