
**Abstract**

Unique recovery of a signal from the magnitude (modulus) of the Fourier transform has been of long-standing interest in image and optical processing in which Fourier-transform phase is lost or difficult to measure. We investigate an alternative problem of recovering a signal from the Fourier-transform magnitude of overlapping regions of the signal, i.e., from the short-time (or -space) Fourier-transform magnitude. Recently it was established that a discrete-time signal $x(n)$ can be uniquely obtained under mild restrictions from its short-time Fourier-transform magnitude. In this paper we extend this result to the case when the short-time Fourier-transform magnitude is known at only one or two frequencies for each $n$. We also present a recursive algorithm for recovering a sequence from such samples and demonstrate the algorithm with an example.