Record Nr. UNINA9910809494403321 Advances in wave turbulence / / edited by Victor Shrira, Keele **Titolo** University, UK, Sergey Nazarenko, University of Warwick, UK Singapore, : World Scientific Pub. Co., 2013 Pubbl/distr/stampa New Jersey:,: World Scientific,, [2013] 2013 981-4366-94-3 **ISBN** 1 online resource (xi, 281 pages): illustrations Descrizione fisica Collana World Scientific series on nonlinear science. Series A;; v. 83 Disciplina 531.1133 Soggetti Turbulence Nonlinear waves Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references. Nota di contenuto Preface; Contents; 1. Wave Turbulence: A Story Far from Over Alan C. Newell and Benno Rumpf; 1.1. Introduction; 1.2. A Tutorial on the Wave Turbulence Closure: 1.3. Solutions of the Kinetic Equation: 1.4. Experimental Evidence; 1.4.1. Capillary wave turbulence; 1.4.2. Gravity wave turbulence; 1.4.3. Vibrating plate turbulence: can one hear the Kolmogorov spectrum?; 1.4.4. Condensates of classical light waves; 1.5. Two Open Questions; 1.6. Open Challenges; Appendix 1.

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## Sommario/riassunto

Wave or weak turbulence is a branch of science concerned with the evolution of random wave fields of all kinds and on all scales, from waves in galaxies to capillary waves on water surface, from waves in nonlinear optics to quantum fluids. In spite of the enormous diversity of wave fields in nature, there is a common conceptual and mathematical core which allows us to describe the processes of random wave interactions within the same conceptual paradigm, and in the same language. The development of this core and its links with the applications is the essence of wave turbulence science (WT) whi