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Sommario/riassunto

This book, 'Computational Methods and Mathematical Modeling in Cyberphysics and Engineering Applications,' explores advanced mathematical techniques and computational methods applied in cyberphysical systems and engineering contexts. It delves into the Korteweg–de Vries equation, soliton solutions, and their perturbations, offering a comprehensive study of nonlinear WKB techniques and asymptotic soliton-like solutions. The book also covers the modeling of heterogeneous fluid dynamics, phase transitions, and porous media, alongside mathematical models for technological process control in

industrial settings. Aimed at researchers and practitioners in mathematics and engineering, it provides insights into the application of complex mathematical frameworks for solving real-world engineering problems.
