

Table of Contents

Introduction	
<i>K. Porsezian, V.C. Kuriakose</i>	1
Optical Soliton Theory and Its Applications in Communication	
<i>A. Hasegawa</i>	9
Linear and Nonlinear Propagation Effects in Optical Fibers	
<i>K. Thyagarajan</i>	33
Nonlinear Waves in Optical Waveguides and Soliton Theory Applications	
<i>S.B. Leble</i>	71
Solitons Around Us: Integrable, Hamiltonian and Dissipative Systems	
<i>N.N. Akhmediev, A. Ankiewicz</i>	105
System Analysis Using the Split Operator Method	
<i>K.J. Blow</i>	127
Multicomponent Higher Order Bright Soliton Solutions and Shape Changing Collisions in Coupled Nonlinear Schrödinger Equations	
<i>M. Lakshmanan, T. Kanna</i>	141
Mathematical Modelling in Fiber and Waveguide Grating Structures	
<i>A.B. Aceves</i>	165
Theory of Gap Solitons in Short Period Gratings	
<i>S. Trillo, C. Conti</i>	185
Impact of Stimulated Raman Scattering in High-Speed Long-Distance Transmission Lines	
<i>P.T. Dinda, A. Labruyere, K. Nakkeeran</i>	207

VIII Table of Contents

Quasi-linear Optical Pulses in Dispersion Managed Fibers: Propagation and Interaction	
<i>M.J. Ablowitz, T. Hirooka</i>	227
Bi-Soliton Propagating in Dispersion-Managed System and Its Application to High Speed and Long Haul Optical Transmission	
<i>A. Maruta, T. Inoue, Y. Nonaka, Y. Yoshika</i>	247
Optical Fiber Soliton Lasers	
<i>G.E. Town, N.N. Akhmediev, J.M. Soto-Crespo</i>	265
Nonlinear Phenomena with Ultra-Broadband Optical Radiation in Photonic Crystal Fibers and Hollow Waveguides	
<i>A. Husakou, V.P. Kalosha, J. Herrmann</i>	299
Experimental Study of Modulational Instability and Vector Solitons in Optical Fibers	
<i>G. Millot, S. Pitois, J.M. Dudley, M. Haelterman</i>	327
Self-structuration of Three-Wave Dissipative Solitons in CW-Pumped Backward Optical Parametric Oscillators	
<i>C. Montes</i>	353
Spatial Semiconductor-Resonator Solitons	
<i>V.B. Taranenko, C.O. Weiss</i>	373
Propagation and Diffraction of Picosecond Acoustic Wave Packets in the Soliton Regime	
<i>O.L. Muskens, J.I. Dijkhuis</i>	391