OPPENHEIM LECTURE 2023

Faculty of Science Distinguished Visitor

Professor Martin Hairer

École Polytechnique Fédérale de Lausanne
& Imperial College London
Fields Medallist 2014

Stochastic Quantisation of Yang-Mills

Tuesday 24 October 2023, 3.00 pm to 4.00 pm
NUS Department of Mathematics
Block S17 Level 4 Seminar Room 1 (S17-04-06)
10 Lower Kent Ridge Road, Singapore 119076

Admission is free, please register https://tinyurl.com/NUSOppenheim2023.
For more information, please visit math.nus.edu.sg > Events > Oppenheim Lectures

Abstract: In this lecture, we will report on recent progress on the problem of building a stochastic process that admits the hypothetical Yang-Mills measure as its invariant measure. One interesting feature of our construction is that it preserves gauge-covariance in the limit even though it is broken by our UV regularisation. This is based on joint work with Ajay Chandra, Ilya Chevyrev, and Hao Shen.

About: The Oppenheim Lectures is a distinguished lecture series in honour of Sir Alexander Oppenheim, first Head of the Department of Mathematics at the Raffles College (a predecessor of NUS), and a number theorist known for the Oppenheim Conjecture.

Activities held in conjunction with the Oppenheim Lecture

16 to 20 October: Mini Course by Dr Atul Shekhar, TIFR Bangalore (Venue: S17-04-06)

25 to 26 October: Workshop on Random Systems (Venue: S17-04-06)

26 October 3 pm: Conversation with Professor Martin Hairer (Venue: Math Staff Lounge)

Jointly Organised by

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ABOUT

Professor Martin Hairer is a chaired professor at École Polytechnique Fédérale de Lausanne (EPFL) and Imperial College London. In 2014, Professor Hairer was awarded the Fields Medal, the highest honour in mathematics, for his achievements in the area of stochastic partial differential equations, in particular, his theory of regularity structures. Prof Hairer grew up in Geneva, Switzerland, where he attended the University of Geneva and received his bachelor's degree in mathematics and master's degree and Ph.D. in physics. He has received numerous awards and distinctions, including the Breakthrough Prize, Whitehead Prize, Fermat Prize, Fellow of the Royal Society, and Knight Commander of the Order of the British Empire.

The Department of Mathematics at NUS has been ranked among the best in Asia in recent QS World University Rankings by Subject. The Department offers a diverse and vibrant programme in undergraduate and graduate studies, in fundamental and applied mathematics. Faculty members' research covers all major areas of contemporary mathematics.

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