



MATH-IMS Joint Applied Mathematics Colloquium Series The Chinese University of Hong Kong

This MATH-IMS Joint Colloquium Series is organized by Center for Mathematical Artificial Intelligence (CMAI), under Department of Mathematics and Institute of Mathematical Sciences (IMS) at The Chinese University of Hong Kong. The colloquium series focuses on mathematics and applications of artificial intelligence, big data and related topics.

Date: January 22, 2021 (Friday)

Time: 9:30am – 10:30am (Hong Kong Time)

Zoom Link: <https://cuhk.zoom.us/j/92775210812>

Blending Data And Models: Kalman Based Approaches

*Speaker: Professor Andrew Stuart
Computing and Mathematical Sciences,
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Abstract: In 1960 Rudolph Kalman published a paper which has had lasting and substantial impact on the use of data to improve the predictive capability of mathematical models: it has been cited around 35,379 times (Google Scholar, 14/01/20). In this talk I will describe the methodology, highlight the wide range of application areas that it has impacted, and explain interesting mathematical structure that has been developed to interpret it.

Bio: Professor Andrew M. Stuart obtained his DPhil from the Oxford University Computing Laboratory in 1986. He then held postdoctoral positions in Mathematics at Oxford University and at MIT in the period 1986-1989. After postdoctoral research in applied mathematics, Professor Stuart held permanent positions at the University of Bath (1989-1992) in mathematics, at Stanford University (1991-1999) in engineering, and at Warwick University (1999-2016) in mathematics. He is currently a Professor in Computing and Mathematical Sciences at the California Institute of Technology. Professor Stuart's research interests have been on the numerical analysis of dynamical systems, applications of stochastic ordinary and partial differential equations, Bayesian inverse problems, and data assimilation. Because of his research achievements, he has received numerous awards and recognitions, including the 1989 Leslie Fox Prize for Numerical Analysis, the Monroe H. Martin Prize from IPST Maryland, the SIAM James Wilkinson Prize, the Germund Dahlquist Prize (SIAM) in 1997, the Whitehead Prize from the London Mathematical Society in 2000, and the J.D. Crawford Prize (SIAM) in 2007. He has been an invited speaker at the International Council for Industrial and Applied Mathematics (ICIAM) in Zurich in 2007, and at the International Congress of Mathematicians (ICM) in Seoul in 2014. In 2020, he was elected as a Fellow of the Royal Society.