

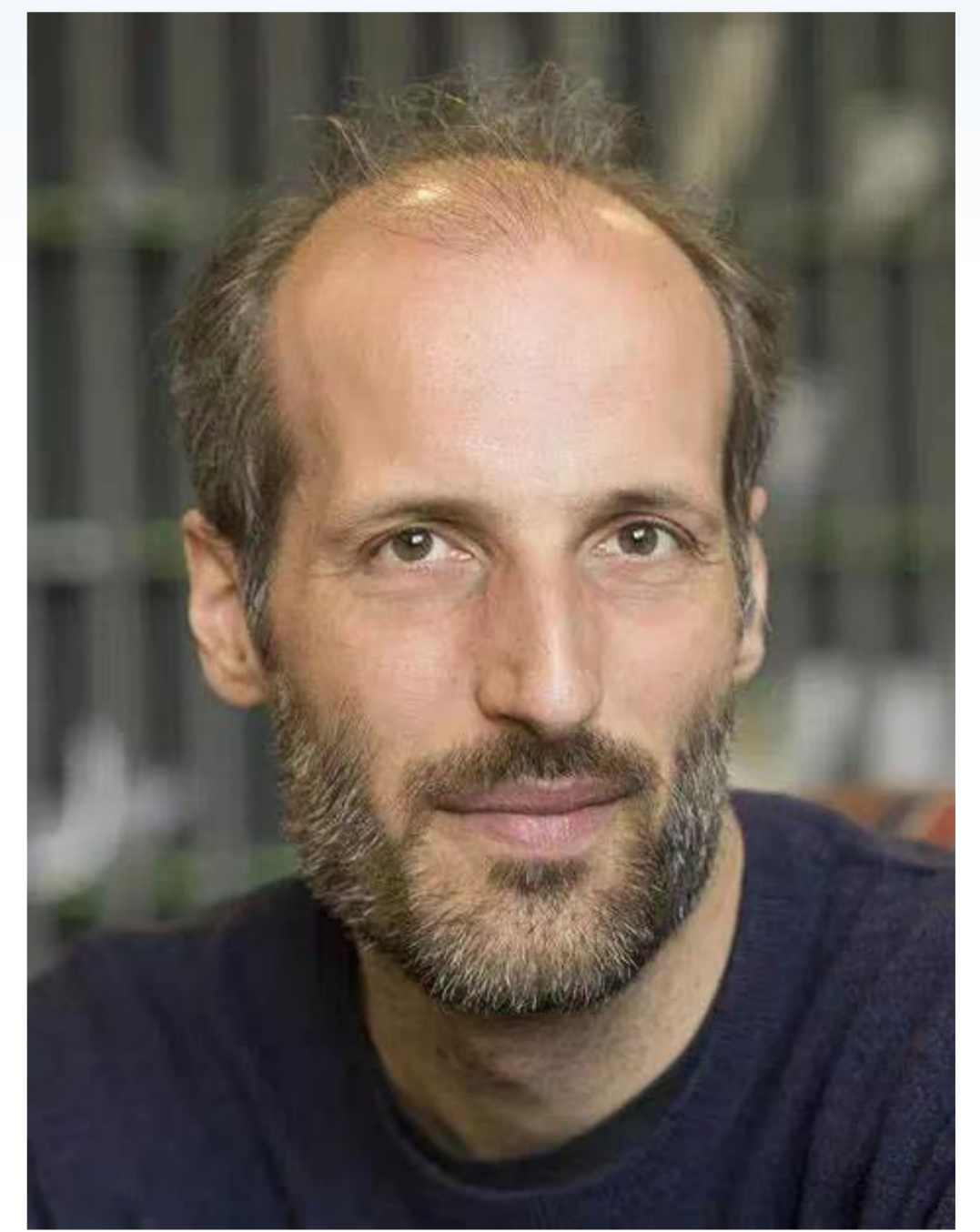


Ergodicity of the projective process for linear SPDEs

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Martin Hairer is Professor of Pure Mathematics at EPFL and Imperial College London. He has invigorated and advanced the field of stochastic partial differential equations in particular, and in stochastic analysis and stochastic dynamics in general. He has worked on variants of Hörmander's theorem, systematisation of the construction of Lyapunov functions for stochastic systems, development of a general theory of ergodicity for non-Markovian systems, multiscale analysis techniques, theory of homogenisation, theory of path sampling, theory of rough paths and, on his theory of regularity structures and stochastic quantisation of Yang-Mills field theory more recently. He has won numerous awards and honours, including the Fields Medal (2014) and the Breakthrough Prize in Mathematics (2021).



Abstract: We consider the angular component of a class of linear SPDEs and provide sufficient conditions to guarantee that it admits a unique invariant measure. Our proof relies on the introduction of a novel Lyapunov functional based on the study of dynamics of the "energy median". This technique in particular allows to obtain -- in an infinite-dimensional setting without order preservation -- lower bounds on top Lyapunov exponents of the equation.

讲座时间:

2023. 11. 08周三下午16:00-17:00

会议地点: ZOOM会议室 会议ID: 354 143 7366 密码: 123456

主办单位:

中科院数学与系统科学研究院应用数学所

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