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Simon Foucart*, foucart@math.uga.edu. *Recovery of signals with sparse frame expansions.*

This talk surveys some recent results on the reconstruction of vectors acquired from a limited number of imperfect measurements in the case where the vectors are known to be sparse or compressible in a frame (not necessarily a tight frame). We focus mainly on inequality-constrained and equality-constrained ℓ_1 -minimizations, but iterative greedy algorithms are also considered. In addition, we discuss the extreme quantization scenario where only binary measurements are available. (Received September 16, 2014)