

**Abstract for GR-TR Conference on Statistical Mechanics
and Dynamical Systems**
If you are invited, please select a minisymposium or plenary.

Travelling Waves in nonlocal lattice equations

V.M. Rothos*

School of Mathematics, Physics and Computational Sciences, Faculty of
Engineering, Aristotle University of Thessaloniki, Thessaloniki 54124 Greece

* Electronic Address: rothos@gen.auth.gr

Existence and bifurcation results of quasi periodic traveling waves of discrete nonlinear Schrödinger equations with nonlocal interactions and with polynomial type potentials are considered. The approach is based on variational techniques and concentration compactness. Several concrete nonlocal interactions are studied as well.

- [1] M. Feckan and V.M. Rothos "Traveling Waves of DNLS with nonlocal interactions", *Applicable Analysis* DOI: 10.1080/00036810903208130 1-25, 2010 .
- [2] M. Feckan and V.M. Rothos " Travelling Waves of Forced Discrete Nonlinear Schrödinger Equations", *Discrete and Continuous Dynamical Systems: S* (in press), 2010.