THE UNIVERSITY



OF HONG KONG

Institute of Mathematical Research Department of Mathematics

Numerical Analysis Seminar

Multilevel representations of random fields

Professor Markus Bachmayr

RWTH Aachen, Germany

Abstract

We consider multilevel representations of stationary random fields on domains and of isotropic random fields on the sphere, implications for sampling such random fields, and how such representations can be utilized in the context of sparse polynomial expansions of solutions of random PDEs. Based on joint works with Albert Cohen, Ron DeVore, Ana Djurdjevac, Dinh Dung, Giovanni Migliorati, Christoph Schwab, and Igor Voulis.

> Date: November 9, 2022 (Wednesday) Time: 5:00 – 6:00pm (Hong Kong Time) Venue: ZOOM: <u>https://hku.zoom.us/j/</u> Meeting ID: 913 6532 3891 Password: 310656

> > All are welcome