



# Numerical Analysis Seminar

## Quantitative homogenization for log-normal coefficients

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### Abstract

Quantitative stochastic homogenization for linear elliptic PDEs with bounded and uniformly elliptic coefficients is by now well-established. In geophysical applications however, permeability can range over more than 8 orders of magnitude. Such permeability fields are often modelled using log-normal distributions (that is, they are obtained as the exponential of a Gaussian random field), which fail boundedness and uniform ellipticity. In this talk I will discuss how to adapt the existing arguments in quantitative homogenization to this degenerate setting. This is joint work with Nicolas Clozeau and Siguang Qi.

Date: March 27, 2024 (Wednesday)

Time: 4:00 - 5:00pm

Venue: ZOOM: <https://hku.zoom.us/j/>

Meeting ID: 913 6532 3891

Password: 310656

*All are welcome*