# Stochastic Analysis and Related Topics

We hold the conference "Stochastic Analysis and Related Topics", as follows.

Date： December 2 (Friday) –December 4 (Sunday), 2022

Place： Hybrid conference at Osaka University and Zoom (online)

Webpage： `https://www.math.kyoto-u.ac.jp/~kusuoka/workshop/sa2022/`
(written in Japanese)

## —Program—

### December 2 (Friday)

9:30–10:10   Tomonori Nakatsu (Shibaura Institute of Technology)
Bounds for density function of solutions to stochastic functional differential equations

10:20–11:00   Kento Ueda (University of Tokyo)
Error distribution of general numerical solution of 1-dim SDE driven by fBm with arbitrary Hurst index

11:10–11:50   Masato Hoshino (Osaka University)
A regularity structure for the quasilinear generalized KPZ equation

11:50–13:20   Lunch break

13:20–14:00   Masahisa Ebina (Kyoto University)
Central limit theorems for stochastic wave equations in dimension three

14:10–15:00   Yuu Hariya (Tohoku University)
Invariance of Brownian motion associated with exponential functionals

15:30–16:20   Nobuaki Naganuma (Kumamoto University)
Generalization of the fourth moment theorem

16:30–17:20 (Zoom)   Zhongmin Qian (University of Oxford)
Some geometric aspect of the Navier-Stokes equations

### December 3 (Saturday)

10:00–10:50 (Zoom)   Bruce Driver (UC SanDiego)
Controlled rough paths revisited

11:00–11:50   Arturo Kohatsu-Higa (Ritsumeikan University)
Derivatives of killed diffusions semigroups can be represented using reflected processes

11:50–13:20   Lunch Break

13:20–14:10   Hiroshi Kawabi (Keio University)
A graph discretized approximation of diffusions with drift and killing on a complete Riemannian manifold

14:20–15:10   Masanori Hino (Kyoto University)
Estimates of the local spectral dimension of the Sierpinski gasket

15:40–16:30   Xue-Mei Li (EPFL)
The logarithmic heat kernel

16:40–17:40   Shigeki Aida (University of Tokyo)
An approach to asymptotic error distributions of rough differential equations

17:45–18:30   Special session in honor of Prof. Shigeki Aida's 60th birthday

## December 4 (Sunday)

 9:30–10:10 (Zoom)    Izumi Okada (Kyushu University)
Capacity of the range of random walk

10:20–11:10   Antonie Lejay (INRIA)
On linear rough differential equations

11:20–12:10   Takashi Kumagai (Waseda University)
Limit theorems for long range random walks on nilpotent groups

Organizers:   Yuzuru Inahama (Kyushu University)
Hiroshi Kawabi (Keio University)
Seiichiro Kusuoka (Kyoto University)
Nobuaki Naganuma (Kumamoto University)
Masato Hoshino (Osaka University)
Yukio Nagahata (Niigata University)
Yuichi Shiozawa (Osaka University)