

Contents

Nonlinear Dynamics of Bloch Wave Packets in Honeycomb Lattices	1
Mark J. Ablowitz and Yi Zhu	
Light Self-Localization and Power-Dependent Steering in Anisotropic Dielectrics: Spatial Solitons in Uniaxial Nematic Liquid Crystals	27
Alessandro Alberucci and Gaetano Assanto	
Frequency and Phase Locking of Laser Cavity Solitons	49
T. Ackemann, Y. Noblet, P. V. Paulau, C. McIntyre, P. Colet, W. J. Firth and G.-L. Oppo	
Light-Induced Breaking of Symmetry in Photonic Crystal Waveguides with Nonlinear Defects as a Key for All-Optical Switching Circuits	89
Evgeny Bulgakov, Almas Sadreev and Konstantin N. Pichugin	
Spatial Solitons in Parity-Time-Symmetric Photonic Lattices: Recent Theoretical Results	125
Ying-Ji He and Boris A. Malomed	
Spontaneous Symmetry Breaking of Pinned Modes in Nonlinear Gratings with an Embedded Pair of Defects	149
I. V. Kabakova, I. Uddin, J. Jeyaratnam, C. M. de Sterke and B. A. Malomed	
Guided Modes and Symmetry Breaking Supported by Localized Gain	167
Yaroslav V. Kartashov, Vladimir V. Konotop, Victor A. Vysloukh and Dmitry A. Zezyulin	

Analytical Solitary Wave Solutions of a Nonlinear Kronig-Penney Model for Photonic Structures Consisting of Linear and Nonlinear Layers	201
Yannis Kominis and Kyriakos Hizanidis	
Trapping Polarization of Light in Nonlinear Optical Fibers: An Ideal Raman Polarizer	227
Victor V. Kozlov, Javier Nuño, Juan Diego Ania-Castañón and Stefan Wabnitz	
Studies of Existence and Stability of Circularly Polarized Few-Cycle Solitons Beyond the Slowly-Varying Envelope Approximation.	247
Hervé Leblond, Dumitru Mihalache and Houria Triki	
Defect Modes, Fano Resonances and Embedded States in Magnetic Metamaterials	277
M. I. Molina	
Pattern Formation Under a Localized Gain	309
Alexander A. Nepomnyashchy	
Spontaneous Formation and Switching of Optical Patterns in Semiconductor Microcavities	321
Jacob Scheuer and Meir Orenstein	
Sub-Wavelength Plasmonic Solitons in 1D and 2D Arrays of Coupled Metallic Nanowires	357
F. Ye, D. Mihalache and N. C. Panoiu	
From Coherent Modes to Turbulence and Granulation of Trapped Gases	377
V. S. Bagnato and V. I. Yukalov	
Bright Solitary Matter Waves: Formation, Stability and Interactions	403
T. P. Billam, A. L. Marchant, S. L. Cornish, S. A. Gardiner and N. G. Parker	
Temporal Quantum Fluctuations in the Fringe-Visibility of Atom Interferometers with Interacting Bose–Einstein Condensate	457
Doron Cohen and Amichay Vardi	

Temperature Effects on the Quantum Coherence of Bosonic Josephson Junctions	473
B. Juliá-Díaz, J. Martorell and A. Polls	
Multiple Fluxon Analogues and Dark Solitons in Linearly Coupled Bose–Einstein Condensates.	485
M. I. Qadir, H. Susanto and P. C. Matthews	
Symmetry-Breaking Effects for Polariton Condensates in Double-Well Potentials	509
A. S. Rodrigues, P. G. Kevrekidis, J. Cuevas, R. Carretero-González and D. J. Frantzeskakis	
Classical Dynamics of a Two-species Bose–Einstein Condensate in the Presence of Nonlinear Maser Processes	531
B. M. Rodríguez-Lara and R.-K. Lee	
Existence, Stability and Nonlinear Dynamics of Vortices and Vortex Clusters in Anisotropic Bose–Einstein Condensates.	543
J. Stockhofe, P. G. Kevrekidis and P. Schmelcher	
Josephson Tunneling of Excited States in a Double-Well Potential . . .	583
H. Susanto and J. Cuevas	
Solitons in a Parametrically Driven Damped Discrete Nonlinear Schrödinger Equation	601
M. Syafwan, H. Susanto and S. M. Cox	
Conditions and Stability Analysis for Saddle-Node Bifurcations of Solitary Waves in Generalized Nonlinear Schrödinger Equations	639
Jianke Yang	
Escape Time of Josephson Junctions for Signal Detection	657
P. Addesso, G. Filatrella and V. Pierro	
Symmetry Breaking Criteria in Electrostatically Loaded Bistable Curved/Prebuckled Micro Beams	679
Lior Medina, Rivka Gilat and Slava Krylov	
Erratum to: Escape Time of Josephson Junctions for Signal Detection.	707
P. Addesso, G. Filatrella and V. Pierro	

Spontaneous Symmetry Breaking, Self-Trapping, and
Josephson Oscillations

Malomed, B.A. (Ed.)

2013, XVII, 707 p. 340 illus., 1 illus. in color., Hardcover

ISBN: 978-3-642-21206-2