The 20th Northeastern Symposium on Mathematical Analysis

Date: 18-19 February 2019

Venue: Kawai Hall, Graduate School of Science, Tohoku University

at Kita-Aobayama Campus

6-3, Aramaki Aza-Aoba, Aoba-ku, Sendai 980-8578 http://www.sci.tohoku.ac.jp/english/access/

URL: https://www.math.sci.hokudai.ac.jp/sympo/nema/20.html

Program

February 18 (Mon.)

9:30~9:40	Opening
9:40~10:30	Paolo Salani (Università di Firenze) To Logconcavity and beyond
10:40~11:30	Shigeaki Koike (Tohoku University) $L^p\text{-viscosity solution theory - revisited -}$
	Lunch break
13:10~13:50	Yutaka Terasawa (Nagoya University) Weak solutions for a diffuse interface model for two-phase flows of incompressible fluids with different densities and nonlocal free energies
14:00~14:40	Kohei Umeta (Nihon University) Laplace hyperfunction and Čech-Dolbeault cohomology
15:00~15:20	Daichi Komori (Hokkaido University) An application of Čech-Dolbeault cohomology to pseudodifferential operators
$15:20\sim15:40$	Mamoru Okamoto (Hokkaido University) (non-)Existence of (a)symmetrically rotating solution for a mathematical model of self-propulsion
15:40~16:00	Keisuke Asahara (Hokkaido University) Spectral analysis of a bosonic quadratic Hamiltonian
16:20~18:10	Poster session at Room 205 in Science Complex A
18:30 ∼	Banquet at ESPACE Ouvert

February 19 (Tue.)

9:40~10:30	Yasunori Okada (Chiba University) Formal and analytic aspects of coupling equations for some partial differential equations
10:40~11:30	Reiji Tomatsu (Hokkaido University) Centrally free actions of C*-tensor categories on von Neumann algebras
	Lunch break
13:10~13:50	Hironobu Sasaki (Chiba University) The scattering problem for the three-dimensional cubic non-linear Klein-Gordon equation with rapidly decreasing input data
14:00~14:30	Long-Jie Zhang (University of Tokyo) Mean curvature flow with driving force for symmetric motion with singular initial data
14:50~15:10	Lorenzo Cavallina (Tohoku University) On a two-phase overdetermined problem: from a theoretical and numerical point of view
15:10~15:30	Junyong Eom (Tohoku University) Large time behavior of ODE type solutions to nonlinear dif- fusion equations
15:30~15:50	Taiga Kumagai (Tokyo Institute of Technology) Some convergence result for nonconvex Hamilton-Jacobi equations and ode systems on graphs
15:50~16:10	Poster award ceremony & Closing

Posters

- 1. Yuki Fukui (University of Tokyo, M2) Construction of weak solution of a weighted inverse mean curvature flow
- Zhongyang Gu (University of Tokyo, M2)
 On the Helmholtz decompositions of vector fields of bounded mean oscillation and in real Hardy spaces over the half space
- 3. Md. Rabiul Haque (Tohoku University, D2) Convection-Diffusion equation with initial data in uniformly local Lebesgue spaces
- 4. Koichi Komada (Tohoku University, D1)
 Final state problem for class of nonlinear nonlocal dispersive equation
- Huanyuan Li (University of Tokyo, D3)
 Blow-up criteria for the strong solutions to the incompressible fluids of Korteweg type
- 6. Tatsuya Matsui (Tohoku University, M2) Singular limit of the damped-wave-type magnetohydrodynamics in Fourier-Lebesgue spaces
- 7. Kuniyasu Misu (Hokkaido University, M2)
 Asymptotic shape of solutions to the mean curvature flow equation with discontinuous source terms
- 8. Ryosuke Nakasato (Tohoku University, D1)
 Global existence of the two-dimensional density-dependent magnetohydrodynamics system in homogeneous Besov spaces
- 9. Tomoyuki Oka (Tohoku University, M2) Space-time homogenization for the fast diffusion equation
- 10. Jun Okamoto (University of Tokyo, M2) Random discretization of O'Hara knot energy
- 11. Wataru Saito (Hokkaido University, M2)
 Asymptotic stability for a system of delay differential equations and its application
- 12. Kei Sasaki (Tohoku University, M2)
 Scattering problem for the cubic nonlinear Schrödinger equation with a double delta potential

- 13. Takuya Sato (Tohoku University, D1)

 Analytic smoothing effect for the system of nonlinear Schrödinger equations with general mass resonance
- 14. Takeshi Suguro (Tohoku University, M2)

 The extended Shannon inequality and the uncertainty principle
- 15. Kazutoshi Taguchi (University of Tokyo, D3) Numerical solution of Kobayashi–Warren–Carter system without regularization
- 16. Yujiro Tateishi (Tohoku University, M2)
 Gradient estimates for the heat equation with inverse-square potential
- 17. Yuki Tsukamoto (Tokyo Institute of Technology, D1)
 A diffused interface with the advection term in a Sobolev space
- 18. Kensuke Yoshizawa (Tohoku University, M2)

 The obstacle problem for the elastic flow defined on planar open curves
- 19. Erbol Zhanpeisov (Tohoku University, M2) Blow-up rate of sign-changing solutions to nonlinear parabolic systems

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Organizing Committee Hiroyuki Takamura (Tohoku University) Naofumi Honda (Hokkaido University) Jun-ichi Segata (Tohoku University)