Hendrik Mattern

Personal details

Date of Birth	21/06/1989
Nationality	German
Personal status	married, one child

Education

02/2015–12/2019 **PhD student**, *Otto-von-Guericke-University*, Magdeburg.
- Title: *Prospective motion correction for high resolution gradient recalled echo-based magnetic resonance imaging at ultra-high field*
- Examiners:
  - Prof. Dr. rer. nat. Georg Rose
  - Prof. Dr. rer. nat. habil. Oliver Speck
  - Prof. Dr. rer. nat. Nikolaus Weiskopf
- Grade: summa cum laude
- DOI: 10.10.25673/32326

04/2012–01/2015 **Master of Science**, *Otto-von-Guericke-University*, Magdeburg.
- Medical Systems Engineering
- Final grade: 1.2
- Master thesis:
  - Title: *Analysis of a Prospective Motion Correction System for Magnetic Resonance Imaging*
  - Supervisor: Prof. Dr. rer. nat. habil. Oliver Speck
  - Grade: 1.1

10/2007–06/2012 **Bachelor of Science**, *Otto-von-Guericke-University*, Magdeburg.
- Electrical Engineering and Information Technology
- Final grade: 2.5
- Bachelor thesis:
  - Title: *Blind Source Separation for Electrocardiography during Magnetic Resonance Imaging*
  - Supervisor: Prof. Dr. rer. nat. Georg Rose
  - Grade: 1.3

Professional experience

03/2025–Today **Junior professor for *Highfield-MR Methods for Neuroimaging***, *Otto-von-Guericke-University*, Magdeburg.

05/2022–Today **Visiting researcher**, *Deutsches Zentrum für Neurodegenerative Erkrankungen (DZNE)*, Magdeburg.

02/2015–02/2025 **Researcher**, *Otto-von-Guericke-University*, Magdeburg.
Prospective motion correction for high resolution MRI at ultra-high field
Sequence development in IDEA
Ultra-high resolution Time-of-Flight angiography and quantitative susceptibility mapping
Quantitative assessment and pattern analysis of the cerebral vasculature
Support and supervision of several 3T and 7T MR studies
Third-party funding acquisition
Supervision and teaching

01/2019–03/2019 **Parental leave**.

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01/2011– 12/2012 **Programmer**, *G&K Medizinische Systeme*, Magdeburg.
Development and programming of medical software in Delphi
Support in quality management and certification of medical software
Installation and support for a PACS and RIS

Awards & stipends

2022 Educational Stipend for ISMRM Workshop on Neurofluids: Anatomy, Physiology & Imaging, Rome

2021 ESMRMB Early Career Fellowship

2021 Young scientist at the 70th Lindau Nobel Laureate Meeting

2020 Young scientist at the Lindau Nobel Laureate Meetings' Online Sciences Days

2020 Merit Award, 36th Annual Scientific Meeting ESMRMB, online meeting

2020 Magma cum laude award, 28th Annual Meeting ISMRM, virtual meeting

2019 Participant of the 9th Nachwuchsakademie Medizintechnik (NAMT-2019) "Quantitative MRI as a key modality in life sciences"

2019 Magma cum laude award, 27th Annual Meeting ISMRM, Montreal

2018 Educational Stipend for Joint Annual Meeting ISMRM-ESMRMB 2018, Paris

2017 Educational Stipend for 25th Annual Meeting ISMRM, Honolulu

2017 Summa cum laude award, 25th Annual Meeting ISMRM, Honolulu

2016 Educational Stipend for 24th Annual Meeting ISMRM, Singapore

2016 Best Poster Award, 7th Annual Scientific Symposium Ultrahigh Field Magnetic Resonance, Berlin

Grants and funding

G1 Mesoscopic imaging of human brain structure, function and neurofluids
Z02 in the CRC 1436, DFG 425899996
01.01.2025-31.12.2028 as PI

G2 BB-DARS: Blood biomarker DrAinage reserve score for personalized risk assessment of ARIA under Aß immunotherapy
by the Deutsche Alzheimer Gesellschaft (DAG) e.V.
01.10.2024-30.09.2026 as Co-PI

G3 Quantification of perivascular spaces in neuropsychiatric long-COVID/post-COVID (LC/PC) syndrome as a biomarker for persisting perivascular inflammation and disease trajectories (JE2/TP5)
by the BMBF as part of the start phase for the German Center for Mental Health (DZPG)
01.07.2023-30.06.2025 as Co-PI

G4 Vascular resistance and resilience in ALS – an ultrahigh-resolution 7T MRI study of the motor cortex
DFG MA 9235/3-1; 501214112
01.10.2022-30.09.2024 as PI

G5 MD-DARS: MagDeburger DrAinage-Reserve-Score for patient-specific, MRI-based prediction of perivascular drainage in the Alzheimer's continuum
by the Deutsche Alzheimer Gesellschaft (DAG) e.V.
01.10.2022-30.09.2024 as Co-PI

G6 Vessel distance mapping: Quantification of subcortical arterial and venous vascular patterns to study their interdependency
DFG MA 9235/1-1 (NAMT9); 446268581
01.07.2020-30.06.2021 as PI

Book chapters

B1 **Mattern H**, Lüsebrink F, Speck O.
High Resolution Structural Brain Imaging published in *Motion Correction in MR: Correction of Position, Motion, and Dynamic Field Changes* edited by van der Kouwe A, Andre J, 2022, ISBN: 9780128244609

Journal publications

J1 Dörner M, Pfister M, Tyndall A, von Känel R, Neumann K, Schreiber F, Arndt P, Fuchs E, Garz C, Glanz W, Butryn M, John A-C, Hildebrand A, Euler S, Hofmann AB, Machetanz L, Kirchebner J, Tacik P, Grimm A, Jansen R, Pawlitzki M, Henneicke S, Perosa P, Labeit B, Düzel E, Meuth SG, Vielhaber S, **Mattern H**, Bernal J, Schreiber S
Associations Of Inferior Frontal Sulcal Hyperintensities On Brain MRI With Cerebral Small Vessel Disease, Cognitive Function, And Depression Symptoms
Scientific Reports 2025
DOI: 10.1038/s41598-025-87493-8

J2 Schreiber S, Arndt P, Morton L, Garza AP, Müller P, Neumann K, **Mattern H**, Dörner M, Bernal J, Vielhaber S, Meuth SG, Dunay IR, Dityatev A, Henneicke S.
Immune system activation and cognitive impairment in arterial hypertension
American Journal of Physiology - Cell Physiology 2024
DOI: 10.1152/ajpcell.00219.2024

J3 Knoll C, Döhler J, Northall A, Schreiber S, Rotta J, **Mattern H**, Kühn E.
Age-Related Differences in Human Cortical Microstructure Depend on the Distance to the Nearest Vein
Brain Communications 2024
DOI: 10.1093/braincomms/fcae321

J4 Xu M, Ribeiro FL, Barth M, Bernier M, Bollmann S, Chatterjee S, Cognolato F, Gulban OF, Itkyal V, Liu S, **Mattern H**, Polimeni JR, Shaw TB, Speck O, Bollmann S.
VesselBoost: A Python Toolbox for Small Blood Vessel Segmentation in Human Magnetic Resonance Angiography Data
Aperture Neuro 2024
DOI: 10.52294/001c.123217

J5 Dörner M, Tyndall A, Hainc N, von Känel R, Schreiber F, Arndt P, Fuchs E, Garz C, Glanz W, Butryn M, Neumann K, Bernal J, **Mattern H**, John AC, Hildebrand A, Kirchebner J, Tacik P, Grimm A, Perosa V, Jansen R, Pawlitzki M, Düzel E, Meuth SG, Vielhaber S, Schreiber S.
Neuropsychiatric Symptoms And Lifelong Mental Activities in Cerebral Amyloid Angiopathy - A Cross-Sectional Study
Alzheimer's Research & Therapy 2024
DOI: 10.1186/s13195-024-01519-3

J6 Oltmer J, **Mattern H**, Beck J, Yakupov R, Greenberg S, Zwanenburg J, Arts T, Düzel E, van Veluw S, Schreiber S, Perosa V.
Enlarged Perivascular Spaces in the Basal Ganglia are Associated with Arteries not Veins
Journal of Cerebral Blood Flow and Metabolism 2024
DOI: 10.1177/0271678X241260629

J7 Dörner M, Seebach K, Heneka MT, Menze I, von Känel R, Euler S, Schreiber F, Arndt P, Neumann K, Hildebrand A, John AC, Tyndall A, Kirchebner J, Tacik P, Jansen R, Grimm A, Henneicke S, Perosa V, Meuth SG, Peters O, Hellmann-Regen J, Preis L, Priller J, Spruth EJ, Schneider A, Fliessbach K, Wiltfang J, Jessen F, Rostamzadeh A, Glanz W, Schulze JB, Schiebler SLF, Buerger K, Janowitz D, Perneczky R, Rauchmann BS, Teipel S, Kilimann I, Laske C, Munk MH, Spottke A, Roy-Kluth N, Wagner M, Frommann I, Lüsebrink F, Dechent P, Hetzer S, Scheffler K, Kleineidam L, Stark M, Schmid M, Ersözlü E, Brosseron F, Ewers M, Schott BH, Düzel E, Ziegler G, **Mattern H**, Schreiber S, Bernal J.
Inferior Frontal Sulcal Hyperintensities On Brain MRI Are Associated With Amyloid Positivity Beyond Age – Results From The Multicentre Observational DELCODE Study
Diagnostics 2024
DOI: 10.3390/diagnostics14090940

J8 Morton L, Arndt P, Garza AP, Henneicke S, **Mattern H**, Gonzalez M, Dityatev A, Yilmazer-Hanke D, Schreiber S, Dunay IR.
Spatio-temporal dynamics of microglia phenotype in human and murine cSVD: impact of acute and chronic hypertensive states
Acta Neuropathologica Communications 2023
DOI: 10.1186/s40478-023-01672-0

J9 Sangal M, Anikeeva M, Priese CS, **Mattern H**, Hövener J-B, Speck O.
MR based magnetic susceptibility measurements of 3D printing materials at 3 Tesla
Journal of Magnetic Resonance Open 2023
DOI:10.1016/j.jmro.2023.100138

J10 Garcia-Garcia B*, **Mattern H***, Vockert N, Yakupov R, Schreiber F, Spallazzi M, Perosa V, Haghikia A, Speck O, Düzel E, Maass A, Schreiber S.
Vessel Distance Mapping: A novel methodology for assessing vascular-induced cognitive resilience
NeuroImage 2023
DOI:10.1016/j.neuroimage.2023.120094
***equal contribution**

J11 Schreiber S, Bernal J, Arndt P, Schreiber F, Müller P, Morton L, Braun-Dullaeus RC, Valdés-Hernández MC, Duarte R, Wardlaw JM, Meuth SG, Mietzner G, Vielhaber S, Dunay IR, Dityatev A*, Jandke S*, **Mattern H***.
Brain Vascular Health in ALS Is Mediated through Motor Cortex Microvascular Integrity
Cells 2023
DOI:10.3390/cells12060957
***equal contribution**

J12 Perosa V, Rotta J, Yakupov R, Kuijf HJ, Schreiber F, Oltmer JT, **Mattern H**, Heinze HJ, Düzel E, Schreiber S.
Implications of quantitative susceptibility mapping at 7 Tesla MRI for microbleeds detection in cerebral small vessel disease
Frontiers in Neurology 2023
DOI: 10.3389/fneur.2023.1112312

J13 Spitz L, Gaidzik F, Stucht D, **Mattern H**, Preim B, Saalfeld S.
A hybrid hierarchical strategy for registration of 7T TOF-MRI to 7T PC-MRI intracranial vessel data
International Journal of Computer Assisted Radiology and Surgery 2023
DOI: 10.1007/s11548-023-02836-y

J14 Chatterjee S, Prabhu L, Pattadkal M, Bortsova G, Sarasaen C, Dubost F, **Mattern H**, de Bruijne M, Speck O, Nürnberger A.
DS6: Deformation-Aware Semi-Supervised Learning: Application to Small Vessel Segmentation with Noisy Training Data
Journal of Imaging 2022
DOI: 10.3390/jimaging8100259

J15 Bollmann S, **Mattern H**, Bernier M, Robinson SR, Park D, Speck O, Polimeni JR.
Imaging of the pial arterial vasculature of the human brain in vivo using high-resolution 7T time-of-flight angiography
eLife, 2022
DOI: 10.7554/eLife.71186

J16 Perosa V, Arts T, Assmann A, **Mattern H**, Speck O, Oltmer J, Heinze H-J, Düzel E, Schreiber S, Zwanenburg JJM.
Pulsatility index in the basal ganglia arteries increases with age in elderly with and without cerebral small vessel disease
American Journal of Neuroradiology, 2022
DOI: 10.3174/ajnr.A7450

J17 Iamshchinina P, Kaiser D, Yakupov R , Hänelt D, Sciarra A, **Mattern H**, Lüsebrink F, Düzel E, Speck O, Weiskopf N, Cichy R.
Perceived and mentally rotated contents are differentially represented in cortical layers of V1
Communications Biology, 2021
DOI: 10.1038/s42003-021-02582-4

J18 Sciarra A, **Mattern H**, Yakupov R, Chatterjee S, Oeltze-Jafra S, Speck O.
Quantitative Evaluation of Prospective Motion Correction in Healthy Subjects at 7T MRI
Magnetic Resonance in Medicine, 2021
DOI: 10.1002/mrm.28998

J19 Vockert N, Perosa V, Ziegler G, Schreiber F, Priester A, Spallazzi M, Garcia-Garcia B, Aruci M, **Mattern H**, Haghikia A, Düzel E, Schreiber S, Maass A.
Hippocampal vascularization patterns exert local and distant effects on brain structure but not vascular pathology in old age
Brain Communications, 2021
DOI: 10.1093/braincomms/fcab127

J20 Lüsebrink F, **Mattern H**, Yakupov R, Acosta-Cabronero J, Ashtarayeh M, Oeltze-Jafra S, Speck O.
Comprehensive ultrahigh resolution whole brain in vivo MRI dataset as a human phantom
Scientific Data, 2021
DOI: 10.1038/s41597-021-00923-w

J21 **Mattern H**, Knoll M, Lüsebrink F, Speck O.
Chemical sHift bAsed pRospectIve k-Space anonyMizAtion (CHARISMA)
Magnetic Resonance in Medicine, 2020
DOI: 10.1002/mrm.28460

J22 Gretsch F*, **Mattern H***, Gallichan D, Speck O.
Fat navigators and Moiré phase tracking comparison for motion estimation and retrospective correction
Magnetic Resonance in Medicine, 2019
DOI: 10.1002/mrm.27908
***equal contribution**

J23 Betts MJ, Kirilina E, Otaduy M, Ivanov D, Acosta-Cabronero J, Callaghan M, Lambert C, Cardenas-Blanco A, Pine K, Passamonti L, Loane C, Keuken MC, Trujillo P, Lüsebrink F, **Mattern H**, Liu K, Priovoulos N, Fließbach K, Dahl MJ, Maass A, Madelung CF, Meder D, Ehrenberg AJ, Speck O, Weiskopf N, Dolan R, Inglis B, Tosun D, Morawski M, Zucca ZA, Siebner HR, Mather M, Uludag K, Heinsen H, Poser BA, Howard R, Zecca L, Rowe JB, Grinberg LT, Jacobs HIL, Düzel E, Hämmerer D.
Locus coeruleus imaging as a biomarker for noradrenergic dysfunction in neurodegenerative diseases
Brain, 2019
DOI: 10.1093/brain/ awz193

J24 **Mattern H**, Sciarra A, Lüsebrink F, Acosta-Cabronero J, Speck O.
Prospective motion correction improves high resolution quantitative susceptibility mapping at 7T
Magnetic Resonance in Medicine, 2018
DOI: 10.1002/mrm.27509

J25 Acosta-Cabronero J, Milovic C, **Mattern H**, Tejos C, Speck O, Callaghan MF.
A robust multi-scale approach to quantitative susceptibility mapping
NeuroImage, 2018
DOI: 10.1016/j.neuroimage.2018.07.065

J26 Milovic C, Acosta-Cabronero J, Pinto JM, **Mattern H**, Andia M, Uribe S, Tejos C.
A new discrete dipole kernel for quantitative susceptibility mapping
Magnetic resonance imaging, 2018
DOI: 10.1016/j .mri.2018.04.004

J27 **Mattern H**, Sciarra A, Godenschweger F, Stucht D, Lüsebrink F, Rose G, Speck O.
Prospective motion correction enables highest resolution time-of-flight angiography at 7T
Magnetic Resonance in Medicine, 2017
DOI: 10.1002/mrm.27033

J28 Lüsebrink F, Sciarra A, **Mattern H**, Yakupov R, Speck O.
T1-weighted in vivo human whole brain MRI dataset with an ultrahigh isotropic resolution of 250 μm
Scientific Data, 2017
DOI: 10.1038/sdata.2017.32

J29 Yarach U, In MH, Chatnuntawech I, Bilgic B, Godenschweger F, **Mattern H**, Sciarra A, Speck O.
A Model-based Iterative Reconstruction for Single-shot EPI at 7T
Magnetic Resonance in Medicine, 2017
DOI: 10.1002/mrm.26633

Letters & comments

L1 **Mattern H**
Editorial for: Subject discomfort of 5T MRI examinations and associated contributing factors
Journal of Magnetic Resonance Imaging, 2025
DOI:10.1002/jmri.29774

L2 Müller P, Herzog M, Duderstadt Y, Kunz M, Lechner K, Meyer F, Schmeißer A, Meißler S, Ahrens D, Neumann K, **Mattern H**, Speck O, Behme D, Dunay I, Seeland U, Schreiber S, Braun-Dullaeus R.
Kardiovaskuläre Prävention in Sachsen-Anhalt - Notwendigkeit und neue Perspektiven
Die Innere Medizin, 2024
DOI:10.1007/s00108-024-01789-x

L3 Pinto J, McGee A, **Mattern H**, Markenroth Bloch K, Haast RAM, Küstner T, Vannesjo SJ.
ESMRMB 2024 focus topic "MR Beyond Structures: The dynamic body at different scales"
Magnetic Resonance Materials in Physics, Biology and Medicine, 2024
DOI:10.1007/s10334-024-01175-6

L4 Schreiber S, Arndt P, Meuth SG, Dityatev A, **Mattern H**.
Brain microvascular disease and functional network connectivity – a call for a stage-based approach
Brain Communications, 2023
DOI:10.1093/braincomms/fcad135

L5 Schreiber S*, John A-C*, Werner C, Vielhaber S, Heinze H-J, Speck O, Würfel J, Behme D*, **Mattern H***.
Counteraction of inflammatory activity in CAA-related subarachnoid hemorrhage
Journal of Neurology, 2022
DOI:10.1007/s00415-022-11437-9
***equal contribution**

L6 Schreiber S, **Mattern H**.
Semi-automated Segmentation and Quantification of Perivascular Spaces at 7 Tesla in COVID-19
Qeios, 2022
DOI: 10.32388/Z0HEWQ

Workshops & Challenges

X1 *SMILE-UHURA : Small Vessel Segmentation at MesoscopIc ScaLEfrom Ultra-High ResolUtion 7T Magnetic Resonance Angiograms*
Organizers: Chatterjee S, **Mattern H**, Dubost F, Schreiber S, Nürnberger A, Speck O.
Conference: IEEE - ISBI 2023, Cartagena de Indias, Colombia / hybrid
DOI: 10.7303/syn47164761 , Challenge homepage

Conference papers

C1 Chatterjee S, Prabhu K, Pattadkal M, Bortsova G, Sarasaen C, Dubost F, **Mattern H**, de Bruijne M, Speck O, Nürnberger A
DS6, Deformation-aware Semi-supervised Learning: Application to Small Vessel Segmentation with Noisy Training Data
Medical Imaging with Deep Learning, 2021
Link to online version

C2 Preeth CJ, **Mattern H**, Juneja M, Vogt J, Speck O, Hartkens T
Entropy based SVM Classifier for Automatic Detection of Motion Artifacts in Clinical MRI
Bildverarbeitung für die Medizin, 2020
DOI: 10.1007/978-3-658-29267-6 _23

C3 Thoma N, Odenbach R, **Mattern H**, Friebe M
Remotely controllable phantom rotation system for ultra-high field MRI to improve Cross Calibration
Current Directions in Biomedical Engineering, 2019
DOI: 10.1515/cdbme-2019-1570538325

Conference abstracts

A1 Penalba Sanchez L, Yi Y-Y, Kurt E, Femminella GD, Loane C, Duckett M, Callaghan M, Weiskopf N, Dolan R, Glanz W, Butryn M, **Mattern H**, Leiman M, Mann I, Pankratz U, Lübeck CY, Kelling N, Howard R, Düzel E, Hämmerer D; *Investigating the Role of the Locus Coeruleus Noradrenergic System in Cognitive Function in Amnestic Mild Cognitive Impairment: An fMRI Study*; 33rd European Congress for Psychiatry. EPA, April 2025, Madrid;

A2 **Mattern H**, Einspänner E, Fuchs E, Schreiber S, Behme D; *Sleepy QSM: Pilot study to assess the effect of sleep deprivation on brain homeostasis with 7T QSM*; 40th Annual Scientific Meeting of European Society for Magnetic Resonance in Medicine and Biology. ESMRMB, October 2024, Barcelona; DOI: 10.1007/s10334-024-01191-6

A3 Akrasirakul S, Setakornnukul J, Puangragsa U, Sathitwatthanawirot C, **Mattern H**, Speck O, Yarach U; *Tikhonov Regularization with High SNR 3D Priors on Highly Accelerated 4D Body MRI* ; 40th Annual Scientific Meeting of European Society for Magnetic Resonance in Medicine and Biology. ESMRMB, October 2024, Barcelona; DOI: 10.1007/s10334-024-01191-6

A4 Díaz M, Fuchs E, **Mattern H**, Behme D, Duarte R, Valdés-Hernández MC, Wardlaw J, Schreiber S, Trujillo M, Bernal J; *Contrast-agnostic deep-learning-based detection of perivascular spaces in magnetic resonance imaging*; Alzheimer's Association International Conference, July 2024, Philadelphia

A5 Xu M, Ribeiro FL, Liu S, Shaw TB, **Mattern H**, Chatterjee S, Speck O, Gulban OF, Hartung G, Bollmann S, Polimeni JR, Barth M, Bollmann S; *VesselBoost: Combining Data Augmentation and Test-time Adaptation to Improve Segmentation of Small Vessels in Human Brain Magnetic Resonance Angiograms*; 2024 OHBM Annual Meeting, June 2024, Seoul; Aperture Neuro. 2024;4(Suppl 1). DOI: 10.52294/001c.120595

A6 Vockert N, Lümkemann L, Yi YJ, Garcia-Garcia B, Behrenbruch N, Marquardt J, Hayek D, **Mattern H**, Hämmerer D, Diersch N, Kühn E, Schreiber S, Maass A; *Examining hippocampal vessel distances in relation to cognition and brain structure in young adults*; 2024 OHBM Annual Meeting, June 2024, Seoul; Aperture Neuro. 2024;4(Suppl 1). DOI: 10.52294/001c.120595

A7 Müller P, Neumann K, Horndasch L, **Mattern H**, Groschek T, Meuth SG, Dunay I, Schmeißer A, Behme D, Schreiber S, Braun-Dullaeus R; *Cerebral small vessel disease as a mediator between heart failure with preserved ejection fraction and cognitive decline*; 10th European Stroke Organisation Conference, May 2024, Basel

A8 Müller P, Horndasch L, Neumann K, **Mattern H**, Cardace S, Arndt P, Pfister M, Groschek T, Vielhaber S, Meuth SG, Dunay I, Schmeißer A, Behme D, Schreiber S, Braun-Dullaeus R; *Cerebral small vessel disease mediates the effect of arterial stiffness on cognitive decline in patients with heart failure with preserved ejection fraction*; 33rd European Meeting on Hypertension and Cardiovascular Protection, May 2024, Berlin; Journal of Hypertension. 42(Suppl 1):e92-e93; DOI: 10.1097/01.hjh.0001020204.96874.a6,

A9 **Mattern H**, Tung YH, Lüsebrink F, Speck O; *Assessing the potential of 7T and high-performance gradients for high-resolution R2* mapping in deep gray matter*; 32nd Annual Meeting of International Society of Magnetic Resonance in Medicine. ISMRM, May 2024, Singapore

A10 Tung YH, **Mattern H**, Speck O; *High b-value in vivo Whole-brain Diffusion MRI at 7T with a High-performance Gradient System*; 32nd Annual Meeting of International Society of Magnetic Resonance in Medicine. ISMRM, May 2024, Singapore

A11 Velasquez Vides JR, Herrmann CJJ, Gladytz T, Shalikar S, Millward JM, Waiczies S, Seeliger E, **Mattern H**, Rose G, Niendorf T; *Simultaneous and Respiratory Motion-Synchronized T2 and T2* Mapping of the Human Kidneys*; 32nd Annual Meeting of International Society of Magnetic Resonance in Medicine. ISMRM, May 2024, Singapore

A12 Müller P, Horndasch L, **Mattern H**, Neumann K, Cardace S, Arndt P, Pfister M, Groschek T, Meuth SG, Dunay I, Schmeißer A, Behme D, Schreiber S, Braun-Dullaeus R; *Cerebral small vessel disease in patients with heart failure with preserved ejection fraction (HFpEF). A pilot study*; 90. Jahrestagung der Deutsche Gesellschaft für Kardiologie – Herz- und Kreislaufforschung e.V. (German Cardiac Society), April 2024, Mannheim DOI: 10.1007/s00392-024-02406-5

A13 Stoll S, Lüsebrink F, Schwarzkopf DS, **Mattern H**, Liu P, Noelle J, Kühn E; *Mapping 2D Population Receptive Fields of the Fingertips in Human Primary Somatosensory Cortex*; 5th Brain In Depth Conference, March 2024, Tübingen

A14 **Mattern H**, Schreiber S, Speck O; *Combining vessel distance mapping and non-negative matrix factorization to identify arterial and venous patterns in the putamen*; 2023 ICP Network Meeting Utrecht, November 2023, Utrecht

A15 Mietzner G, Schreiber F, Lümkemann L, Brüggemann J, Sciarra A, Knoll C, Kuehn E, Speck O, Schreiber S, **Mattern H**; *Enabling in vivo assessment of motor cortex vessel dominance patterns using 7T MRI and vessel distance mapping*; 39th Annual Scientific Meeting of European Society for Magnetic Resonance in Medicine and Biology. ESMRMB, October 2023, Bern; DOI: 10.1007/s10334-023-01108-9

A16 Fuchs E **Mattern H**, Vockert N, Arndt P, Neumann K, John A-C, Kühn E, Maass A, Düzel E, Schreiber S, Behme D; *Aging, cognition, and cerebral small vessel disease correlate with MR-based patterns of blood brain barrier breakdown*; 58. Jahrestagung der Deutschen Gesellschaft für Neuroradiologie e.V. Neurorad, October 2023, Kassel

A17 Stoll S, Lüsebrink F, Schwarzkopf DS, **Mattern H**, Liu P, Kühn E; *Tailoring Population Receptive Field Modeling to Other Sensory Systems – From Vision to Touch*; System vision science summer school & symposium, August 2023, Tübingen

A18 Behrenbruch N, Incesoy E, Bernal J, Menze I, Vockert N, Kleineidam L, Buerger K, Wolfsgruber S, Spottke A, Fleissbach K, Laske C, Perneczky R, Peters O, Priller J, Schneider A, Heneka MT, Wagner M, Teipel S, Wiltfang J, Speck O, Perosa V, Yakupov R, Jessen F, Düzel E, **Mattern H**, Schreiber S, Ziegler G, Maass A; *Altered Blood Oxygen Level Dependent Signal Fluctuations in the Spectrum of Alzheimer's Dementia and in Patients with White Matter Hyperintensities*; Alzheimer's Association International Conference, July 2023, Amsterdam

A19 Stoll S, Lüsebrink F, Schwarzkopf DS, **Mattern H**, Liu P, Kühn E; *Modeling Population Receptive Fields of the Fingertips in Human Primary Somatosensory Cortex*; Touch 2023: Festival of Touch, July 2023, Marseille

A20 **Mattern H**, Speck O; *The potential of ultra-high resolution 7T T2-weighted TSE to assess the glymphatic system's structure*; 31st Annual Meeting of International Society of Magnetic Resonance in Medicine. ISMRM, June 2023, Toronto

A21 **Mattern H**, Lüsebrink F, Speck O; *The effect of imaging parameters, aging, and circadian rhythm on Freesurfer's estimates: A single subject study at 7T over 7 years*; 31st Annual Meeting of International Society of Magnetic Resonance in Medicine. ISMRM, June 2023, Toronto

A22 Oltmer J, Beck J, **Mattern H**, Yakupov R, Auger C, Düzel E, van Veluw S, Schreiber S, Perosa V; *Enlarged Perivascular Spaces in the Basal Ganglia Surround Arteries, not Veins*; 31st Annual Meeting of International Society of Magnetic Resonance in Medicine. ISMRM, June 2023, Toronto

A23 Chatterjee S, Gaidzik F, Sciarra A, **Mattern H**, Janiga G, Speck O, Nürnberger A, Pathiraja S; *Exploiting the inter-rater disagreement to improve probabilistic segmentation*; 31st Annual Meeting of International Society of Magnetic Resonance in Medicine. ISMRM, June 2023, Toronto

A24 Chatterjee S, Chintalapati KV, Radhakrishna C, Kumar SCHR, Sutrave R, **Mattern H**, Speck O, Nürnberger A; *Enhancing Vessel Continuity in Deep Learning based Segmentation using Maximum Intensity Projection as Loss*; 31st Annual Meeting of International Society of Magnetic Resonance in Medicine. ISMRM, June 2023, Toronto

A25 Besteher B, Kantola J, Li M, Bernal J, Machnik M, Reuken P, Finke K, Opel N, Kiviniemi V, **Mattern H**, Walter M; *From inflammation to degeneration – Enlarged perivascular spaces and glymphatic clearance in neuropsychiatric long-COVID syndrome*; Psychoimmunology Expert Meeting 2023, April 2023, Ulm; DOI: 10.1016/j .jadr.2023.100522

A26 John A-C, Schreiber S, Werner C, Vielhaber S, Heinze H-J, Speck O, Würfel J, Behme D, **Mattern H**; *Evolution of cortical superficial siderosis in a 75-year-old patient with cerebral amyloid angiopathy*; 8th International Cerebral Amyloid Angiopathy (CAA) Conference, November 2022, Perth

A27 Fuchs E, **Mattern H**, John A-C, Zubel S, Vielhaber S, Düzel E, Maass A, Kühn E, Schreiber S, Behme D; *Investigation of Blood Brain Barrier Breakdown and Early Clearance in Patients with Cerebral Small Vessel Disease using Contrast Enhanced MRI*; 57. Jahrestagung der Deutschen Gesellschaft für Neuroradiologie e.V. Neurorad, October 2022, Kassel

A28 John A-C, Schreiber S, Werner C, Vielhaber S, Heinze H-J, Speck O, Würfel J, Behme D, **Mattern H**; *Entwicklung einer kortikalen superfiziellen Siderose bei einer 75-jährigen Patientin mit zerebraler Amyloidangiopathie (CAA)*; 57. Jahrestagung der Deutschen Gesellschaft für Neuroradiologie e.V. Neurorad, October 2022, Kassel

A29 **Mattern H**, Speck O; *The potential of ultra-high resolution T2-weighted TSE acquired at 7T to assess structures of the glymphatic system*; ISMRM Workshop on Neurofluids. September 2022, Rome

A30 Velasquez Vides JR, Speck O, Niendorf T, **Mattern H**; *Development of Freely Available 3D Radial Gradient Echo Sequences and Reconstruction*; 13th Annual Scientific Symposium Ultrahigh Field Magnetic Resonance. September 2022, Berlin

A31 Garcia-Garcia B, **Mattern H**, Vockert N, Yakupov R, Schreiber F, Spallazzi M, Perosa V, Speck O, Düzel E, Maass A, Schreiber S; *Vessel distance mapping: a novel methodology for assessing vascular-induced cognitive resilience*; Alzheimer's Association International Conference, July 2022, San Diego; DOI: 10.1002/alz.063391

A32 Ulbrich P, Morton L, Briese M, Lämmlin N, **Mattern H**, Hasanuzzaman M, Westhues M, Garz C, Becker A, Dityatev A, Jandke S, Yilmazer-Hanke D, Sendtner M, Dunay I, Schreiber S; *Stage-dependent responses of vascular and parenchymal cells in the hypertensive rat brain*; 31st European Meeting on Hypertension and Cardiovascular Protection, June 2022, Athens/Hybrid; DOI: 10.1097/01 .hjh.0000836812.14897.03

A33 **Mattern H**, Angenstein F, Mawrin C, Perosa V; *Post mortem study of R2* and vessel distance maps across cortical depth*; Joint Annual Meeting ISMRM-ESMRMB 2022, May 2022, London, UK

A34 **Mattern H**, Speck O; *Resolution-dependency of arterial and venous density estimates and vessel distance maps in deep gray matter*; Joint Annual Meeting ISMRM-ESMRMB 2022, May 2022, London, UK

A35 Anikeeva M, Sangal M, Pravdivtseva MS, **Mattern H**, Speck O, Hövener J-B; *Magnetic Resonance Relaxometry and susceptibility of contemporary 3D printing materials*; First International Workshop on Reacting Particle-Gas Systems, June 2022, Bochum, Germany

A36 Neumann K, Aruci M, Aki C, Günther M, Mistelbauer G, Garcia-Garcia B, Oeltze-Jafra S, Stucht D, **Mattern H**, Speck O, Perosa V, Düzel E, Schreiber S; *Vaskuläre Ursachen kognitiver Defizite bei Patienten mit zerebraler Mikroangiopathie*; Research Days 2021, Magdeburg, Germany

A37 **Mattern H**; *Vessel distance mapping of the aging subcortical venous vasculature*; 37th Annual Scientific Meeting of European Society for Magnetic Resonance in Medicine and Biology. ESMRMB, October 2021, Online; DOI: 10.1007/s10334-021-00947-8

A38 Bollmann S, **Mattern H**, Bernier M, Robinson SR, Park D, Speck O, Polimeni JR; *High resolution time-of-flight angiography of the pial arterial vasculature of the human brain in vivo*; 12th Annual Scientific Symposium Ultrahigh Field Magnetic Resonance. September 2021, Berlin, Germany

A39 **Mattern H**; *Openly available sMall vEsseL sEgmenTaTion pipelinE (OMELETTE)*; 29th Annual Meeting of International Society of Magnetic Resonance in Medicine. ISMRM, May 2021, virtual meeting

A40 **Mattern H**, Schreiber S, Speck O; *Vessel distance mapping for deep gray matter structures*; 29th Annual Meeting of International Society of Magnetic Resonance in Medicine. ISMRM, May 2021, virtual meeting

A41 Iamshchinina P, Kaiser D, Yakupov R, Haenelt D, Sciarra A, **Mattern H**, E. Duezel, Speck O, Weiskopf N, Cichy R; *Perceived and mentally rotated contents are differentially represented in cortical layers of V1*; 20th Annual Meeting Vision Sciences Society, October 2020; DOI: 10.1167/jov.20.11.766

A42 **Mattern H**, Speck O; *Vessel distance mapping*; 36th Annual Scientific Meeting of European Society for Magnetic Resonance in Medicine and Biology. ESMRMB, September 2020, Online; DOI: 10.1007/s10334-020-00876-y

A43 **Mattern H**, Knoll M, Lüsebrink F, Speck O; *Chemical sHift bAsed pRospectIve k-Space anonyMizAtion (CHARISMA)*; 28th Annual Meeting of International Society of Magnetic Resonance in Medicine. ISMRM, August 2020, virtual meeting

A44 **Mattern H**, Sciarra A, Dünnwald M, Chatterjee S, Müller U, Oeltze-Jafra S, Speck O; *Contrast prediction-based regularization for iterative reconstructions (PROSIT)*; 28th Annual Meeting of International Society of Magnetic Resonance in Medicine. ISMRM, August 2020, virtual meeting

A45 **Mattern H**, Odenbach R, Thoma N, Godenschweger F, Speck O; *Remotely controllable phantom rotation device for cross-calibration at 7T*; 28th Annual Meeting of International Society of Magnetic Resonance in Medicine. ISMRM, August 2020, virtual meeting

A46 Lüsebrink F, **Mattern H**, Yakupov R, Oeltze-Jafra S, Speck O; *The human phantom: Comprehensive ultrahigh resolution whole brain in vivo single subject dataset*; 28th Annual Meeting of International Society of Magnetic Resonance in Medicine. ISMRM, August 2020, virtual meeting data available at DOI: 10.24352/UB.OVGU-2020-145

A47 Sciarra A, Dünnwald M, **Mattern H**, Speck O, Oeltze-Jafra S; *Super-Resolution with Conditional-GAN for MR Brain Images*; 28th Annual Meeting of International Society of Magnetic Resonance in Medicine. ISMRM, August 2020, virtual meeting

A48 Iamshchinina P, Kaiser D, Yakupov R, Haenelt D, Sciarra A, **Mattern H**, E. Duezel, Speck O, Weiskopf N, Cichy R; *Perceived and mentally rotated contents are differentially represented in cortical layers of V1*; 26th Annual Meeting of the Organization for Human Brain Mappting. OHBM, June 2020, virtual meeting

A49 Lüsebrink F, **Mattern H**, Oeltze-Jafra S, Speck O; *Beyond high resolution: Denoising during image reconstruction to improve image quality*; 36th Annual Scientific Meeting of European Society for Magnetic Resonance in Medicine and Biology. ESMRMB, October 2019, Rotterdam; DOI: 10.1007/s10334-019-00755-1

A50 Lüsebrink F, **Mattern H**, Oeltze-Jafra S, Speck O; *Image reconstruction pipeline*; 36th Annual Scientific Meeting of European Society for Magnetic Resonance in Medicine and Biology. ESMRMB, October 2019, Rotterdam; DOI: 10.1007/s10334-019-00756-0

A51 Thoma N, Odenbach R, **Mattern H**,Friebe M; *Remotely controllable phantom rotation system for ultra-high field MRI to improve Cross-Calibration*; 53rd Annual Conference of the German Society for Biomedical Engineering, September 2019, Frankfurt am Main, Germany

A52 Lüsebrink F, **Mattern H**, Oeltze-Jafra S, Speck O; *Denoising during image reconstruction to improve image quality of high resolution MR data*; 3rd Brain in Depth Symposium, April 2019, Leipzig, Germany

A53 **Mattern H**, Acosta-Cabronero J, Speck O; *High resolution imaging of the arterial and venous vasculature in deep gray matter*; 27th Annual Meeting of International Society of Magnetic Resonance in Medicine. ISMRM, May 2019, Montreal, Canada

A54 Gretsch F, **Mattern H**, Gallichan D, Speck O; *Direct comparison of fat navigators and Moiré phase tracking for retrospective brain motion correction at 7T*; 27th Annual Meeting of International Society of Magnetic Resonance in Medicine. ISMRM, May 2019, Montreal, Canada

A55 Cardenas-Blanco A, Chen Y, Valdes-Herrera JP, Yakupov R, **Mattern H**, Sciarra A, Berron D, Maass A, Speck O, Düzel E; *Hippocampal subfield segmentation and partial volume effects - reliability assessment*; 27th Annual Meeting of International Society of Magnetic Resonance in Medicine. ISMRM, May 2019, Montreal, Canada

A56 **Mattern H**, Speck O; *Optimizing Cartesian compressed sensing for ultra-high resolution Time of Flight angiography*; Joint Annual Meeting ISMRM-ESMRMB 2018, June 2018, Paris, France

A57 Sciarra A, **Mattern H**, Speck O; *Machine learning algorithms for detection of motion artifacts: a general approach*; Joint Annual Meeting ISMRM-ESMRMB 2018, June 2018, Paris, France

A58 **Mattern H**, Odenbach R, Parsanejad P, Friebe M; *3D-printed MRI marker for personalized interventional applications through T1 and T2 relaxation time matching*; Computer Assisted Radiology and Surgery Congress and Exhibition. CARS, June 2018, Berlin, Germany; DOI:/10.1007/s11548-018-1766-y

A59 Lüsebrink F, **Mattern H**, Speck O; *Beyond high resolution: A glimpse into the future*; 2nd Brain in Depth Symposium, May 2018, Magdeburg, Germany

A60 Lüsebrink F, **Mattern H**, Sciarra A, Yakupov R, Speck O; *Ultrahoch aufgelöster T1-gewichteter in vivo MRT Datensatz des gesamten menschlichen Gehirns*; 20th Annual Meeting German Chapter of International Society of Magnetic Resonance in Medicine, November 2017, Göttingen; ISSN: 1863-6365

A61 **Mattern H**, Sciarra A, Speck O; *Non-iterative, retrospective background suppression in time of flight angiography*; 34th Annual Scientific Meeting of European Society for Magnetic Resonance in Medicine and Biology. ESMRMB, October 2017, Barcelona; DOI: 10.1007/s10334-017-0632-1

A62 **Mattern H**, Sciarra A, Speck O; *Wavelet entropy: quantifying small-scale head motion artifacts*; 34th Annual Scientific Meeting of European Society for Magnetic Resonance in Medicine and Biology. ESMRMB, October 2017, Barcelona; DOI: 10.1007/s10334-017-0632-1

A63 **Mattern H**, Lüsebrink F, Speck O; *Ultrahochaufgelöste MRT des Gehirns mittels prospektiver Bewegungskorrektur*; 52. Jahrestagung der Deutschen Gesellschaft für Neuroradiologie e.V. Neurorad, October 2017, Cologne

A64 **Mattern H**, Lüsebrink F, Sciarra A, Speck O; *More than meets the eye: Quantitative evaluation of prospective motion correction at 7T*; 25th Annual Meeting of International Society of Magnetic Resonance in Medicine. ISMRM, April 2017, Honolulu, USA

A65 **Mattern H**, Sciarra A, Godenschweger F, Stucht D, Lüsebrink F, Speck O; *Beyond the biological resolution limit: Prospectively motion corrected Time of Flight angiography at 7T*; 25th Annual Meeting of International Society of Magnetic Resonance in Medicine. ISMRM, April 2017, Honolulu

A66 Sciarra A, **Mattern H**, Yakupov R, Stucht D, Schulze P, Godenschweger F, Speck O; *Quantitative Evaluation of Prospective Motion Correction for Structural Imaging at 7T*; 25th Annual Meeting of International Society of Magnetic Resonance in Medicine. ISMRM, April 2017, Honolulu

A67 Cardenas-Blanco A, Berron D, Chen Y, **Mattern H**, Yakupov R, Sciarra A, Speck O, Düzel E; *Impact of Prospective Motion Correction in 7T FMRI Studies*; 25th Annual Meeting of International Society of Magnetic Resonance in Medicine. ISMRM, April 2017, Honolulu

A68 Rua C, In MH, Yakupov R, **Mattern H**, Costagli M, Symms M, Del Guerra A, Tosetti M, Speck O; *Study of the PSF Distortion Correction for Ultra-High Field BOLD FMRI*; 25th Annual Meeting of International Society of Magnetic Resonance in Medicine. ISMRM, April 2017, Honolulu

A69 Lüsebrink F, **Mattern H**, Sciarra A, Speck O; *Quantitative and Qualitative Evaluation of Bias Field Correction Methods*; 25th Annual Meeting of International Society of Magnetic Resonance in Medicine. ISMRM, April 2017, Honolulu

A70 Yarach U, **Mattern H**, Speck O; *Iterative SENSE with Integrated EPI Nyquist Ghost and Distortion Corrections*; 25th Annual Meeting of International Society of Magnetic Resonance in Medicine. ISMRM, April 2017, Honolulu

A71 **Mattern H**, Acosta-Cabronero J, Sciarra A, Speck O; *Prospectively motion-corrected QSM at 7 Tesla*; 33rd Annual Scientific Meeting of European Society for Magnetic Resonance in Medicine and Biology. ESMRMB, September 2016, Vienna; DOI: 10.1007/s10334-016-0570-3

A72 **Mattern H**, Sciarra A, Godenschweger F, Stucht D, Lüsebrink F, Speck O; *Beyond high resolution: Prospectively motion corrected Time of Flight angiography with 150 μm isotropic resolution at 7T under SAR constraints*; 28th Annual International Conference of Society of Magnetic Resonance Angiography. SMRA, September 2016, Chicago

A73 **Mattern H**, Acosta-Cabronero J, Sciarra A, Speck O; *Prospective motion correction for high-resolution QSM*; 4th International Workshop on Quantitative Susceptibility Mapping. September 2016, Graz

A74 Sciarra A, **Mattern H**, Stucht D, Yakupov R, Schulze P, Godenschweger F, Speck O; *Prospective Motion Correction Applications at 7T*; ITN Network HiMR Final Meeting. June 2016, Magdeburg

A75 Rua C, Costagli M, Biagi L, Symms M, Cosottini M, Wastling S, Barker G, In MH, Yakupov R, **Mattern H**, Speck O, Del Guerra A, Tosetti M; *Strategies for high-resolution fMRI at 7 Tesla*; ITN Network HiMR Final Meeting. June 2016, Magdeburg

A76 **Mattern H**, Acosta-Cabronero J, Sciarra A, Speck O; *Prospectively motion corrected QSM-based venograms at 7 Tesla*; 7th Annual Scientific Symposium Ultrahigh Field Magnetic Resonance. June, 2016 Berlin

A77 **Mattern H**, Sciarra A, Godenschweger F, Stucht D, Lüsebrink F, Speck O; *Prospective motion correction for ultra-high resolution Time of Flight angiography at 7T under SAR constraints*; 24th Annual Meeting of International Society of Magnetic Resonance in Medicine. ISMRM, May 2016, Singapore

A78 Lüsebrink F, Sciarra A, **Mattern H**, Yakupov R, Speck O; *Beyond High Resolution MPRAGE: In Vivo T1-Weighted Imaging at 7T with 250 μm Isotropic Resolution Using Prospective Motion Correction*; 24th Annual Meeting of International Society of Magnetic Resonance in Medicine. ISMRM, May 2016, Singapore

A79 Yarach U, **Mattern H**, Sciarra A, Speck O; *Combination of Individual Coil QSM at High Field Strength (7T)*; 24th Annual Meeting of International Society of Magnetic Resonance in Medicine. ISMRM, May 2016, Singapore

A80 Yarach U, Stucht D, **Mattern H**, Godenschweger F, Speck O; *Gradient Nonlinearity and B0-Induced Distortion Corrections of Prospective Motion Correction Data at 7T MRI*; 24th Annual Meeting of International Society of Magnetic Resonance in Medicine. ISMRM, May 2016, Singapore

A81 **Mattern H**, Godenschweger F, Sciarra A, Stucht D, Speck O; *Ultra-high resolution Time of Flight angiography at 7T with prospective motion correction under SAR constraints*; 18th Annual Meeting German Chapter of International Society of Magnetic Resonance in Medicine. DS-ISMRM, November 2015, Münster; ISSN: 1863-6365

Supervision of students

ongoing **Jascha Brüggemann**, *Vessel distance mapping to assess vascular resistance and resilience*, PhD thesis, supervisor.

2024 **Maryam Kargaran**, *Automatic vessel wall enhancement detection from contrast enhanced MRI*, Research project, examiner & supervisor.

2022 **Elnaz Khosroshahi**, *Investigation of vascular contributions to Alzheimer's disease with vessel distance mapping technique*, Master thesis, examiner & supervisor.

2020 **Jose Raul Velasquez Vides**, *Development of an freely available 3D radial gradient echo sequence and reconstruction*, Master thesis, examiner & supervisor.

2020 **Mahantesh Vishvanath Pattadkal & Kartik Prabhu**, *DS6: Deformation-aware learning for small vessel segmentation with small, imperfectly labeled dataset*, Team project, supervisor.

2019 **Ursula Müller**, *Compressed Sensing for high resolution Time of Flight angiographic Ultra High Field Magnetic Resonance Imaging*, Master thesis, examiner & supervisor.

2019 **Martin Quitmann**, *Variable k-space averaging of Inversion Recovery Sequences for high-resolution MR images with increased SNR*, Master thesis, examiner & supervisor.

2019 **Chandrakanth Jayachandran Preetha**, *Simulation of motion artifacts in magnetic resonance imaging*, Research project, examiner & supervisor.

2018 **Ursula Müller**, *Analysis of undersampling patterns for compressed sensing in magnetic resonance imaging*, Research project, examiner & supervisor.

Teaching

since 2025 **Physics I & II**, *Course leader & instructor*, summer & winter term.

since 2023 **Magnetic Resonance System Engineering**, *Tutor*, course provided to Siemens employees exclusively.

since 2019 **Basics of Magnetic Resonance**, *Tutor*, winter term.

2018-2025 **Physics for Engineers**, *Tutor*, winter & summer term.

Invited talks

IT1 *7T imaging of the cerebral structure & vasculature at the mesoscopic scale*, Inselspital - Universitätsspital Bern, 19.06.2024

IT2 *7T MRI and Vessel Distance Mapping: Unveiling Mesoscopic Vascular Patterns*, Max Planck Institute for Human Development Berlin, 30.04.2024

IT3 *High-resolution structural brain imaging*, lecture as part of the motion correction online series of British chapter of the ISMRM, 14.03.2024

IT4 *Ultra-high field MRI*, lecture at the 54th annual meeting of the Deutschen Gesellschaft für Medizinische Physik (DGMP), 28.09.2023

IT5 *Ultra-high field imaging to study the brain's vasculature and structure*, seminar of the Berlin Ultra High Field Facility, 16.11.2022

IT6 *Ultra-high resolution structural and vascular MRI*, lecture for British chapter of the ISMRM online series, 14.10.2022

IT8 *In-vivo imaging of vascular and (g)lymphatic system of the human brain with MRI*, SynAGE Workshop: Assessment of vascular and (g)lymphatic functions, Magdeburg, 05.05.2022

IT9 *(f)MRI oversimplified*, lecture for the developmental psychology course at the University of Innsbruck, 16.03.2022

IT13 *Robustness and Motion Correction: Hardware and Sequence Solutions*, 36th ESMRMB, Rotterdam, 05.10.2019

IT14 *Bewegungskorrektur*, DGMP: 54. Arbeitskreistreffen, Erlangen, 23.09.2019

IT15 *Motion corrected, high resolution MRI of the human anatomy and vasculature*, Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, 18.07.2019

Committee & Memberships

since 2023 Center for Behavioral Brain Sciences

2022-2025 Congress Program Committee for the 39th, 40th & 41st Annual Meeting of the ESMRMB

since 2021 ESMRMB Early Career Researchers ad hoc Committee
- 2021-2023 Member
- 2024 Vice-Chair
- 2025 Chair

2021-2022 ISMRM Motion Correction Study Group Committee (trainee representative)

Language skills

German mother tongue

English fluent in speech and writing

Programming skills

since 2012 MATLAB

since 2019 Python

since 2015 C/C++

since 2015 IDEA