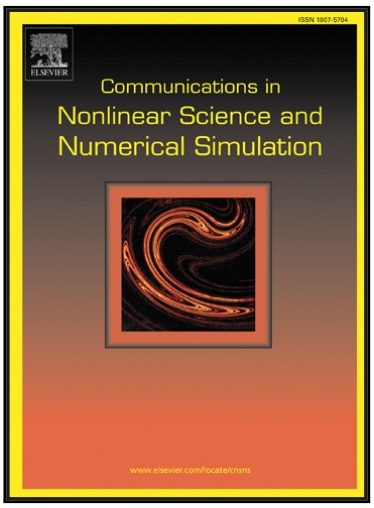
Accepted Manuscript



New classes of solutions in the Coupled $\mathcal{PT}$ Symmetric Nonlocal Nonlinear Schrödinger Equations with Four Wave Mixing

P.S. Vinayagam, R. Radha, U. Al Khawaja, Liming Ling

PII: S1007-5704(17)30404-5
DOI: 10.1016/j.cnsns.2017.11.016
Reference: CNSNS 4373

To appear in: *Communications in Nonlinear Science and Numerical Simulation*

Received date: 27 March 2017
Revised date: 31 July 2017
Accepted date: 23 November 2017

Please cite this article as: P.S. Vinayagam, R. Radha, U. Al Khawaja, Liming Ling, New classes of solutions in the Coupled $\mathcal{PT}$ Symmetric Nonlocal Nonlinear Schrödinger Equations with Four Wave Mixing, *Communications in Nonlinear Science and Numerical Simulation* (2017), doi: 10.1016/j.cnsns.2017.11.016

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

ACCEPTED MANUSCRIPT

Highlights

- We investigate a model which describes the PT symmetric coupled nonlocal NLSE with FWM.
- We show the model completely integrable by constructing the associated Lax-pair.
- We derived various classes of exact solutions and conditions to obtain Bright-Bright, Dark-Dark, Bright-Dark and Soliton-Breather solutions.
- We show many class of soliton solutions including Peregrine solitons, Akhmediev breather, Kuznetsov-Ma breather.
- We also found a new class of solution which is localized both in time and space which we called “Soliton (breather) lattice”.

ACCEPTED MANUSCRIPT

Download English Version:

https://daneshyari.com/en/article/7154815

Download Persian Version:

https://daneshyari.com/article/7154815

Daneshyari.com