

## Preface

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This volume of *Matemática Contemporânea* is dedicated to the *XXV Brazilian School of Probability* which was held in the week of August 8-13, 2022 at IMECC, Unicamp. The Brazilian School of Probability is the most traditional event on Probability Theory in Brazil and has considerably contributed to the strengthening of this research area. This XXV edition was part of the *São Paulo School of Advanced Science on Singular Stochastic Partial Differential Equations and their Applications* which was held in the period of August 2-13, 2022 at the same institute. These São Paulo Schools of Advanced Science events, initiated in 2010 and financially supported by FAPESP, span diverse research domains, including Mathematics, Computer Science, Chemistry, and more. This joint meeting attracted more than 100 participants, featured 4 courses with exercise classes, 7 plenary talks, 8 short talks and 22 posters. The program unfolded across two weeks, with the first week hosting two foundational mini-courses: Paulo Ruffino gave a course about stochastic calculus and Sebastian Riedel introduced the main concepts of the theory of rough paths. These two courses laid the groundwork for the subsequent courses in the following week. In

the second week the latest developments in the field of stochastic partial differential equations were discussed by Lorenzo Zambotti and Martin Hairer. Lorenzo Zambotti introduced the theory of regularity structures and Martin Hairer talked about recent progress on Yang-Mills.

The current volume of *Matemática Contemporânea* offers a selection of contributions to the School, mainly based on lecture notes and review papers related to the plenary talks. We are very happy to offer this material to our community, and grateful to all the authors for their work and patience. All the papers have been peer-refereed. We are truly indebted to the experts who agreed to collaborate as anonymous referees.