

Introduction

This volume contains mainly the lectures delivered by the participants of the International Conference: Operator Theory, Analysis and Mathematical Physics – OTAMP2006, held in Lund. As in the previous conferences of the OTAMP series, the main lectures presented an overview of current research which uses operator methods in analysis and mathematical physics.

The topics of the Proceedings belong to various different fields of mathematical physics. Among others (but there is much more in this volume) the following subjects are presented: inverse spectral and scattering problems on graphs, review articles on quadratic Hamiltonians and Born-Oppenheimer approximations, recursive construction of the Ablowitz-Ladik Hierarchy, spectral properties of finite difference and one (or two) dimensional Schrödinger operators, eigenvalues and their estimates for Jacobi matrices and Aharonov-Bohm operator.

Most papers of the volume contain original material and were refereed by acknowledged experts. The Editors thank all the referees whose job helped to improve the clarity of the collected material. The Organizing Committee of the conference also thanks all session organizers for the interesting choice of the scientific programme and to all participants who delivered fine lectures. We greatly appreciate financial support of the **ESF** programme **SPECT**, without whose financial support the OTAMP2006 would never been so well organized. Special thanks go to other agencies supported the conference financially: Vetenskapsrådet, Wenner-Gren Foundation, as well as to Lund University and to the Institute of Mathematics of the Polish Academy of Sciences.

Last but not least, we thank the Editorial Board and especially Professor I. Gohberg for including this volume (as the previous ones of OTAMP meetings) into the series Operator Theory: Advances and Applications and to Birkhäuser-Verlag for help in preparation of the volume.

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