

Max Zimmermann

Personal Data

Status/Function:		Post Doctoral Research Fellow
Scientific focus:		magnetic resonance imaging science and imaging data analysis
Phone:		+ 49 7071 29 87533
Fax:		+ 49 7071 29 4451
Email:		Max.Zimmermann@med.uni-tuebingen.de

Education and qualifications

- 03.2016 - present **Ph.D. student to Dr. rer. biol. hum.,**
Friedrich-Alexander-University Erlangen Nürnberg
- Ph.D. thesis: Multimodal refinement of functional areas in lesioned brains
- 10.2011 - 02.2016 **Electrical engineering student Dipl.-Ing. (FH),**
University of Applied Sciences Würzburg-Schweinfurt
- Diploma thesis: Entwicklung und Validierung physiologischer MRT-Verfahren zur Untersuchung des Sauerstoffstoffwechsels und der Mikrogefäßarchitektur. (*Development and validation of physiological MRI procedures for the study of oxygen metabolism and microvessel architecture.*)
 - main focus on medical engineering

Work Experience

- 10.2019 - present **PostDoc**
Werner Siemens Imaging Center, Department of Preclinical Imaging and Radiopharmacy, University of Tübingen
- developing software for multimodal metabolic imaging (MRS and PET)
 - developing software for MRI based imaging methods
 - developing software for microscopic image post processing
 - ParaVison (Bruker MRI) programming
- 01.2018 - 12.2018 **Scientific assistant**
Neuroradiology of the University Hospital Erlangen
- fMRI / MEG localizations of motor, sensory and language functions as well as their fibers and the comparison of these methods
01. 2016 - 12.2018 **Scientific assistant**
Neuroradiology of University Hospital Erlangen
- Development and validation of physiological MRI procedures for the investigation of oxygen metabolism and microvessel architecture with a focus on gliomas.
 - fMRI / MEG localizations of motor, sensory and language functions as well as their fibers

Publications

- 12.2019 **Vascular architecture mapping for early detection of glioblastoma recurrence.** Published by Neurosurg Focus
A. Stadlbauer, I. Eyüpoglu, M. Buchfelder, A. Dörfler, M. Zimmermann, G. Heinz, S. Oberndorfer
- 10.2019 **Refined fMRI and MEG mapping reveals reorganization in language-relevant areas of lesioned brains.** Published by World Neurosurg
M. Zimmermann, K. Rössler, M. Kaltenhäuser, P. Grummich, B. Yang, M. Buchfelder, A. Dörfler, K. Kölbl and A. Stadlbauer
- 03.2019 **Comparative fMRI and MEG localization of cortical sensorimotor function: Bimodal mapping supports motor area reorganization in glioma patients.** Published by PLOS ONE
M. Zimmermann, K. Rössler, M. Kaltenhäuser, P. Grummich, N. Brandner, M. Buchfelder, A. Dörfler, K. Kölbl and A. Stadlbauer
- 02.2019 **Physiologic MR imaging of the tumor microenvironment revealed switching of metabolic phenotype upon recurrence of glioblastoma in humans.** Published by Journal of Cerebral Blood Flow & Metabolism
A. Stadlbauer, S. Oberndorfer, M. Zimmermann, B. Renner, M. Buchfelder, G. Heinz, A. Dörfler, A. Kleindienst and K. Roessler
- 08.2019 **Development of a Non-invasive Assessment of Hypoxia and Neovascularization with Magnetic Resonance Imaging in Benign and Malignant Breast Tumors: Initial Results.** Published by Molecular imaging and Biology
A. Stadlbauer, M. Zimmermann, B. Bennani-Baiti, T.H. Helbich, P. Baltzer, P. Clauser, P. Kapetas, Z. Bago-Horvath and K. Pinker
- 08.2019 **Predicting Glioblastoma response to Bevacizumab Through MRI Biomarkers of the Tumor Microenvironment.** Published by Molecular imaging and Biology
A. Stadlbauer, K. Rössler, M. Zimmermann, M. Buchfelder, A. Kleindienst, A. Dörfler, G. Heinz and S. Oberndorfer
- 10.2018 **Intratumoral heterogeneity of oxygen metabolism and neovascularization uncovers 2 survival-relevant subgroups of IDH1 wild-type glioblastoma.** Published by Oxford University Press on behalf of the Society for Neuro-Oncology
A. Stadlbauer, M. Zimmermann, A. Dörfler, S. Oberndorfer, M. Buchfelder, R. Coras, M. Kitzwögerer, and K. Rössler
- 08.2017 **Vascular Hysteresis Loops and Vascular Architecture Mapping in Patients with Glioblastoma treated with Antiangiogenic Therapy.** Published by nature scientificreports
A. Stadlbauer, M. Zimmermann, S. Oberndorfer, A. Dörfler, M. Buchfelder, G. Heinz and K. Rössler
- 02.2017 **Recurrence of glioblastoma is associated with elevated microvascular transit time heterogeneity and increased hypoxia.** Published by Journal of Cerebral Blood Flow & Metabolism
A. Stadlbauer, K. Mouridsen, A. Dörfler, M.B. Hansen, S. Oberndorfer M. Zimmermann, M. Buchfelder, G. Heinz and K. Rössler
- 04.2017 **Intraoperative MR Imaging of cerebral oxygen metabolism during resection of brain lesions.** Published by World Neurosurgery
Andreas Stadlbauer, A. Merkel, M. Zimmermann, B. Sommer, M. Buchfelder, A. Meyer-Bäse and Karl Rössler

- 06.2017 **MR Imaging–derived Oxygen Metabolism and neovascularization characterization for grading and IDH gene Mutation Detection of gliomas.**
Published by Radiology
A. Stadlbauer, M. Zimmermann, M. Kitzwögerer, S. Oberndorfer, K. Rössler, A. Dörfler, M. Buchfelder and G. Heinz
- 06.2016 **Magnetic resonance imaging biomarkers for clinical routine assessment of microvascular architecture in glioma.** Published by Journal of Cerebral Blood Flow & Metabolism
A. Stadlbauer, M. Zimmermann, G. Heinz, S. Oberndorfer, A. Dörfler, M. Buchfelder and K. Rössler

Conferences and Courses attended

Regular contributions in the period 2016 up to 2018 for example ESMRMB 2016:

- Magnetic resonance imaging biomarkers for assessment of vascular pathologies in gliomas
- Combined Assessment of tumor oxygen metabolism and angiogenesis in glioma patients