

## スーパーグローバルコース数学特別講演会

ネブラスカ大学リンカーン校の Kazuo, Yamazaki 先生の講演が  
下記の日程で行われます。

日時 : 2026 年 3 月 18 日 (水) 14 : 00 ~ 15 : 30

場所 : 理学研究科 3 号館 127 室



**Kazuo, Yamazaki**

(University of Nebraska-Lincoln)

### Title :

「Singular Stochastic PDEs: Uniqueness, Non-uniqueness, and Global Theory」

### Abstract :

Stochastic PDEs are PDEs forced by random noise and singular stochastic PDEs refer to the case when the noise is so rough that the solution becomes a distribution and the products within the nonlinear terms become ill-defined.

The breakthrough techniques of regularity structures and paracontrolled distributions has led to local-in-time solution theory for locally subcritical singular SPDEs, but two challenging questions remain: locally critical/supercritical cases, and global-in-time solution theory. We will discuss two approaches: convex integration technique that has shown potential for solution theory (non-unique) even in the locally critical/supercritical case and the estimates-oriented approach of Hairer-Rosati to construct global-in-time solution theory (unique). We also comment on another finding that the convex integration technique seems unlikely to succeed for the  $\Phi^4$  model from quantum field theory.

- ・ 本学の学生は申込不要です。
- ・ 本講演は京都大学のスーパーグローバル教育プログラム、スーパーグローバルコース（数学分野）の企画講演です。  
当コースについての詳細は <https://www.math.kyoto-u.ac.jp/ja/ktgu/ktgu> をご覧ください。

