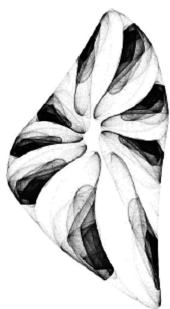


6th Workshop on Quantum Chaos and Localisation Phenomena

Warsaw, Poland, May 24–26, 2013



Editors of the Proceedings:

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WARSAW

POLISH ACADEMY OF SCIENCES
INSTITUTE OF PHYSICS

Conference was organized by:

Institute of Physics Polish Academy of Sciences
Center for Theoretical Physics Polish Academy of Sciences
Pro-Physica Foundation

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Objectives:

To assess achievements and to formulate directions of new research
on quantum chaos and localisation
To bring together prominent experimental and theoretical physicists who share
a common interest in quantum chaos and localisation phenomena

Scope:

Quantum chaos and nonlinear classical systems
Quantum and microwave billiards
Quantum and microwave graphs
Atoms in strong electromagnetic fields – experiment and theory
Chaos vs. coherent effects in multiple scattering
Anderson localisation
Random lasers
Quantum chaos and quantum computing
Entanglement and noise

Preface

The 6th Workshop on Quantum Chaos and Localisation Phenomena was held in Warsaw, Poland, from May 24 to 26, 2013 in the Institute of Physics of the Polish Academy of Sciences. The Workshop was organized by the Institute of Physics of the Polish Academy of Sciences, the Centre for Theoretical Physics of the Polish Academy of Sciences and the Foundation “Pro-Physica”. For the first time this biennial workshop was organized in 2003. The main objectives of the Workshops are the assessment of achievements and the formulation of directions of a new research on quantum chaos and localisation phenomena.

The Workshop gathered about 50 participants from Bulgaria, Czech Republic, Denmark, Germany, Greece, Israel, Italy, Korea, Mexico, Russia, Slovenia, Spain, Sweden, United Kingdom, and USA, representing experimental and theoretical physicists. Almost half of them were Ph.D. students or postdocs. During the meeting 18 invited lectures and 11 posters were presented. The presentations were focused on the following topics: quantum chaos and non-linear classical systems, quantum and microwave graphs, atoms in strong electromagnetic fields, chaos versus coherent effects in multiple scattering, Anderson localisation, quantum chaos and quantum computing, entanglement and noise, and physics of low dimensional systems. In the talks and poster presentations the theoretical and experimental problems from various fields of solid state, liquid, atomic and molecular, mathematical and statistical physics were discussed. It may be noticed that this time the majority of the lectures were devoted to quantum graphs. Many interesting scientific discussions took place during the poster session as well as during the coffee breaks and conference dinner. On behalf of the organizers we would like to express our gratitude to all speakers and the authors of the poster presentations for their contribution to the success of the Workshop.

We present the Proceedings of the 6th Workshop on Quantum Chaos and Localisation Phenomena in which 11 invited lectures are published.

The organizers acknowledge the financial support of the Ministry of Science and Higher Education.

Editors of the proceedings

Leszek Sirko

Szymon Bauch