



AUSTRIAN
ACADEMY OF
SCIENCES



Institute of Science and Technology

INVITATION TO THE THIRD TALK OF THE PUBLIC LECTURE SERIES
ÖAW – IST AUSTRIA LECTURES

BRIDGING SCALES

MARTIN HAIRER

Department of Mathematics, Imperial College, London

WELCOME

ANTON ZEILINGER

President, Austrian Academy of Sciences

THOMAS HENZINGER

President, IST Austria

IST Austria and the Austrian Academy of Sciences have initiated a joint lecture series aiming to bring to Austria speakers of the highest international standing active in fields that are of mutual interest to both institutions and to a wider public.

The lecture series will be continued by Martin Hairer, Chair in Probability and Stochastic Analysis at the Imperial College London. He is a fellow of the Royal Society and a member of the Austrian Academy of Sciences, the German National Academy of Sciences Leopoldina and the Berlin-Brandenburg Academy of Sciences and Humanities. In 2014, he received the Fields medal, “for his outstanding contributions to the theory of stochastic partial differential equations, and in particular for the creation of a theory of regularity structures for such equations”.

The lecture will focus on one fascinating aspect of probability theory: the universal aspect of the objects it allows us to construct. The most well-known example of this phenomenon is the central limit theorem. For a very large class of collections of random variables, additive functionals that only depend weakly on any one element of the collection exhibit Gaussian behaviour in the limit. When taking time evolution into account, it turns out that in certain “cross-over regimes” the large-scale behaviour of a number of stochastic systems can formally be described by an ill-posed stochastic partial differential equation.

The talk will conclude with a Q&A followed by a reception.

Please register [here](#) by 30 May 2018.

6 JUNE 2018
6:30 P.M.
AUSTRIAN ACADEMY OF SCIENCES
FESTIVE HALL
DR. IGNAZ SEIPEL-PLATZ 2, 1010 VIENNA