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Promoting Young Researchers in Germany

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DFG

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Outline

- The German system of research and higher education
- DFG's mission
- Scientific career development
- Young investigators in physics

Institutions of Research and Higher Education in Germany

Institutions of higher learning (391) in Germany, among them:

- 104 universities
- Several colleges of theology, education as well as art and music
- 184 universities for applied research
- 31 colleges of public administration

Non-university research institutions:

- Max Planck Society
- Fraunhofer Society
- Helmholtz Association of German Research Centres
- Leibniz Association
- Research institutions of the federal and the state governments

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Our Mission

- Self-governance of science and the humanities
- Promoting academic excellence on a competitive basis
- Serving all fields of science and the humanities
- **Promoting young researchers**
- Advisory activities in politics
- International co-operation



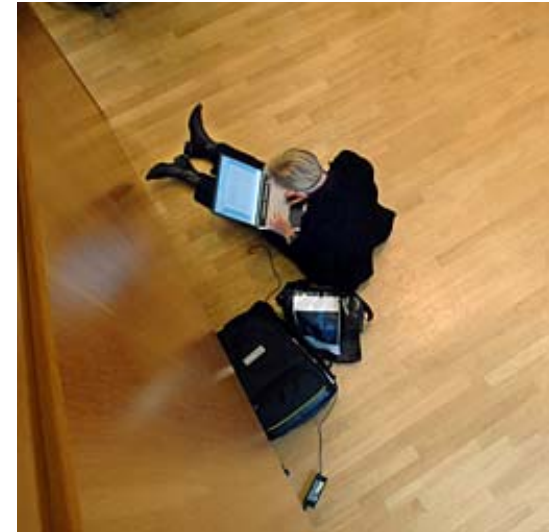
Our Approach: Science Career Development

Aims:

- Attract outstanding young researchers
- Provide talents with excellent research topics and first class working conditions
- Pave the way to independent careers at an early stage

Realisation:

- Offer flexible funding instruments to meet the specific requirements of young researchers
- Induce beneficial structures within the research system
- Special attention to: scientific excellence, individual careers



The DFG Funding Chain

Qualification phase					
Undergraduate Studies	PhD training	Postdoc phase	Assistant Professorship	Associate Professorship	Full Professorship
				Heisenberg Professorship	
			Emmy Noether Programme	Heisenberg Fellowship	
	RTG Fellowship	Research Fellowship (abroad)	Research Fellowship (abroad)	Research Fellowship (abroad)	
	Position in a RTG	One's own position	One's own position	One's own position	
Student in DFG Project or RTG	Position in a DFG-funded research proj.	Position in a DFG-funded research proj.	Position in a DFG-funded research project	Position in a DFG-funded research project	

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Emmy Noether Programme: - fast track to a professorship

Aim:

Supporting young researchers in achieving early independence.

Young postdocs gain the qualifications required for a university career during a **5 year funded period**, in which they lead their **own Independent Junior Research Group**.

Eligibility:

Researchers with **two to four years significant international research experience** („postdoc time“).



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Young Investigators in Physics



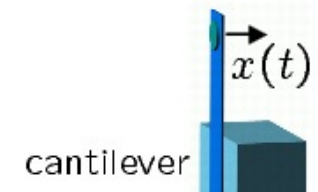
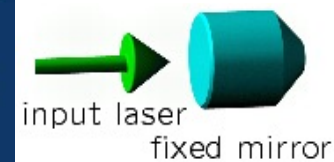
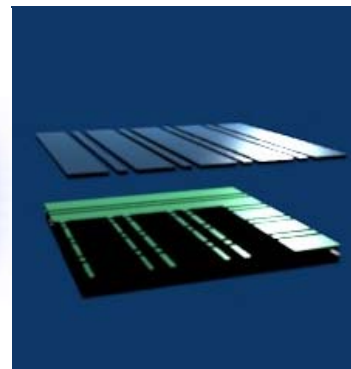
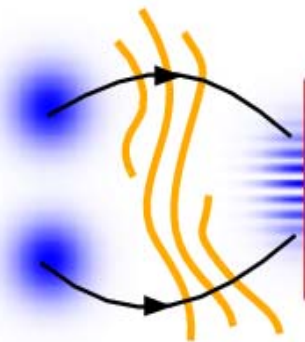
Florian Marquardt

University of Munich (LMU)

- Emmy Noether Research Group Leader
- Walter-Schottky-Price 2009 of German Physical Soc.
- Project: Condensed matter theory

Topics

- Aspects of decoherence with emphasis on transport interference experiments and solid-state based qubits
- Superconducting circuit QED
- Nano- and micromechanics





Heisenberg Fellowship - preparing for a tenured professorship

Aim:

Provide outstanding researchers with the opportunity to prepare for a leading position in science and research and to use the time to work on an advanced research topic (**from postdoc to professor**).

Eligibility:

Researchers fulfilling the requirements for long-term professorship, e.g.

- Junior professors
- German researchers returning to Germany
- Foreign researchers interested in a scientific career in Germany.



Heisenberg Professorship - with tenure track option

Applicants for a Heisenberg professorship must also participate in the **competitive** host institution's professorial appointment process.

The host university must

- create a position and indicate how this position constitutes a **structural development of the department.**
- guarantee funding from its **own budget after** the DFG's five-year funding period.

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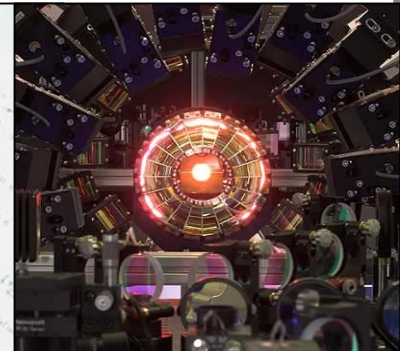
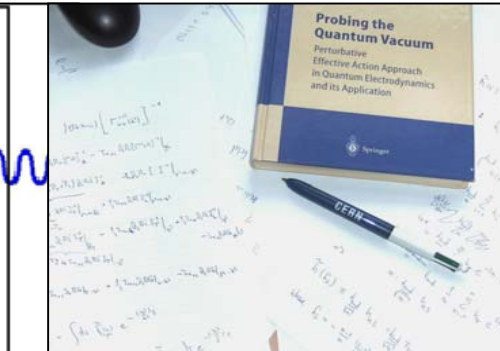
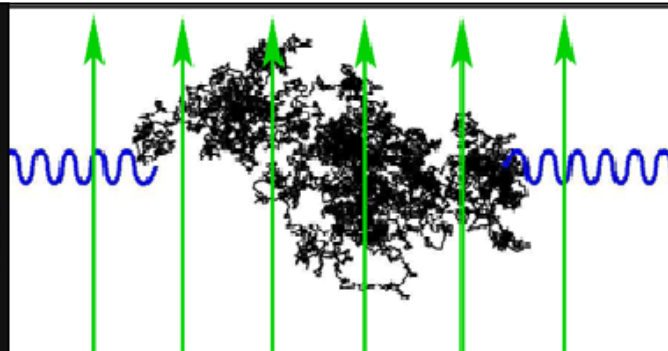
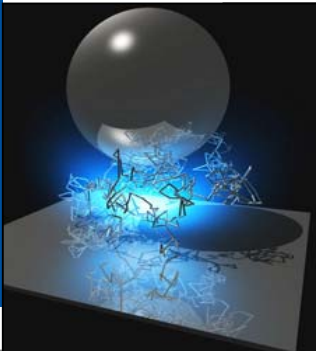
Holger Gies

University of Jena

- **Heisenberg-Professor**, former Emmy Noether Group Leader
- Heinz-Maier-Leibnitz-Price of DFG (2006)

Topics

- Quantum field theory
- Properties of quantum vacuum
- Casimir effect with possible application to different fields like nanotechnology
- Theory of ultracold quantum gases



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**Thank you
for your attention!**

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