Ahmed I Zayed*, Department of Mathematical Sciences, DePaul University, Chicago, IL 60614, and Ayush Bhandari. *Shift–Invariant and Sampling Spaces Associated with the Special Affine Fourier Transform.

The Special Affine Fourier Transformation or the SAFT generalizes a number of well-known unitary transformations as well as signal processing and optics related mathematical operations. Shift-invariant spaces also play an important role in sampling theory, multiresolution analysis, and many other areas of signal and image processing.

In this talk we discuss shift-invariant spaces associated with the special affine Fourier transform and their relationship with convolution and semi–discrete convolution operators associated with the SAFT. (Received August 01, 2017)