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Sommario/riassunto

This book provides a valuable collection of contributions by distinguished scholars presenting the state of the art and some of the most significant latest developments and future challenges in the field of dispersive partial differential equations. The material covers four major lines: (1) Long time behaviour of NLS-type equations, (2) probabilistic and nonstandard methods in the study of NLS equation, (3) dispersive properties for heat-, Schrödinger-, and Dirac-type flows, (4) wave and KdV-type equations. Across a variety of applications an amount of crucial mathematical tools are discussed, whose applicability and versatility goes beyond the specific models presented here. Furthermore, all contributions include updated and comparative literature.