Workshop on physical and mathematical approaches to geophysical fluid problems

September 6–September 9, 2019 at Hilton Niseko Village (Hokkaido, Japan)

PROGRAM

6th (FRI)	7th (SAT)	8th (SUN)	9th (MON)
	8:00 – 8:55 Breakfast	8:00 – 9:00 Breakfast	7:30 – 8:30 Breakfast
	8:55 – **Opening** 9:00 – 9:40 **M. Yamada** 10:00 – 10:40 **A. Mahalov** 11:00–11:40 **K. Nakai**	9:00 – 9:40 **Y.-Y. Hayashi** 10:00 – 10:40 **T. Tauchi** 11:00–11:40 **K. Ishioka**	8:30 – 9:10 **I. Saito** 9:30 – 10:10 **P.-Y. Hsu** 10:30–11:10 **T. Yoneda** 11:10–**Closing**
	12:00 – 14:00 Lunch	12:00 – 14:00 Lunch	12:00 – 14:00 Lunch
	14:00 – 14:40 **K. Obuse** 15:00 – 15:40 **N. Kishimoto** 16:00 – 16:40 **T. Nakazawa**	14:00 – 14:40 **T. Kato** 15:00 – 15:40 **S. Takehiro** 16:00 – 16:40 **T. Kashiwabara**	**Discussion time: interaction between Physics and Math**
19:30 – 21:00 Welcome party	18:00 – 20:00 Dinner	18:00 – 20:00 Dinner	18:00 – 20:00 Dinner
21:00 – 22:00 Free Discussion	20:00 – 22:00 Free Discussion	20:00 – 22:00 Free Discussion	20:00 – 22:00 Free Discussion

Michio Yamada (Kyoto University)

Zonal flow formations in two-dimensional turbulence on a rotating sphere (Part 1)

Alex Mahalov (Arizona State University)

Stochastic Three-Dimensional Navier-Stokes Equations + Waves: Averaging, Convergence, Regularity and Nonlinear Dynamics

Kengo Nakai (University of Tokyo)

Machine-learning construction of a model for a macroscopic fluid variable by using reservoir computing

Kiori Obuse (Okayama University)

Zonal flow formations in two-dimensional turbulence on a rotating sphere (Part 2)

Nobu Kishimoto (Kyoto University)

Characterization of three-dimensional Euler flows supported on finitely many Fourier modes

Takashi Nakazawa (Osaka University)

Shape optimization problem based on Data-Driven and Model-Based approaches

Yoshi-Yuki Hayashi (Kobe University)

Waves and mean flow generation in the atmospheres of terrestrial planets

Taito Tauchi (University of Tokyo)

Existence of a conjugate point in the incompressible Euler flow on an ellipsoid

Keiichi Ishioka (Kyoto University)

A method to estimate an upper bound of disturbance growth from shear-flow instability using conservation laws

Takamori Kato (Saga University)

A cancellation property and well-posedness of integrable dispersive PDEs on the torus

Shin-ichi Takehiro (Kyoto University)

Thermal convection in rotating spherical shells and generation of mean zonal flows

Takahito Kashiwabara (University of Tokyo)

Semigroup and maximal regularity approach to the primitive equations

Izumi Saito (Nagoya Institute of Technology)

Quasi-invariant for Rossby wave turbulence and its relation to pattern formation

Pen-Yuan Hsu (University of Tokyo)

Continuous alignment of vorticity direction prevents the blow-up of the Navier-Stokes flow under the no-slip boundary condition

Tsuyoshi Yoneda (University of Tokyo)

A remark on the zeroth law and instantaneous vortex stretching on the incompressible 3D Euler equations

Organizers
  Nobu Kishimoto   (Kyoto University)
  Alex Mahalov   (Arizona State University)
  Tsuyoshi Yoneda   (University of Tokyo)