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| Nota di contenuto       | Introduction -- Dissipative Solitons of the Swift-Hohenberg Equation -- Dissipative Magneto-Optic Solitons -- Dissipative Solitons in Semiconductor Optical Amplifiers -- Dissipative Solitons in Pattern-Forming Nonlinear Optical Systems: Cavity Solitons and Feedback Solitons -- Solitons in Laser Schemes with Saturable Absorption -- Spatial Resonator Solitons -- Dissipative Temporal Solitons -- Soliton Dynamics in Modelocked Lasers -- Temporal Multi-Soliton Complexes Generated by Passively Modelocked Lasers -- Dissipative Solitons in Reaction-Diffusion Systems -- Discrete Ginzburg-Landau Solitons -- Discrete Dissipative Solitons -- Nonlinear Schroedinger Equation with Dissipation: Two Models for Bose-Einstein Condensates -- Solitary Waves of Nonlinear Equations -- Stability Analysis of Pulses via the Evans Function: Dissipative Systems -- Bifurcations and Strongly Amplitude-Modulated Pulses of the Complex Ginzburg-Landau Equation. |
| Sommario/riassunto      | This volume is devoted to the exciting topic of dissipative solitons, i.e.   |

pulses or spatially localised waves in systems exhibiting gain and loss. Examples are laser systems, nonlinear resonators and optical transmission lines. The physical principles and mathematical concepts are explained in a clear and concise way, suitable for students and young researchers. The similarities and differences in the notion of a soliton between dissipative systems and Hamiltonian and integrable systems are discussed, and many examples are given. The contributions are written by the world's leading experts in the field, making it a unique exposition of this emerging topic.

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