

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

Date: July 23 – July 27, 2024

Venue: 02 Conference Room, 1st Floor, 55N Bldg., Waseda University, Nishi-Waseda Campus
早稲田大学 西早稲田キャンパス 55 号館 N 棟 1 階 第 2 会議室

Quantum Physics

July 23, Tuesday

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|-------------|---|
| 10:30-12:00 | Paolo Facchi (University of Bari), Minicourse I
Product Formulas in Quantum Dynamics |
| 14:45-16:15 | Saverio Pascazio (University of Bari), Minicourse I
Quantum Correlations |
| 16:30-18:00 | Paolo Facchi (University of Bari), Minicourse II
Product Formulas in Quantum Dynamics |

July 24, Wednesday

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| 10:30-12:00 | Saverio Pascazio (University of Bari), Minicourse II
Quantum Correlations |
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Mathematical Physics

July 24, Wednesday

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| 13:00 - 14:30 | Vladimir Georgiev (University of Pisa, Waseda University),
Minicourse I
On ground states and well-posedness for local and nonlocal dispersive equations
Local uniqueness of ground states for generalized Choquard problem |
| 15:00 - 16:30 | Kenji Nakanishi (Kyoto University), Minicourse I
Global wellposedness of general evolution equations on the Fourier half space |
| 17:00 - | Reception |

July 25, Thursday

- 10:00 - 11:30 Kenji Nakanishi (Kyoto University), **Minicourse II**
Global wellposedness of general evolution equations on the Fourier half space
- 13:30 - 15:00 Vladimir Georgiev (University of Pisa, Waseda University),
Minicourse II
On ground states and well-posedness for local and nonlocal dispersive equations
On Sobolev spaces associated with Laplace operator with contact perturbation
- 15:30-16:30 Jun Kato (Nagoya University)
Small energy scattering for the Zakharov type system
- 16:40-17:30 Shun Tsuhara (Kanagawa University)
The boundary Strichartz estimates for the Schrödinger equation in the half space and its application to nonlinear problems

July 26, Friday

- 10:00-11:30 Vladimir Georgiev (University of Pisa, Waseda University),
Minicourse III
On ground states and well-posedness for local and nonlocal dispersive equations
On damped wave equation in dimension 1: global solution and decay in Fujita subcritical case
- 13:30-15:00 Kenji Nakanishi (Kyoto University), **Minicourse III**
Global wellposedness of general evolution equations on the Fourier half space
- 15:30-16:30 Noriyoshi Fukaya (Waseda University)
Stability of standing waves for all frequencies to nonlinear Schrödinger equations with potentials

16:40-17:30 Kohei Akase (Osaka University)
Global well-posedness for a nonlinear Schrödinger equation with quadratic derivative nonlinearity

July 27, Saturday

11:00-12:00 Nurgissa Yessirkegenov (SDU University)
Cylindrical and hypoelliptic functional inequalities

14:00-15:00 Takahisa Inui (Osaka University)
Global dynamics for threshold even solutions to the focusing nonlinear Schrödinger equation with a repulsive delta potential

15:30-16:30 Soichiro Katayama (Osaka University)
(836 th Applied Analysis Seminar, 第 836 回 応用解析研究会)
Asymptotic behavior for systems of ODEs and its application to nonlinear wave and Schrödinger equations

This workshop is a part of "Special Lecture on Quantum Physics".

このワークショップは量子物理学特別講義「Special Lecture on Quantum Physics」を兼ねています。

Organized by Hiromichi Nakazato, Tohru Ozawa, Kazuya Yuasa, Vladimir Georgiev

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