

1125-42-1060

Akram Aldroubi* (akram.aldroubi@vanderbilt.edu), Vanderbilt University, SC 1520, Nashville, TN 37240, and **Ilya Krishtal** and **Sui Tang**. *Reconstruction of signals from phaseless samples of evolutionary systems.*

Assume $f \in \mathbb{R}^n$ is an unknown function evolving under the action of an operator A on \mathbb{R}^n such that at time n the signal evolves to $f_n = A^n f$. Let $\Omega \subset \{1, 2, \dots, n\}$. We consider the problem of finding conditions on A, Ω and L_i such that any $f \in \mathbb{R}^n$ can be uniquely determined up to a sign from the unsigned samples

$$Y = \{|f(i)|, \dots, |A^{L_i-1} f(i)| : i \in \Omega\}.$$

(Received September 14, 2016)