

Summer School  
**Randomness in Physics and Mathematics**

From Quantum Chaos to Free Probability

**August 5 - 17, 2013**

**ZiF - Center for Interdisciplinary Research, Bielefeld University**

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Randomness

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Schedule

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Talks

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Photos

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Participants

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Poster

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Department of Mathematics

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Faculty of Physics

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Bielefeld University

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Bielefeld Tourism

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Travel information

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The event is supported by [Volkswagenstiftung](#) and by [ZiF](#)



The aim of this summer school is to bring together and educate international PhD students and young post-doctoral fellows from physics, mathematics as well as from engineering. Statistical methods and in particular randomness play an important role in many modern applications in physics and other natural sciences, as well as in several branches of mathematics. One of the common themes that interlaces fields as diverse as probability theory, complex analysis and combinatorics is that of random matrices. On the physics side applications include the transition from classical to quantum chaos, classical problems such as random walks or the theory of spin glasses up to problems of entanglement in quantum computation. Random matrices also appear in optimisation in telecommunication, a very active field in engineering. The proposed school will try to cover all these recent topics in an intense two week summer course consisting of 8 interdisciplinary, interactive lecture series lead by world leading international experts.

The event is supported by the Volkswagenstiftung and by the ZiF. In addition to accommodation and subsistence for all participants we can offer 10 stipends providing travel support. We particularly welcome applications by female participants. Childcare can be arranged for any participant who is accompanied by his children.

**Applications to participate and for travel support are welcome and should be directed to**

the [conference centre ZiF \(Ms Marina Hoffmann\)](#).

**The deadline for requesting participation has passed and registration is closed.**

**There will be a participation fee of 50 Euro.**

For informal enquiries including the scientific part, please, contact any of the organisers.

**Lecturers:**

**Ivan Corwin**, MIT Boston, MA, USA

**Yan Fyodorov**, London, GBR

**Alice Guionnet**, MIT Boston, MA, USA

**Satya Majumdar**, Paris, FRA

**Ralf Müller**, Erlangen, GER

**Sebastian Müller**, Bristol, GBR

**Roland Speicher**, Saarbrücken, GER

**Craig Tracy**, Davis, CA, USA

**Convenors:**

**Gernot Akemann**, Bielefeld

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**Friedrich Götze**, Bielefeld

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