

# KINETIC THEORY AND STOCHASTIC PARTIAL DIFFERENTIAL EQUATIONS

Pathways workshop, MSRI/SLMath, August 21 to 22, 2025

## BOOKS

- [1] R. A. CARMONA and B. ROZOVSKII (eds.), *Stochastic partial differential equations: six perspectives*, Mathematical Surveys and Monographs **64**, American Mathematical Society, Providence, RI, 1999, ISBN 0-8218-0806-0. [MR](#) [Zbl](#)
- [2] G. DA PRATO and J. ZABCZYK, *Ergodicity for infinite-dimensional systems*, London Mathematical Society Lecture Note Series **229**, Cambridge University Press, Cambridge, UK, 1996, ISBN 0-521-57900-7. [MR](#) [Zbl](#)
- [3] G. DA PRATO and J. ZABCZYK, *Stochastic equations in infinite dimensions*, 2nd ed., Encyclopedia of Mathematics and its Applications **152**, Cambridge University Press, Cambridge, UK, 2014, ISBN 978-1-107-05584-1. [MR](#) [Zbl](#)
- [4] R. C. DALANG and M. SANZ-SOLÉ, *Stochastic partial differential equations, space-time white noise and random fields*, Springer Monographs in Mathematics, Springer, Cham, Switzerland, 2025, To be released October 6, 2025. [arXiv](#).
- [5] D. KHOSHNEVISAN, *Analysis of stochastic partial differential equations*, CBMS Regional Conference Series in Mathematics **119**, American Mathematical Society, Providence, RI, 2014, ISBN 978-1-4704-1547-1. [MR](#) [Zbl](#)
- [6] D. KHOSHNEVISAN and F. RASSOUL-AGHA (eds.), *A minicourse on stochastic partial differential equations* (Salt Lake City, UT, 2006), Lecture Notes in Mathematics **1962**, Springer, Cham, Switzerland, 2009. [MR](#) [Zbl](#)
- [7] W. LIU and M. RÖCKNER, *Stochastic partial differential equations: an introduction*, Universitext, Springer, Cham, 2015, ISBN 978-3-319-22353-7; 978-3-319-22354-4. [MR](#) [Zbl](#)

## ARTICLES

- [8] M. GUBINELLI, P. IMKELLER, and N. PERKOWSKI, *Paracontrolled distributions and singular PDEs*, *Forum Math. Pi* **3** (2015), Article e6. [MR](#) [Zbl](#)
- [9] M. HAIRER, *A theory of regularity structures*, *Invent. Math.* **198** (2014), no. 2, 269–504. [MR](#) [Zbl](#)

## JOURNALS

- [10] *Stochastics and Partial Differential Equations: Analysis and Computations*, Springer, Cham, Switzerland. ISSN 2194-0401, e-ISSN 2194-041X [MR](#) [ZBL](#).