Hong Kong Probability Seminar

https://sites.google.com/site/hkprobability/

Date: February 14, 2019 (Thursday), CUHK
Venue: LT2, Yasumoto International Academic Park (YIA)

- 2:00 – 3:30pm : Qi-Man Shao (CUHK)

  Wandering around the Asymptotic Theory

  Abstract: In this talk we will be wandering around the asymptotic theory in probability and statistics, from the classical limit theory to recent developments and newly developed tools and techniques.

- 3:30 – 4:00pm: Coffee break

- 4:00 – 5:30pm: Federico Camia (NYU Abu Dhabi)

  Limit laws and conformal ensembles in the planar Ising model

  Abstract: In the last twenty years there has been tremendous progress in the mathematical understanding of phase transitions for models of statistical mechanics defined on planar lattices. Much of that progress is related to the study of scaling limits, obtained by sending the lattice spacing to zero. In this talk I will give a brief introduction to scaling limits and present some recent results in the mathematical theory of phase transitions. I will focus on the case of the Ising model, which was introduced in the 1920s to study ferromagnetism and is one of the most studied models of statistical mechanics. I will discuss the convergence of the Ising magnetization to a random field (i.e., a random generalized function) with interesting properties of conformal covariance, and the connection with Euclidean field theory and the associated quantum field theory. (Based on collaborations with Rene Conijn, Christophe Garban, Jianping Jiang, Demeter Kiss, and Chuck Newman.)

All are welcome

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The Chinese University of Hong Kong