

Preface

This book has appeared as a development and extension of the material of post-graduate lecture courses given by the author at the Wolfgang Pauli Institute, Vienna, in October 2007 (4 h), The University of Warwick, Coventry, in October–December 2007 (20 h) and Institut Henri Poincaré, Paris, in April 2009 (10 h).

As a result, the book has been written and structured as a graduate text rather than a monograph, with numerous exercises offered along the way. The main aim here was to produce a compact description which would be accessible for graduate students and non-specialist mature researchers who would like to learn about Wave Turbulence and possibly apply it in their own fields.

I would like to express my warmest thanks to my teacher Vladimir Zakharov from whom I was fortunate to learn Wave Turbulence firsthand as a Ph.D. student and later as a coworker. I am grateful to all of my friends and colleagues with whom I collaborated in different areas of Wave Turbulence over 20 years: Sasha Balk, Laura Biven, Guido Boffetta, Umberto Bortolozzo, Antonio Celani, Yeontaek Choi, Colm Connaughton, Petr Denissenko, Davide Dezzani, Alex Dyachenko, Grisha Falkovich, Sebastien Galtier, Boris Gershgorin, Peter Horvai, Sang Gyu Jo, Elena Kartashova, Ho Il Kim, Sergei Lukaschuk, Victor Lvov, Yuri Lvov, Mitya Manin, Stuart McLelland, Anatolii Mikhailovskii, Balu Nadiga, Alan Newell, Miguel Onorato, Boris Pokorni, Annick Pouquet, Davide Proment, Andrei Pushkarev, Brenda Quinn, Stefania Residori, Olexii Rudenko, Alex Schekochihin, Thorwald Stein, Rob West and Norman Zabusky. I thank participants of the Wave Turbulence courses in Vienna, Warwick and Paris for their feedback which I used to improve presentation, especially Thorwald Stein who helped with processing the original lecture notes. I thank Jason Laurie, Miguel Onorato, Davide Proment and Brenda Quinn for sharing some figures obtained in their numerical simulations and for helping to correct numerous typos. Finally, I am grateful to Uriel Frisch for encouraging me to write this book.

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