

## Research Training Group

*High-Dimensional Phenomena in Probability - Fluctuations and Discontinuity:*

**11 open Ph.D. positions and 2 open Postdoc positions**

The Research Training Group *High-Dimensional Phenomena in Probability - Fluctuations and Discontinuity* (RTG 2131), funded by the Deutsche Forschungsgemeinschaft (DFG), invites applications for **11 Ph.D. positions** (salary scale **TV-L E 13, 75 %**; including social benefits) for a three-year structured Ph.D. program. Moreover the RTG 2131 invites applications for **2 Postdoc positions** (salary scale **TV-L E 13, 100 %**; including social benefits) initially awarded for two years. Start of the program and all positions will be October 1st, 2015. The RTG is based at the faculties of mathematics at the three universities of Bochum, Dortmund and Duisburg-Essen, Germany.

## Research Program

The goal of the RTG is to bring together the joint expertise on aspects of high dimension in probability. In the study of random structures in high dimensions, one frequently observes universality in limit theorems (fluctuations) as well as phase transitions (discontinuities). These aspects form the common focus of a large number of currently active research projects in stochastic processes. The cooperation of several research groups will offer the Ph.D. students the unique opportunity to gain experience beyond their own research topic, thus giving a broad scientific education. As a rule, each doctoral student in the RTG will be supervised by two PIs. The RTG is supported by top level research groups in probability theory and its applications, stochastic analysis, stochastic geometry and mathematical physics. For more information, see

<http://www.ruhr-uni-bochum.de/ffm/graduierntenkolleg/GRKmain.html.en>

## Structured training program

The doctoral research projects are accompanied by a structured training programme consisting of graduate courses taught by two PIs simultaneously (tandem lectures), seminars and international summer schools. The involvement of external researchers is obtained by research visits at the three participating universities, and by visits to the home institutions of foreign cooperation partners, made possible by the international network of research cooperations of the PIs. The students will profit from the opportunities provided by the Universitätsallianz Ruhr, notably the RUB Research School (scientific and soft skills), the Global Young Faculty and the ScienceCareerNet Ruhr with its mentoring<sup>3</sup> program for career development of female students and postdocs. Specifically for the RTG, research oriented gender equality standards will be developed by suitable measures. For female Ph.D. students, the RTG will offer a programme tailored for their research topic. A supervision concept, an evaluation process,

and annual feedback conferences complete the research training programme. The inclusion of post-doctoral researchers into the RTG is made possible by the offer of professional research development and by specific qualification opportunities.

### **Requirements**

For Ph.D. positions, candidates should have obtained (or be about to obtain) a M.Sc. degree (or equivalent) in mathematics or closely related fields with excellent results, and intend to pursue graduate studies in mathematics within the research areas of the RTG. All graduate students will be expected to work towards a Ph.D. degree at one of the participating universities in Bochum, Dortmund and Duisburg/Essen.

For Postdoc positions, we expect an exposé of 2-3 pages sketching the applicants' research interests with respect to the research areas of the RTG.

Applications should provide the usual documents:

- ★ letter of application
- ★ curriculum vitae
- ★ copies of certificates
- ★ Diploma/masters thesis and relevant publications if available
- ★ for Ph.D application: statement of purpose sketching the applicants' research interests
- ★ for Postdoc application: exposé of 2-3 pages sketching the applicants' research interests with respect to the research areas of the RTG

The RTG particularly encourages the applications of female candidates. Disabled persons will be given preferential treatment in cases of otherwise equal qualification.

### **Applications and inquiries should be addressed to:**

Prof. Dr. Peter Eichelsbacher, Coordinator, GRK 2131  
Faculty of Mathematics, Ruhr University of Bochum  
NA 3/66, Universitätsstraße 150, 44780 Bochum, Germany

**preferably via e-mail to [tanja.schiffmann \(at\) rub.de](mailto:tanja.schiffmann@rub.de)**

**DEADLINE:**  
**Applications are requested before**  
**June 26, 2015**

