Geometry of solutions of PDE's and its related inverse problems

— A conference in honor of Professor Shigeru Sakaguchi's sixtieth birthday —

Date: October 5 (Wed.) 13:20 – October 7 (Fri.) 17:30

Place: Aoba Science Hall 2nd floor, Science Complex C, Tohoku University

—Program—

Part 1

October 5 (Wed.)

13:20 – 13:30   Opening

13:30 – 14:10   Tatsuki Kawakami (Osaka Prefecture University)
An exterior nonlinear elliptic problem with a dynamical boundary condition

14:20 – 15:00   Cristian Enache (American University of Sharjah)
On some new estimates for low eigenvalues of the Laplacian

15:30 – 16:10   Ryuichi Sato (Tohoku University)
Heat equation with a nonlinear boundary condition and growing initial data

16:20 – 17:00   Lorenzo Cavallina (Tohoku University)
Local optimizers for the two-phase torsion problem in a ball

October 6 (Thu.)

9:30 – 10:10   Norisuke Ioku (Ehime University)
Existence and nonexistence of solutions for the heat equation with a superlinear source term

10:20 – 11:00   Daniel Peralta-Salas (Institute de Ciencias Matematicias)
A problem of Berry and knotted zeros in the eigenfunctions of the harmonic oscillator

11:20 – 12:00   Hiroshi Ohtsuka (Kanazawa University)
On the fine asymptotic behavior of the solutions for the linearized Gel'fand problem

Part 2

13:30 – 14:10   Paolo Salani (Università degli studi di Firenze)
Concavity properties for solutions of elliptic and parabolic systems

14:20 – 15:00   Toshio Mikami (Tsuda College)
A survey of stochastic optimal transportation problem

15:30 – 16:10   Vincenzo Ferone (Università degli studi di Napoli Federico II)
On Pólya's inequality for torsional rigidity and first Dirichlet Laplacian eigenvalue

16:20 – 17:00   Masaru Ikehata (Hiroshima University)
The enclosure method for the Maxwell system in time domain

October 7 (Fri.)

10:20 – 11:00   Shuichi Jimbo (Hokkaido University)
Y-shaped Graph and time entire solutions of a semilinear parabolic equation

11:10 – 11:50   Hayato Nawa (Meiji University)
Existence and uniqueness of ground states of semilinear elliptic equations involving
the critical and super critical exponent in their nonlinearities

13:30 – 14:10   Antoine Henrot (Université de Lorraine)
Some problems of minimisation involving the first eigenvalue of the Laplacian–
Dirichlet

14:20 – 15:00   Tetsutaro Shibata (Hiroshima University)
Inverse and direct bifurcation problems for nonlinear eigenvalue problems

15:30 – 16:20   Rolando Magnanini (Università degli studi di Firenze)
The game-theoretic p-laplacian: the importance of being a ball

16:40 – 17:30   Shigeru Sakaguchi (Tohoku University)
Two-phase conductors and overdetermined problems with transmission conditions

17:30   Closing

19:00   Banquet

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Organizing Committee:
Masaru Ikehata (Hiroshima University)
Kazuhiro Ishige (Tohoku University)
Tatsuki Kawakami (Osaka Prefecture University)
Toshio Mikami (Tsuda College)
Tetsutaro Shibata (Hiroshima University)

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