Project title: Random Matrices and Random Landscapes

Project area: Applied Probability and Mathematical Physics

Supervisor(s): Prof Yan Fyodorov

Start date: 36 months full-time starting in May 2012 or soon after

Project details:
Applications are invited for a PhD studentship “Random Matrices and Random Landscapes” as a part of the EPSRC funded project “Insights into Disordered Landscapes via Random Matrix Theory and Statistical Mechanics”. Based at the School of Mathematical Sciences at Queen Mary, University of London, the successful candidate will be part of the Applied Mathematics group.

The aim of the EPSRC project as a whole is to build understanding of statistical properties of random curves as well as higher-dimensional random surfaces known as random landscapes. This is an active area of research in Applied Mathematics with fascinating applications in Theoretical Physics, Number Theory, and optimization problems. Under the supervision of Prof Yan V Fyodorov the successful candidate will concentrate on analysing various statistical characteristics of minima, maxima, and saddle points of random curves and landscapes, and their implications to Statistical Mechanics problems.

Suitable candidates:
The successful candidate should have a first or upper-second (2:1) class honours degree in Mathematics, Mathematical or Theoretical Physics, or another related area and be able to demonstrate a strong mathematical background. High levels of ability in scientific computing and programming will be an advantage.

Funding details:
The studentship is funded by EPRSC and will cover student fees and a tax-free stipend starting at £15,590 per annum. Please see the following webpage for eligibility criteria http://www.epsrc.ac.uk/funding/students/Pages/eligibility.aspx

Information about the School of Mathematical Sciences:
The School of Mathematical Sciences is one of the largest UK mathematical science departments and is one of five Schools in the Faculty of Science and Engineering at Queen Mary. The School offers energetic and diverse postgraduate activity across the spectrum of mathematical sciences from pure and applied mathematics to statistics. Our staff includes international leaders in many areas of mathematical research, and the School is a hive of activity, providing a vibrant postgraduate life. For more information about the School please see http://www.maths.qmul.ac.uk/
Contact:
Informal enquiries can be made by email to Prof Yan Fyodorov, y.fyodorov@qmul.ac.uk

How to apply:
To apply for this studentship and for entry on to the mathematics research programme please fill in online application form at http://www.qmul.ac.uk/postgraduate/applyresearchdegrees/index.html

In addition completed application forms along with a full CV, names, two references, a statement of purpose and a one page research statement describing your previous research experience and outlining its relevance to this project should be sent, ideally by email, to Yan Fyodorov (y.fyodorov@qmul.ac.uk).

If you have any queries regarding the application process please contact the postgraduate administrative officer (maths-pg@qmul.ac.uk / 020 7882 5454).

Application deadline:
Deadline for applications is 15 March 2012.