

Numerical Methods for High-Dimensional Problems in Finance

Supervisor: [Kathrin Glau](#)

Research Group: [Probability and Applications](#)

Funding: For September 2021 entry: Funding may be available through QMUL Principal's Postgraduate Research Studentships, School of Mathematical Sciences Studentships, and EPSRC DTP, in competition with all other PhD applications.

Studentships will cover tuition fees, and a stipend at standard rates for 3-3.5 years.

We welcome applications for self-funded applicants year-round, for a January, April or September start.

Project description:

The research focuses on:

- Development of new computational methods for finance:
 - Function approximation;
 - Dimensionality Reduction;
 - Complexity Reduction;
- Creation of synthetic data sets;
- Applications to pricing and risk management;
- The analysis of the reliability and efficiency of the new methods.

Requirements:

- Strong background in mathematics, particularly in numerical mathematics;
- Very good programming skills (Matlab/Python/C++) desired;
- Prior knowledge of the field of computational finance is useful, but not required.

Further information:

[How to apply](#)

[Entry requirements](#)

[Fees and funding](#)