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*Recovery of Compactly Supported Functions from Spectrogram Measurements via Lifting.*

A novel phase retrieval method, motivated by ptychographic imaging, is proposed for the approximate recovery of a compactly supported specimen function  $f : \mathbb{R} \rightarrow \mathbb{C}$  from its continuous short time Fourier transform (STFT) spectrogram measurements. The method, partially inspired by the well known PhaseLift algorithm, is based on a lifted formulation of the infinite dimensional problem which is then later truncated for the sake of computation. Numerical experiments demonstrate the promise of the proposed approach. (Received July 27, 2017)