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Spectral Methods for Operators of Mathematical Physics

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Contents

Introduction

This volume contains proceedings of the International Conference: Operator Theory and its Applications in Mathematical Physics – OTAMP 2002 held at Mathematical Research and Conference Center in Bedlewo near Poznan.

The aim of the conference was to gather researches working in close areas of operator theory, analysis and mathematical physics, which is reflected by the titles of scientific sessions

- Random and quasiperiodic Schrödinger operators (P. Stollmann and G. Stolz);
- Jacobi matrices and orthogonal polynomials (J.S. Geronimo and W. Van Assche);
- Singular perturbations of self-adjoint operators (W. Karwowski and P. Kurasov).

The current volume contains in addition to materials of the lectures given at the conference original research articles, several ones initiated during the conference. Two main entirely connected themes dominate the volume

- spectral properties of 1-dimensional Schrödinger operators and infinite Jacobi matrices,
- theory of self-adjoint and dissipative operators.

Contributions devoted to the first theme contain in particular results on the existence and finiteness of the point spectrum of Jacobi matrices, bounds for the points of spectral concentration of one-dimensional Schrödinger operators, WKB and turning points for the second order difference equations. The second theme is represented by the articles devoted to partial non-stationary perturbation determinants, self-adjointness by domination of commutators, symmetric functional models etc.

The Organizing Committee of the conference takes this opportunity to thank all session organizers for helping in putting together the scientific programm and all participants for coming to Bedlewo and making this conference into a useful scientific event. Special thanks go to M. Moszynski for helping in organization. We would like to thank

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for generous financial support. It is impossible to imagine the conference without warm hospitality from everybody working at

Mathematical Research and Conference Center in Bedlewo.

The Editors would like to thank all the referees assisting in preparation of this volume and coming with numerous suggestions helping to keep the high standard of this volume.

Finally we are indebted to The Editorial Board and in particular to Professor I. Gohberg for including these Proceedings in the series *Operator Theory: Advances and Applications* and to Birkhäuser Verlag for patience and help in preparation of the volume.

Krakow-Lund-St. Petersburg, March 2004
The Editors