

# Prof. Dr. habil. Mathias Kläui - Curriculum Vitae

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Date of birth: 18. August 1976      Nationality: German  
Place of birth: Zürich (CH)      Marital status: Married, 1 child

## Professional Life and Work Experience

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July 2011 -      **Institut für Physik, Johannes Gutenberg-Universität Mainz**  
W3 Full Professorship for Condensed Matter Physics.  
Director Materials Science in Mainz (2012-)  
Director Gutenberg College for Young Researchers (2014-)

April 2010 – June 2011      **Laboratory of Nanomagnetism and Spin Dynamics**  
**Paul Scherrer Institut (PSI) & Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland**  
Associate Professor and Group Leader

2008 – 2010      **Universität Konstanz, Germany**  
Leader of an independent Research Group funded by a European Research Council Starting Independent Researcher Grant.

2003 – 2008      **Universität Konstanz, Germany**  
Junior Lecturer (Wiss. Assistent, Habilitation 2008)

2003 – 2005      **IBM Research Laboratory Zürich, Rüschlikon, Switzerland**  
Postdoctoral Fellow

2001 (4 months)      **Toyota Technological Institute, Nagoya, Japan**  
Visiting Scientist

2001 – 2004 (altogether 3 months)      **Laboratoire Louis Néel – CNRS, Grenoble, France**  
Multiple stays as Visiting Scientist

2001      **DESY - Deutsches Elektronensynchrotron, Hamburg, Germany**  
Intern

## Education

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2008      Habilitation “Head-to-head Domain Walls in Magnetic Nanostructures”  
**Universität Konstanz, Konstanz, Germany**

2001-2003      PhD in Physics “Nanomagnetism of high-symmetry structures”  
**University of Cambridge, UK**

1999-2000      Master of Philosophy in Physics  
**University of Cambridge, UK**

1996-2001      Diploma in Physics (Top grade: With Distinction)  
**Rheinisch-Westfälische Technische Hochschule Aachen, Germany**

1987-1996      School Leaving Certificate Abitur

## Awards and competitive scholarships

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| Postdoctoral | <ul style="list-style-type: none"><li>● Nicholas Kurti Prize for Research in Physical Sciences</li><li>● Starting Independent Researcher Grant of the European Research Council</li><li>● Physics Prize of the Academy of Sciences Göttingen</li><li>● Max Auwärter Award for outstanding contributions to surface physics</li><li>● Scholar of the Elite-Program of the Landesstiftung Baden - Württemberg</li><li>● Founding Member of the Global Young Academy</li><li>● Member of the Young Academy (Junge Akademie) of the Berlin Brandenburg Academy of Sciences and the German National Academy of Sciences Leopoldina</li><li>● Member of the Zukunftskolleg - Centre for Junior Research Fellows in Konstanz</li><li>● Scholarship of the German Academic Exchange Service (DAAD)</li></ul> |
| PhD          | <ul style="list-style-type: none"><li>● Distinguished Clerk Maxwell Scholar of the Cavendish Laboratory, Cambridge</li><li>● Engineering and Physical Sciences Research Council Scholarship</li><li>● Fellow of the Cambridge European Society</li><li>● Scholarship of the Japan International Science / Technology Exchange Center</li><li>● Conference awards (APS March Meeting 2002, CMMP 2003)</li></ul>   |
| Diploma      | <ul style="list-style-type: none"><li>● Springorum Medal of Excellence (RWTH Aachen)</li><li>● Scholar of the German National Academic Foundation (Studienstiftung des Deutschen Volkes)</li></ul>   |

## Skills and Activities

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| Languages:               | German (native), English (fluent), French (fluent), Dutch (basic), Japanese (basic), Italian (basic)  |
| Scientific Focus:        | Nanomagnetism and Spin Dynamics on the Nanoscale:<br>Spin Transfer Torque - Current-induced domain wall motion,<br>Ultrafast spin dynamics, Magnetotransport and magnetoresistance effects,<br>Spin transport and spin injection in metals and graphene, Spin-orbit effects including spin orbit torques, Spin – caloritronics, Micromagnetic numerical simulations; Memory, logic and sensing applications.  |
| Professional Activities: | <ul style="list-style-type: none"><li>● &gt;128 reviewed publications (h-factor 32), 5 patents, &gt;15 reviews, &gt;75 invited presentations at universities, &gt;55 invited conference presentations &gt;75 other contributions including tutorials, summer school lectures, etc.</li><li>● &gt;5 Mio. € third party funding in the last 5 years.</li><li>● &gt;250h of university didactics courses, Hochschuldidaktikzertifikat Baden Württemberg, Undergraduate and Graduate lecture courses.</li><li>● Supervision of &gt;30 Postdocs, PhDs, students and interns and mentoring of &gt;5 senior postdocs that obtained permanent positions in academia.</li><li>● Director Materials Science in Mainz and Gutenberg Nachwuchskolleg</li><li>● Leader of a research group on low power IT devices and renewable energies within the think tank “Neue Verantwortung”</li><li>● Development of courses on ethical research practices in academia, and courses on conception and planning of research projects.</li><li>● Organization, chairman and program committee member of various conferences (Heraeus Meeting, Quantum Coherence Workshop, British-German Frontiers of Science Workshops, MMM, Intermag, NewSpin...)</li><li>● Reviewer for various journals (Nature family PRL, Nano Lett, etc.)<br/>Reviewer for projects (NSF, ANR, AERES, DFG, EPSRC, FAS, etc.)</li><li>● Senior Member of the IEEE, Member of the IEEE Magnetism Society Technical Committee, Advisory board of CINEMA, COMATT,...</li></ul> |