

# Dr. Anke Henning - Curriculum vitae

Business: Max Planck Institute for Biological Cybernetics  
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## Personal data

Date of Birth: 1978  
Place of Birth: Germany  
Nationality: German  
Scopus ID: 22835171300  
**Status:** **Research Group leader (1 Senior Scientist, 2 PostDocs, 9 Phd students)**  
<http://www.kyb.mpg.de/de/>  
<http://www.biomed.ee.ethz.ch/research/bioimaging/mr-spectroscopy>

## Scientific Career / Education ([abroad](#))

06.2012 – now **Max Planck Research Group Leader** (*W2 level including the right to enroll PhD students at University of Tübingen: Physics & Neuroscience*), Department for Ultra-High Field MRI (Department chair: Prof. K. Scheffler), Max-Planck Institute (MPI) for Biological Cybernetics, Tübingen, Germany

06.2011 – 09.2011 **Visiting scientist**, 7T MRI group, Radiology Department, University Medical Center (UMC) [Utrecht, Netherlands](#), Prof. P.R. Luijten / D.W.J. Klomp / C.A.T. van den Berg

05.2008 – now **Senior scientist** (*Oberassistentin*), IBT, UZH, [Zurich, Switzerland](#), Prof. P. Boesiger

08.2006 – now **Project leader “MR spectroscopy”**, Institute for Biomedical Engineering (IBT), University (UZH) and ETH, [Zurich, Switzerland](#)

04.2004 - 04.2008 **PhD**  
Institute for Biomedical Engineering, Swiss Federal Institute of Technology (ETH); Prof. Peter Bösiger, [Zurich, Switzerland](#)  
Dissertation 17771 ETH Zürich: *Magnetic Resonance Spectroscopy Localization at High and Ultra High Field Strength.*

10.1996 – 04.2002 **Master of Physics** (*Diplom-Physikerin*)  
Technical University Chemnitz (TUC), Chemnitz, Germany  
Master thesis: Prof. H.J. Hinneberg  
*Structural investigations of CrSi<sub>2</sub>-films by TEM.*

09.1999 - 05.2000 **Exchange year:** State University of New York in [Binghamton, USA](#)  
Term paper: Prof. J.E.Morris  
*Computer modeling of conduction in discontinuous metal films.*

06.1996 **Abitur** (*A-level / High school degree*), Herder-Gymnasium Stralsund, Germany

## Professional experience (*NMR / MRI / MRS*; [abroad](#)):

06.2005 – 04.2012 Course organization & Teaching: **Advanced MR Spectroscopy Course**; IBT, UZH & ETH [Zurich, Switzerland](#)

01.2005 – 07.2008 Course organization & Teaching: **Applied MR Spectroscopy Course & onsite trainings** in Zurich and various hospitals in [Europe, South Africa and Asia](#);

	Gyrotools GmbH, Zurich
08.2002-02.2004	<b>High field NMR spectroscopy / structural biology:</b> protein-RNA complexes; Institute for Molecular Biology & Biophysics, ETH <u>Zurich, CH</u> , Prof. FHT Allain
04.2001 – 02.2002	Teaching assistant: lab classes; Department of Physics, TUC; Chemnitz
10.2000 - 04.2002	Advertising texts, promotion events, presentations; Central course guidance service, TUC, Chemnitz, Germany
07.2000 - 09.2000	<b>Partial Fourier MRI;</b> internship at Universidade de São Paulo, Instituto de Fisica, <u>São Carlos, Brazil</u> , Prof A. Tannus
09.1997 - 02.1999	Junior research assistant: TEM, SEM, STM, preparation techniques; Department of Physics, TUC Chemnitz, Germany, Prof. M. Hietschold
09.1998 - 10.1998	Acceleration measurement devices for usage in satellite navigation systems (GLONASS); internship at Kiev Polytechnic Institute/ Department of Aeronautics, <u>Kiev, Ukraine</u> , Prof. A.V. Zbrutsky
09.1994 - 09.1996	Technical drafts & technical documentation for advertised bidding; consulting engineering office "Henning & Forst", Stralsund, Germany
09.1994 - 07.1996	Cashier; ARAL petrol station, Heinrich-Heine-Ring Stralsund, Germany

## Research Grants (for details see attachment)

2015	EU project grant / Horizon 2020 ( <b>Coordinator / PI; 3 261 125 Euro</b> )
2014	ZIHP grant ( <b>Co-PI; 139 439 SFr</b> )
2013	SNF grant ( <b>PI; 308 000 SFr</b> )
2012	MPI group leader ( <b>PI; 1 590 000 Euro</b> )
2011	NCCBI grant ( <b>PI; 180 000 SFr</b> )
2010	Hartmann-Müller-Stiftung grant ( <b>PI; 30 000 SFr</b> )
2009	NCCR Neuro grant ( <b>Co-PI; 90 000 SFr</b> )
2007	ZIHP grant ( <b>Co-PI; my project part: 140 000 SFr</b> )
1999/2000	DAAD grant for an exchange year at SUNY Binghamton / USA ( <b>40 000 DM</b> )

## Memberships

2013	<b>ZNZ</b> (Zurich Neuroscience centre)
2011	<b>ZIHP</b> (Zurich Center for Integrative Human Physiology)
2005 – now	<b>ISMRM</b> (International Society of Magnetic Resonance in Medicine)
2005 – now	<b>ESMRMB</b> (European Society of Magnetic Resonance in Medicine)

## Awards & Stipends

2012 - 2014	ISMRM merit award: 2x summa cum laude / 7x magna cum laude (as last author)
2012	ISMRM Dynamic MRS Study Group Poster Award (as last author)
2011	ISMRM Poster Award Winner (2 <sup>nd</sup> prize as last author)
2008	ISMRM Poster Award Winner (1 <sup>st</sup> prize as first author)
2007	Educational stipend ISMRM
2005	ESMRMB Certificate of Merit Poster Award (as first author)
2005	Educational stipend ISMRM
2003	Educational stipend EMBO
1998	Travel stipend for an IAESTE internship in Kiev / Ukraine
1996	Math Olympiad 1 <sup>st</sup> prize Vorpommern

## Conference Organization

2016	<b>Conference Chair; ISMRM workshop</b> on Advanced MRS methods; Hege, D
2015 – 2017	<b>Annual Meeting Program Committee (AMPC)</b> member; <b>ISMRM annual meetings</b> Toronto / Canada (2015), Singapore (2016) and Honolulu / US (2017)
2015	<b>Scientific Program Committee</b> member, <b>ESMRMB annual meeting</b> ; Edinburgh, UK
2013	<b>Scientific Program Committee</b> member, <b>Award Committee</b> member, <b>moderator</b> of a <b>plenary session</b> and <b>3 scientific sessions</b> ; <b>ESMRMB annual meeting</b> , Toulouse, France
2012	<b>Session chair</b> , <b>ISMRM annual meeting</b> , Melbourne, Australia
2010	<b>Session chair</b> , <b>ISMRM annual meeting</b> , Stockholm, Sweden
2008	<b>Meeting Vice Chair</b> of 3 <sup>rd</sup> 7T Philips user meeting, Ittingen, Switzerland

## Invited Lectures (for details see attachment)

### Conferences

2015	<b>ISMRM</b> annual meeting; Toronto, Canada
2014	<b>Gordon Research Conference on In vivo Magnetic Resonance</b> , Andover/NH, USA
2014	<b>TRANSACT workshop</b> on Quality assurance in clinical MRS, Bern, CH
2013	<b>Biomedica summit</b> , Aachen, Germany
2013	<b>ISMRM High Field Workshop</b> , Noordwijk, Netherlands
2012	<b>19<sup>th</sup> Swiss NMR symposium</b> , Bern, Switzerland
2009	<b>AAPM annual meeting</b> , Anaheim, CA, USA
2007	<b>17<sup>th</sup> Swiss NMR symposium</b> , Zurich, Switzerland

### Universities

2014	Queen Square MS Centre group seminary, University College London, London, UK
2013	Danish Technical University, Lyngby, Denmark
2013	University Erlangen-Nürnberg, Erlangen, Germany
2013	Danish Research Centre for Magnetic Resonance (DRCMR), Copenhagen, Denmark
2012	UTSW, Dallas / Texas, USA
2012	Neuroscience Department, University of Maastricht, Netherlands
2012	Cardiology seminary, University of Aberdeen, Aberdeen, UK
2011	MPI Biologische Kybernetik, Tübingen, Germany
2010	CIBM HUG seminary, Geneva, Switzerland
2009	SFB colloquium, Otto-von-Guericke University, Magdeburg, Germany
2009	7T user group colloquium, Vanderbilt University, Nashville, TE, USA
2009	Radiology colloquium, UCLA, Los Angeles, CA, USA
2008	AMSM colloquium, University of Bern, Switzerland

### Industry

2013	Siemens Ultra High Field User Meeting, Wien, Austria
2012	GE Global Research, Munich, Germany
2007-2012	7T Philips user meetings: Nashville, Dallas, Zurich, Noordwijk & Columbus
2007	Spectroscopy Philips user meeting, Berlin, Germany

## Teaching & Supervision (completed theses only; 9 ongoing PhD theses)

### PhD theses

- Ariane Fillmer. *Hardware and Algorithmic Advances in B<sub>0</sub> Shimming for High and Ultra-High Field MRI and MRS*. Diss. ETH 22526, 2015. (PI)
- Andreas Hock. *Motion Correction Techniques for in vivo magnetic resonance spectroscopy of the human spinal cord*. **Diss. ETH 20972**, 2013. (PI)
- Chen Xing. *Quantitative, SNR-enhanced and Localized <sup>13</sup>C Magnetic Resonance Spectroscopy*. **Diss. ETH 20945**, 2012. (PI)
- Fuchs Alexander. *Detection and Quantification of J-coupled Metabolites by High Field MRS*. **Diss. ETH 20865**, 2012. (PI)
- Mac Millan Erin Leigh. *Application of Metabolite Cycled Non-Water-Suppressed Magnetic Resonance Spectroscopy, and Measurement of Magnetization Transfer between Water and Metabolites, in the human brain, spinal cord, and skeletal muscles at 3T and 7T*. **Diss. University Bern**, 2012. (co-PI)
- Heinzer Susanne. *Acquisition of Quantitative Magnetic Resonance Spectra*. **Diss. ETH 19053**, 2010. (PI)

### MD theses

- Jauslin Marco. *Exercise protocol and muscular fiber type composition dependent phosphocreatine recovery in health and disease*. **Diss Medical Faculty, University Zurich**, 2010. (Co-PI)

### Master / Bachelor / Semester theses

- Sebastian Lutterer. *Application and evaluation of shim strategies for the improvement of High Field MRI and MRSI*, **Semester thesis, ETHZ**, August 2013.
- Eisenring Lukas. *Echo-Planar Spectroscopic Imaging at 7Tesla*, **Master thesis, ETHZ**, February 2013.
- Wyss Patrik. *Comparison of RF Field Mapping Techniques at Ultra-High Fields*. **Master thesis, ETHZ**, September 2012.
- Eisenring Lukas. *Influence of Spatial Weighting in SENSE Reconstruction on Voxel Bleeding in MRSI*, **Semester thesis, ETHZ**, May 2012.
- Wyss Michael. *Bestimmen der T<sub>1</sub> und T<sub>2</sub> Gewebe-Relaxationszeiten im menschlichen Hirn bei einer Magnetfeldstärke von 7T*. **Bachelor thesis, Fachhochschule Nordwestschweiz**, May 2012.
- Dokumaci Ayse Sila. *Correlation-based Cross Validation of PRESS, MEGA-PRESS Editing and 2D JPRESS at 3T*. **Master thesis, ETHZ**, May – Dec 2011.
- Brüschweiler Nicole. *Denoising of MRS signals using wavelet methods*. **Master thesis, EPFL/ ETHZ**, 2007

### Internships

- Cameron Donnie, UK, *B<sub>0</sub> shimming for 1H & 31P MRS in the myocardium*. Jun – Sep 2012.
- Carrie Chiu, Hongkong, *Absolute metabolite quantification*. July-Aug 2011.
- Luttje Mariska, Netherlands, *ERETIC-based JPRESS & MEGA-PRESS quantification*. Sep-Dec 2010
- Valkovic Ladislav, Slovakia, *Navigator gated shimming and F<sub>0</sub> determination*. Sep-Dec 2010
- Akhvediani Tamuna, Georgia, *1H MRSI in CADASIL patients*. Sep 2005-May 2006
- Nadig Karin, Switzerland, *fMRI paradigm optimization*, Jun – Sep 2004

### Teaching

- Advanced MRI Educational Club – PhD seminary; Max Planck Institute for Biological Cybernetics & Eberhard Karls Universität Tübingen; 2013 - 2014
- Advanced MR Spectroscopy block courses for scientists, clinicians, MR physicists and radiographers (1 week): organization, teaching & hands-on class; UZH & ETHZ; 2005-2013
- Spectroscopy Educational Club – PhD seminary; ETHZ; Switzerland; 2007 - 2012
- Lecture & Tutorial “Magnetic Resonance Imaging in Medicine”; ETHZ; Switzerland; 2010
- Lectures in the frame of block courses on Neuroimaging (ZNZ) and Medical Imaging (CIMST); ETHZ, Switzerland; 2006-2009
- Applied MR Spectroscopy onsite trainings (2-5 days): teaching & hands-on class; Gyrotools GmbH; Netherlands, Finland, Great Britain, Turkey, South Africa, UAE; 2005-2008
- Lab class Biochemistry; ETHZ; Switzerland; 2003
- Lab classes Physics; TU Chemnitz; Germany ; 2001-2002

## Reviewing for

ISMRM

ESMRMB

NMR in Biomedicine

Magnetic Resonance in Medicine

Synapse

NeuroImage

Journal of Magnetic Resonance

Journal of Magnetic Resonance Imaging

Human Brain Mapping

Journal of Neuroscience Methods

Frontiers in Systems Neuroscience

Swiss National Science Foundation

Agency for Science, Technology and Research Singapore

## Extracurricular Activities

2001/2002

IAESTE Germany – elected board member

1997-2002

founder member of the IAESTE local committee Chemnitz

1997-2002

student faculty council, Physics Department, Technical University Chemnitz

1996

voluntary group leader in a children's recreational retreat

1994-1996

school newspaper, Herder-Gymnasium, Stralsund

1985-2002

competitive sport: track & field (longjump, sprint)

travelling, photography, outdoor sports

## Languages

German (native), English (fluent), Spanish (intermediate), Russian (intermediate)

February 20<sup>th</sup> 2015,

