

Contents

Preface	vii
Microlocal Analysis and Evolution Equations: Lecture Notes from the 2008 CMI/ETH Summer School (April 25, 2013) JARED WUNSCH	1
Some Global Aspects of Linear Wave Equations DEAN BASKIN AND RAFFAEL MAZZEO	73
Lectures on Black Holes and Linear Waves MIHALIS DAFERMOS AND IGOR RODNIANSKI	97
The Theory of Nonlinear Schrödinger Equations GIGLIOLA STAFFILANI	207
On the Singularity Formation for the Nonlinear Schrödinger Equation PIERRE RAPHAËL	269
Nonlinear Schrödinger Equations at Critical Regularity ROWAN KILLIP AND MONICA VIŞAN	325
Geometry and Analysis in Many-Body Scattering ANDRÁS VASY	443
Wave Maps with and without Symmetries MICHAEL STRUWE	483
Derivation of Effective Evolution Equations from Microscopic Quantum Dynamics BENJAMIN SCHLEIN	511