International Workshop on
“Fundamental Problems in Mathematical and Theoretical Physics”

Date: September 28 – October 3, 2015
Venue: Large Meeting Room, 1st Floor, 55 Bldg., 早稲田大学 西早稲田キャンパス 55 号館 N 棟 1 階大会議室

Part I. Quantum Physics

September 28, Monday
10:30 – 12:30 Paolo Facchi (Università di Bari, Italy) Minicourse
C* Algebra for Quantum Physics: I

14:30 – 16:00 Saverio Pascazio (Università di Bari, Italy) Minicourse
Quantum Typicality: I

16:30 – 18:00 Paolo Facchi (Università di Bari, Italy) Minicourse
C* Algebra for Quantum Physics: II

September 29, Tuesday
10:30 – 12:30 Saverio Pascazio (Università di Bari, Italy) Minicourse
Quantum Typicality: II

14:30 – 16:00 Paolo Facchi (Università di Bari, Italy) Minicourse
C* Algebra for Quantum Physics: III

16:30 – 18:00 Saverio Pascazio (Università di Bari, Italy) Minicourse
Quantum Typicality: III

September 30, Wednesday
10:30 – 11:30 Giancarlo Garnero (Università di Bari, Italy)
Moving Walls and Geometric Phases in the Dynamics of a Quantum Particle in a 1D Box

11:30 – 12:30 Tohru Tanaka (Waseda University, Tokyo)
Model-Based Analysis of Asymptotically Disturbance-Free Measurement and Its Application to Deriving a New Quantum Bayes’ Rule
September 30, Wednesday
15:00 – 16:30 Tadahiro Oh (The University of Edinburgh), **Minicourse I**
Invariant and quasi-invariant measures for Hamiltonian PDEs

16:45 – 17:45 Tetsu Mizumachi (Hiroshima University)
On stability of line solitons of the KP-II equation

October 1, Thursday
10:30 – 12:00 Tadahiro Oh (The University of Edinburgh), **Minicourse II**
Invariant and quasi-invariant measures for Hamiltonian PDEs

13:30 – 14:00 Gaku Hoshino (Waseda University)
Space-time analytic smoothing effect for pseudo-conformally invariant Schrödinger equations

14:00 – 14:30 Kazumasa Fujiwara (Waseda University)
Remark on local solvability of the Cauchy problem for semirelativistic equations

14:30 – 15:00 Kota Uriya (Tohoku University)
Final state problem for a system of nonlinear Schrödinger equations with mass resonance

15:30 – 17:00 Neal Bez (Saitama University), **Minicourse I**
Recent developments in the heat-flow semigroup interpolation method
October 2, Friday
10:30 – 12:00 Tadahiro Oh (The University of Edinburgh), Minicourse III
Invariant and quasi-invariant measures for Hamiltonian PDEs

13:30 – 14:15 Oana Pocovnicu (Heriot-Watt University)
A modulated two-soliton with transient turbulent regime for a focusing cubic nonlinear half-wave equation on the real line

14:20 – 15:05 Takamori Kato (Saga University)
A cancellation property and well-posedness of fifth order KdV type equations on the torus

15:30 – 16:15 Chris Jeavons (University of Birmingham)
Sharp bilinear estimates for linear dispersive equations

16:20 – 17:50 Neal Bez (Saitama University), Minicourse II
Recent developments in the heat-flow semigroup interpolation method

18:00 – Reception at Takeuchi Lounge

October 3, Saturday
11:00 – 12:00 Kenji Nakanishi (Osaka University)
Scattering for the Gross-Pitaevskii equation in the energy space

13:30 – 15:00 Neal Bez (Saitama University), Minicourse III
Recent developments in the heat-flow semigroup interpolation method

*15:30 – 16:30 Vladimir Georgiev (University of Pisa)
Some biomedical models and their relation with Schrödinger equations

*609th Applied Analysis Seminar

Organized by Hiromichi Nakazato • Tohru Ozawa • Kazuya Yuasa
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