

PREFACE

This volume collects the papers presented at the *9th Workshop on Noncommutative Harmonic Analysis with Applications to Probability*, held in Będlewo, Poland, September 29 – October 10, 2006. All the papers were subject to the refereeing procedure. Almost 60 mathematicians and physical mathematicians participated in the Workshop, presenting lectures related to the following main topics:

1. Free probability, random matrices and relations to other deformed models of probability;
2. Theory of noncommutative martingales and its applications to operator spaces;
3. Quantum groups and connections with models of quantum probability;
4. Quantum white noise and infinite dimensional analysis;
5. Noncommutative harmonic analysis with applications to noncommutative probability;
6. Quantum information and quantum entropy;
7. Quantum dynamical semigroups and Lévy processes;
8. Positive definite functions on groups;
9. Classical and noncommutative Markov processes;
10. Asymptotic spectral analysis of graphs;
11. Orthogonal polynomials;
12. Continuous Young diagrams.

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Special thanks go to all the speakers of the Workshop. In particular, we highly appreciate the special invited introductory lectures given by Jacques Faraut, “Schur duality with applications to harmonic analysis” and Fumio Hiai, “Inequalities related to free entropy”.

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