

# The 23rd Northeastern Symposium on Mathematical Analysis

**Date** 21-22, February, 2022

**URL** <https://www.math.sci.hokudai.ac.jp/sympo/nema/23.html>

## Program

### February 21 (Monday)

- 10:00-10:50 Nakao Hayashi (Tohoku University)  
Initial boundary value problem for the nonlinear Schrödinger equation
- 11:00-11:50 Daniel Spector (National Taiwan Normal University)  
Sobolev Inequalities in  $L^1$
- 13:30-14:00 Takashi Kagaya (Muroran Institute of Technology)  
Singular Neumann boundary problems for a class of fully nonlinear parabolic equations
- 14:10-14:40 Kentaro Fujie (Tohoku University)  
Boundedness of solutions to a fully parabolic chemotaxis system with local sensing in higher dimensions
- 14:55-15:15 Shuangquan Xie (Tohoku University)  
Oscillatory localized patterns in reaction-diffusion systems
- 15:15-15:35 Keisuke Yoshida (Hokkaido University)  
Simplicity of  $C^*$ -algebras associated to self-similar groups
- 15:35-15:55 Kensuke Yoshizawa (Tohoku University)  
An obstacle problem for the elastic energy among graph curves pinned at endpoints
- 16:10-16:30 Poster Preview
- 16:30-18:30 Poster Session

## **February 22 (Tuesday)**

- 10:00-10:50 Shuichi JIMBO (Hokkaido University)  
A semilinear parabolic equation in a simple unbounded metric graph
- 11:00-11:50 Satoshi Tanaka (Tohoku University)  
On the uniqueness of positive radial solutions to superlinear elliptic equations in annuli
- 13:30-14:00 Megumi Sano (Hiroshima University / Tohoku University)  
Improvements and generalizations of two Hardy type inequalities
- 14:10-14:40 Shota Sakamoto (Tokyo Institute of Technology)  
A Cauchy problem of the non-cutoff Boltzmann equation in a Fourier-Lebesgue space in  $\mathbb{R}^3$
- 14:50-15:10 Yucong Huang (University of Oxford / Tokyo Institute of Technology)  
On Spherically Symmetric Weak Solution to the Cauchy Problem for Compressible Full Navier-Stokes Equations
- 15:25-15:45 Hiroshi Ishii (Hokkaido University)  
Asymptotic profiles of zero points of solutions to nonlocal diffusion equations
- 15:45-16:05 Takeshi Suguro (Tohoku University)  
Singular limit problem for the Keller--Segel system in uniformly local spaces
- 16:05-16:25 Hiroshi Wakui (Tokyo University of Science)  
Stability of constant steady states of a parabolic-elliptic Keller-Segel system
- 16:35-16:55 Poster Award Ceremony & Closing
- 17:00-19:00 Free discussion

### Organizers :

- Shin-Ichiro Ei (Hokkaido University)  
Takayoshi Ogawa (Tohoku University)  
Tadahiro Miyao (Hokkaido University)