

## Contents

Preface	ix
Algebras in reconstruction of manifolds M. I. BELISHEV	1
Spectral theory of a mathematical model in quantum field theory for any spin JEAN-CLAUDE GUILLOT	13
A review on large $k$ minimal spectral $k$ -partitions and Pleijel's Theorem B. HELFFER and T. HOFFMANN-OSTENHOF	39
Increasing stability for near field from the scattering amplitude VICTOR ISAKOV	59
Inverse scattering on multi-dimensional asymptotically hyperbolic orbifolds HIROSHI ISOZAKI, YAROSLAV KURYLEV, and MATTI LASSAS	71
Error estimates of the Bloch band-based Gaussian beam superposition for the Schrödinger equation HAILIANG LIU and MAKSYM PRYPOROV	87
On random weighted Sobolev inequalities on $\mathbb{R}^d$ and applications DIDIER ROBERT and LAURENT THOMANN	115
Calderón problem for Maxwell's equations in the waveguide O. YU. IMANUVILOV and M. YAMAMOTO	137
Gaussian beams on Zoll manifolds and maximally degenerate Laplacians STEVE ZELDITCH	169