

Curriculum Vitae

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RESEARCH INTEREST

I am seeking a MRI physicist position in London, UK, starting earliest in April 2019.

Since I started working as a MRI physicist with my postgraduate position in 2003, I very much liked the interdisciplinarity and diversity of the profession. I enjoy working with medical doctors and technologists and helping them getting the most out of their MRI exams and clinical studies. I also feel strongly obliged to the scientific and academic side of the profession with initiating own research projects, writing grant proposals and manuscripts as well as teaching coworkers and students. I am very enthusiastic to collaborate, since I am convinced it is only possible to make a difference, if we are working together.

My focus as a MRI physicist is quantitative imaging, including quantitative susceptibility mapping (QSM), relaxometry, myelin water imaging (MWI), perfusion (ASL, DSC) and diffusion (DTI) imaging. I am also eager to further broaden and deepen my knowledge and expertise and would be happy working on methods which are not my primary focus yet.

Please do not hesitate to contact me, if you have any question or require further information.

EDUCATION

- 06/2018 Habilitation (Privat-Dozent), University Medical Center Hamburg-Eppendorf, Hamburg, Germany
 - 11/2007 PhD in natural science (Dr.rer.nat.), with highest honor (summa cum laude), Technical University Ilmenau, Germany
 - 05/2003 Diploma in engineering physics (Dipl. Ing.), GPA 1.8 (1-best, 6-worst), Technical University Ilmenau, Germany
 - 06/1996 High school graduation, GPA 2.2 (1-best, 6-worst), Friedrich Schiller Gymnasium, Zeulenroda, Germany
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RESEARCH EXPERIENCE

- since 05/2015 Honorary Research Associate, Institute of Child Health (ICH), UCL, London, UK
- 07/2010-11/2018 Head of MRI-Physics, Department of Neuroradiology, University Medical Center Hamburg-Eppendorf (UKE), Hamburg, Germany
- 02/2015 - 04/2015 Visiting scientist, UCL Institute of Child Health, University College London, London, UK

- 11/2014-11/2018 Project manager of the small animal scanning site at the UKE for genetically modified organisms of security level 1 (IB17-75/13)
- 05/2011 - 05/2012 Chair of the ISMRM study group Susceptibility Weighted Imaging (SWI)
- 01/2008 - 06/2010 Postdoctoral research fellow, St. Jude Children's Research Hospital, Department of Radiological Sciences, Translational Imaging Research Group, Memphis, TN, USA
- 06/2003 - 12/2007 Doctoral research fellow, Medical Physics Group, Friedrich Schiller University Jena, Germany, Thesis: *"New Advances in Susceptibility Weighted MRI to Determine Physiological Parameters"*
- 10/2001 - 12/2002 Graduate research fellow, Institute of Physical High-Technology, Jena, Germany
- 04/2001 - 08/2001 Research internship, Fukui National College of Technology, Material Science, Sabae, Fukui, Japan
- 04/2001 - 08/2001 Assistant lecturer in Scientific English, Fukui University, Fukui, Japan
- 10/1999 - 09/2000 Student research assistant in Physical Chemistry, Technical University Ilmenau, Germany

ADDITIONAL QUALIFICATIONS

- 04/2014 Safety in Genetic Engineering (§15 Abs.2 Satz 1 Nr.3 GenTSV), Apr. 25.-26. 2014, Hamburg, Germany
- 02/2013 Training in academic teaching at the UKE, Feb. 07.-09. 2013, Jesteburg, Germany
- 02/2012 Course in Basics of Laboratory Animal Science according to FELASA B Guidelines, Feb. 20.-24. 2012, Hamburg, Germany
- 10/2011 North American ClinScan Users' Meeting, Oct. 27. 2011, Memphis, TN, USA
- 11/2010 ICE - Image Calculation Environment Course at Siemens Medical Solutions (VB17), Nov. 15.-18. 2010, Cary, NC, USA
- 10/2008 North American IDEA Users Group Meeting, Oct. 8.-10. 2008, Memphis, TN, USA
- 04/2007 European IDEA Users Group Meeting, Apr. 26.-27. 2007, Freiburg, Germany
- 05/2005 IDEA - Integrated Development Environment for Applications (VA25) and ICE - Image Calculation Environment Course at Siemens Medical Solutions (VA25), May 23.-27. 2005, Cary, NC, USA

TEACHING

- since 2017 Supervision and review of medical seminar papers of the integrated medical program (iMED) of the UKE
- 2016-2018 Organization and jointly teaching of a 14-day MRI compact course as part of the 2nd Track: Radiological Methods in Diagnostics and Therapy at the 7. term of the iMED at the UKE

- 2014-2018 Jointly responsible for the neuroradiological academy at the UKE for medical doctorate students (<http://akademie.neuroradiologie-aktuell.de/>)
- 2013-2018 Co-Organization and MRI specific teaching of the 2nd Track: Radiological Methods in Diagnostics and Therapy at the 2.-4. terms of the iMED at the UKE
- 2012-2018 Teaching of MRI physics to neuroradiological interns and medical students with the compulsory optional subject of neuroradiology at the UKE
- 2011-2018 Teaching MRI safety to radiologist and technologists at the UKE
- 2005-2018 Primary supervision of diploma, bachelor, master and medical doctorate students of the Friedrich Schiller University (FSU) Jena, university of applied science Ernst-Abbe-Hochschule (EAH) Jena, Technische Universität Ilmenau, Hamburg University of Technology (TUHH) and the UKE.

GRANTS

- 05/2016 Traveling Grant of the German Academic Exchange Service (DAAD) for ISMRM in Singapur
- 02/2015 Grant to support initiation of international collaboration by the German Research Foundation (DFG SE 2052/2-1) for a 3 month visit at UCL Institute of Child Health, University College London, London, UK
- 07/2014 Grant in cooperation with the Department of Oral and Maxillofacial Surgery of the UKE and NORAS MRI products GmbH on the development of highly sophisticated dental MRI solutions by the Central Innovation Program SME (Zentrales Innovationsprogramm Mittelstand – ZIM) of the Federal Ministry for Economic Affairs and Energy (KF3259801CS3)
- 07/2011 Individual grant on metabolic tumor MR-imaging by the German Research Foundation (DFG SE 2052/1-1)
- 06/2004 Short-Term Scientific Mission grant by the European Cooperation in Science and Technology (COST-STSM-B21-00305)

AWARDS

- 10/2016 Poster price of the “Verein für Hirn-Aneurysma-Erkrankte Der Lebenszweig e.V.” for the work “*Assessment of flow dynamics in a 3d printed brain aneurysm model by magnetic particle imaging, magnetic resonance imaging and dynamic subtraction angiography*”, conferred on the occasion of the 51. DGNR annual meeting, 06.-08. October 2016, Cologne, Germany
- 07/2013 Young Investigator Travel Award, 2nd International Workshop on MRI Phase Contrast and Quantitative Susceptibility Mapping (QSM), July 25.-27., 2013. Ithaca, New York (USA).
- 09/2007 “Philips-Award in Medical Physics”, for the work “*Obtaining Blood Oxygenation Levels from MR Signal Behaviour in the Presence of Single Venous Vessels*”, conferred on the occasion of the Dreiländertagung, ”Medizinphysik 2007”, 25.-28. September 2007, Bern, Swiss

09/2004 “Siemens-Award for Young Scientists in Medical Physics” for the work “*In vitro und in vivo suszeptibilitäts-gewichtete Bildgebung (SWI)*”, conferred on the occasion of the 35. DGMP annual meeting, 22.-25.September 2004, Leipzig, Germany

MEMBERSHIPS

since 01/2010 Deutsche Gesellschaft für Medizinische Physik (DGMP)
since 08/2004 Deutsche Gesellschaft für Biomedizinische Technik (DGBMT)
since 04/2004 German Chapter of the ISMRM (DS-ISMRM)
since 12/2003 International Society for Magnetic Resonance in Medicine (ISMRM)

REVIEWER

since 04/2017 PLOS ONE
since 02/2017 Magnetic Resonance Imaging
since 12/2015 NMR in Biomedicine
since 02/2014 Magnetic Resonance in Medicine
since 07/2012 AJNR
since 01/2013 Journal of Magnetic Resonance Imaging
since 05/2011 Zeitschrift für Medizinische Physik
since 11/2008 Neuroimage

PUBLICATIONS AND CONFERENCE ABSTRACTS

75 Peer reviewed journal articles (21 as first or last author)
2 Book chapters (2 as first or last author)
19 Invited talks
89 Conference talks (26 as first or last author)
89 Conference posters (27 as first or last author)

19.12.2018, Hamburg, Germany

Jan Sedlacik

1 Publications

1.1 Papers

2018

Talai AS, **Sedlacik J**, Boelmans K, Forkert ND. *Widespread diffusion changes differentiate Parkinson's disease and progressive supranuclear palsy*. Neuroimage Clin. 2018;20:1037-1043. doi: 10.1016/j.nicl.2018.09.028. Epub 2018 Oct 4.

Nawka MT, Buhk JH, Gellissen S, **Sedlacik J**, Fiehler J, Frölich AM. *A new method to statistically describe microcatheter tip position in patient-specific aneurysm models*. J Neurointerv Surg. 2018 Oct 16. pii: neurintsurg-2018-014259. doi: 10.1136/neurintsurg-2018-014259.

Faizy TD, Kumar D, Broocks G, Thaler C, Flottmann F, Leischner H, Kutzner D, Hewera S, Dotzauer D, Stellmann JP, Reddy R, Fiehler J, **Sedlacik J**, Gellißen S. *Age-Related Measurements of the Myelin Water Fraction derived from 3D multi-echo GRASE reflect Myelin Content of the Cerebral White Matter*. Sci Rep. 2018 Oct 9;8(1):14991. doi: 10.1038/s41598-018-33112-8.

Talai AS, Ismail Z, **Sedlacik J**, Boelmans K, Forkert ND. *Improved Automatic Morphology-Based Classification of Parkinson's Disease and Progressive Supranuclear Palsy*. Clin Neuroradiol. 2018 Sep 14. doi: 10.1007/s00062-018-0727-8.

Schetelig D, **Sedlacik J**, Fiehler J, Frölich A, Knopp T, Sothmann T, Waschkewitz J, Werner R. *Analysis of the influence of imaging-related uncertainties on cerebral aneurysm deformation quantification using a no-deformation physical flow phantom*. Sci Rep. 2018 Jul 20;8(1):11004. doi: 10.1038/s41598-018-29282-0.

Keller S, **Sedlacik J**, Schuler T, Buchert R, Avanesov M, Zenouzi R, Lohse AW, Kooijman H, Fiehler J, Schramm C, Yamamura J. *Prospective comparison of diffusion-weighted MRI and dynamic Gd-EOB-DTPA-enhanced MRI for detection and staging of hepatic fibrosis in primary sclerosing cholangitis*. Eur Radiol. 2018 Jul 16. doi: 10.1007/s00330-018-5614-9.

Remus CC, Kording F, Arck P, Solano E, **Sedlacik J**, Adam G, Hecher K, Forkert ND. *DCE MRI reveals early decreased and later increased placenta perfusion after a stress challenge during pregnancy in a mouse model*. Placenta. 2018 May;65:15-19. doi: 10.1016/j.placenta.2018.03.009. Epub 2018 Apr 1.

Kumar D, Hariharan H, Faizy TD, Borchert P, Siemonsen S, Fiehler J, Reddy R, **Sedlacik J**. *Using 3D spatial correlations to improve the noise robustness of multi component analysis of 3D multi echo quantitative T2 relaxometry data*. Neuroimage. 2018 May 12;178:583-601. doi: 10.1016/j.neuroimage.2018.05.026. [Epub ahead of print]

Tortora D, Severino M, **Sedlacik J**, Toselli B, Malova M, Parodi A, Morana G, Fato MM, Ramenghi LA, Rossi A. *Quantitative susceptibility map analysis in preterm neonates with germinal matrix-intraventricular hemorrhage*. J Magn Reson Imaging. 2018 May 10. doi: 10.1002/jmri.26163. [Epub ahead of print]

Rendenbach C, Schoellchen M, Bueschel J, Gauer T, **Sedlacik J**, Kutzner D, Vallittu PK, Heiland M, Smeets R, Fiehler J, Siemonsen S. *Evaluation and reduction of magnetic resonance imaging artefacts induced by distinct plates for osseous fixation: an in vitro study @ 3 T*. Dentomaxillofac Radiol. 2018 May 23:20170361. doi: 10.1259/dmfr.20170361. [Epub ahead of print]

Richter M, Murtaza N, Scharrenberg R, White SH, Johanns O, Walker S, Yuen RKC, Schwanke B, Bedürftig B, Henis M, Scharf S, Kraus V, Dörk R, Hellmann J, Lindenmaier Z, Ellegood J, Hartung H, Kwan V, **Sedlacik J**, Fiehler J, Schweizer M, Lerch JP, Hanganu-Opatz IL, Morellini F, Scherer SW, Singh KK, Calderon de Anda F. *Altered TAOK2 activity causes autism-related neurodevelopmental and cognitive abnormalities through RhoA signaling*. Mol Psychiatry. 2018 Feb 21. doi: 10.1038/s41380-018-0025-5.

Nawka MT, **Sedlacik J**, Frölich A, Bester M, Fiehler J, Buhk JH. *Multiparametric MRI of intracranial aneurysms treated with the Woven EndoBridge (WEB): a case of Faraday's cage?* J Neurointerv Surg. 2018 Feb 10. pii: neurintsurg-2017-013625. doi: 10.1136/neurintsurg-2017-013625.

Gelderblom M, Gallizioli M, Ludewig P, Thom V, Arunachalam P, Rissiek B, Bernreuther C, Glatzel M, Korn T, Arumugam TV, **Sedlacik J**, Gerloff C, Tolosa E, Planas AM, Magnus T. *IL-23 (Interleukin-23)-Producing Conventional Dendritic Cells Control the Detrimental IL-17 (Interleukin-17) Response in Stroke*. Stroke. 2018 Jan;49(1):155-164. doi: 10.1161/STROKEAHA.117.019101.

Thaler C, Faizy TD, **Sedlacik J**, Bester M, Stellmann JP, Heesen C, Fiehler J, Siemonsen S. *The use of multiparametric quantitative magnetic resonance imaging for evaluating visually assigned lesion groups in patients with multiple sclerosis*. J Neurol. 2018 Jan;265(1):127-133. doi: 10.1007/s00415-017-8683-9. Epub 2017 Nov 20.

2017

Sedlacik J, Kjørstad Å, Nagy Z, Buhk JH, Behem CR, Trepte CJ, Fiehler J, Temme F. *Feasibility Study of a Novel High-Flow Cold Air Cooling Protocol of the Porcine Brain Using MRI Temperature Mapping*. Ther Hypothermia Temp Manag. 2017 Nov 3. doi: 10.1089/ther.2017.0031.

Ludewig P, Gdaniec N, **Sedlacik J**, Forkert ND, Szwargulski P, Graeser M, Adam G, Kaul MG, Krishnan KM, Ferguson RM, Khandhar AP, Walczak P, Fiehler J, Thomalla G, Gerloff C, Knopp T, Magnus T. *Magnetic Particle Imaging for Real-Time Perfusion Imaging in Acute Stroke*. ACS Nano. 2017 Oct 4. doi: 10.1021/acsnano.7b05784

Thaler C, Schneider T, **Sedlacik J**, Kutzner D, Stellmann JP, Heesen C, Fiehler J, Siemonsen S. *T1w dark blood imaging improves detection of contrast enhancing lesions in multiple sclerosis*. PLoS One. 2017 Aug 10;12(8):e0183099. doi: 10.1371/journal.pone.0183099

Tortora D, Severino M, Malova M, Parodi A, Morana G, **Sedlacik J**, Govaert P, Volpe JJ, Rossi A, Ramenghi LA. *Differences in subependymal vein anatomy may predispose preterm infants to GMH-IVH*. Arch Dis Child Fetal Neonatal Ed. 2017 Jun 6. pii: fetalneonatal-2017-312710. doi: 10.1136/archdischild-2017-312710

Huddleston DE, Langley J, **Sedlacik J**, Boelmans K, Factor SA, Hu XP. *In vivo detection of*

lateral-ventral tier nigral degeneration in Parkinson's disease. Hum Brain Mapp. 2017 May;38(5):2627-2634. doi: 10.1002/hbm.23547

Sedlacik J, Frölich A, Spallek J, Forkert ND, Werner F, Knopp T, Krause D, Fiehler J, Buhk J-H. *Detection of flow dynamic changes in 3D printed aneurysm models after treatment.* International Journal on Magnetic Particle Imaging (IJMPI). 2017 Mar;3(1):1703005, doi: 10.18416/ijmpi.2017.1703005

Faizy TD, Thaler C, Ceyrowski T, Brooks G, Treffler N, **Sedlacik J**, Stürner K, Stellmann JP, Heesen C, Fiehler J, Siemonsen S. *Reliability of cortical lesion detection on double inversion recovery MRI applying the MAGNIMS-Criteria in multiple sclerosis patients within a 16-months period.* PLoS One. 2017 Feb 24;12(2):e0172923. doi: 10.1371/journal.pone.0172923

Thaler C, Faizy TD, **Sedlacik J**, Holst B, Stürner K, Heesen C, Stellmann JP, Fiehler J, Siemonsen S. *T1 Recovery Is Predominantly Found in Black Holes and Is Associated with Clinical Improvement in Patients with Multiple Sclerosis.* AJNR Am J Neuroradiol. 2017 Feb;38(2):264-269. doi: 10.3174/ajnr.A5004

Langley J, Huddleston DE, **Sedlacik J**, Boelmans K, Hu XP. *Parkinson's disease-related increase of T2*-weighted hypointensity in substantia nigra pars compacta.* Mov Disord. 2017 Mar;32(3):441-449. doi: 10.1002/mds.26883

Smeets R, Schöllchen M, Gauer T, Aarabi G, Assaf AT, Rendenbach C, Beck-Broichsitter B, Semmusch J, **Sedlacik J**, Heiland M, Fiehler J, Siemonsen S. *Artefacts in multimodal imaging of titanium, zirconium and binary titanium-zirconium alloy dental implants: an in vitro study.* Dentomaxillofac Radiol. 2017 Feb;46(2):20160267. doi: 10.1259/dmfr.20160267

2016

Löbel U, Forkert ND, Schmitt P, Dohrmann T, Schroeder M, Magnus T, Kluge S, Weiler-Normann C, Bi X, Fiehler J, **Sedlacik J**. *Cerebral Hemodynamics in Patients with Hemolytic Uremic Syndrome Assessed by Susceptibility Weighted Imaging and Four-Dimensional Non-Contrast MR Angiography.* PLoS One. 2016 Nov 1;11(11):e0164863. doi: 10.1371/journal.pone.0164863

Kjørstad Å, Regier M, Fiehler J, **Sedlacik J**. *A decade of lung expansion: A review of ventilation-weighted 1H lung MRI.* Z Med Phys. 2017 Sep;27(3):172-179. doi: 10.1016/j.zemedi.2016.07.005

Sedlacik J, Frölich A, Spallek J, Forkert ND, Faizy TD, Werner F, Knopp T, Krause D, Fiehler J, Buhk JH. *Magnetic Particle Imaging for High Temporal Resolution Assessment of Aneurysm Hemodynamics.* PLoS One. 2016 Aug 5;11(8):e0160097. doi: 10.1371/journal.pone.0160097

Löbel U, **Sedlacik J**, Nickel M, Lezius S, Fiehler J, Nestrasil I, Kohlschütter A, Schulz A. *Volumetric Description of Brain Atrophy in Neuronal Ceroid Lipofuscinosis 2: Supratentorial Gray Matter Shows Uniform Disease Progression.* AJNR Am J Neuroradiol. 2016 May 26. [Epub ahead of print]

Faizy TD, Thaler C, Kumar D, **Sedlacik J**, Brooks G, Grosser M, Stellmann JP, Heesen C, Fiehler J, Siemonsen S. *Heterogeneity of Multiple Sclerosis Lesions in Multislice Myelin Water Imaging.*

PLoS One. 2016 Mar 18;11(3):e0151496

Brandenstein L, Schweizer M, **Sedlacik J**, Fiehler J, Storch S. *Lysosomal dysfunction and impaired autophagy in a novel mouse model deficient for the lysosomal membrane protein Cln7*. Hum Mol Genet. 2016 Feb 15;25(4):777-91. doi: 10.1093/hmg/ddv615

Kumar D, Siemonsen S, Heesen C, Fiehler J, **Sedlacik J**. *Noise robust spatially regularized myelin water fraction mapping with the intrinsic $B(1)$ -error correction based on the linearized version of the extended phase graph model*. J Magn Reson Imaging. 2016 Apr;43(4):800-17. doi: 10.1002/jmri.25078

2015

Thaler C, Faizy T, **Sedlacik J**, Holst B, Stellmann JP, Young KL, Heesen C, Fiehler J, Siemonsen S. *T1- Thresholds in Black Holes Increase Clinical-Radiological Correlation in Multiple Sclerosis Patients*. PLoS One. 2015 Dec 11;10(12):e0144693

Sedlacik J, Kutzner D, Khokale A, Schulze D, Fiehler J, Celik T, Gareis D, Smeets R, Friedrich RE, Heiland M, Assaf AT. *Optimized 14 + 1 receive coil array and position system for 3D high-resolution MRI of dental and maxillofacial structures*. Dentomaxillofac Radiol. 2016;45(1):20150177. doi: 10.1259/dmfr.20150177

Domnick NK, Gretenkord S, De Feo V, **Sedlacik J**, Brockmann MD, Hanganu-Opatz IL. *Neonatal hypoxia-ischemia impairs juvenile recognition memory by disrupting the maturation of prefrontal-hippocampal networks*. Exp Neurol. 2015 Nov;273:202-14. doi: 10.1016/j.expneurol.2015.08.017

Assaf AT, Zrnc TA, Remus CC, Khokale A, Habermann CR, Schulze D, Fiehler J, Heiland M, **Sedlacik J**, Friedrich RE. *Early detection of pulp necrosis and dental vitality after traumatic dental injuries in children and adolescents by 3-Tesla magnetic resonance imaging*. J Craniomaxillofac Surg. 2015 Sep;43(7):1088-93. doi: 10.1016/j.jcms.2015.06.010

Cheng B, Schulz R, Bönstrup M, Hummel FC, **Sedlacik J**, Fiehler J, Gerloff C, Thomalla G. *Structural plasticity of remote cortical brain regions is determined by connectivity to the primary lesion in subcortical stroke*. J Cereb Blood Flow Metab. 2015 Sep;35(9):1507-14. doi: 10.1038/jcbfm.2015.74

Siemonsen S, Young KL, Bester M, **Sedlacik J**, Heesen C, Fiehler J, Stellmann JP. *Chronic T2 Lesions in Multiple Sclerosis are Heterogeneous Regarding Phase MR Imaging*. Clin Neuroradiol. 2016 Dec;26(4):457-464

Langley J, Huddleston DE, Chen X, **Sedlacik J**, Zachariah N, Hu X. *A multicontrast approach for comprehensive imaging of substantia nigra*. Neuroimage. 2015 May 15;112:7-13. doi: 10.1016/j.neuroimage.2015.02.045

Kording F, Forkert ND, **Sedlacik J**, Adam G, Hecher K, Arck P, Remus CC. *Automatic differentiation of placental perfusion compartments by time-to-peak analysis in mice*. Placenta. 2015 Mar;36(3):255-61. doi: 10.1016/j.placenta.2014.12.010

Sedlacik J, Reitz M, Bolar DS, Adalsteinsson E, Schmidt NO, Fiehler J. *Correlation of oxygenation and perfusion sensitive MRI with invasive micro probe measurements in healthy mice brain.* Z Med Phys. 2015 Mar;25(1):77-85. doi: 10.1016/j.zemedi.2014.01.004

2014

Löbel U, Schweser F, Nickel M, Deistung A, Grosse R, Hagel C, Fiehler J, Schulz A, Hartig M, Reichenbach JR, Kohlschütter A, **Sedlacik J**. *Brain iron quantification by MRI in mitochondrial membrane protein-associated neurodegeneration under iron-chelating therapy.* Ann Clin Transl Neurol. 2014 Dec;1(12):1041-6. doi: 10.1002/acn3.116

Boelmans K, Spies L, **Sedlacik J**, Fiehler J, Jahn H, Gerloff C, Münchau A. *A novel computerized algorithm to detect microstructural brainstem pathology in Parkinson's disease using standard 3 Tesla MR imaging.* J Neurol. 2014 Oct;261(10):1968-75. doi: 10.1007/s00415-014-7440-6

Assaf AT, Zrnc TA, Remus CC, Schönfeld M, Habermann CR, Riecke B, Friedrich RE, Fiehler J, Heiland M, **Sedlacik J**. *Evaluation of four different optimized magnetic-resonance-imaging sequences for visualization of dental and maxillo-mandibular structures at 3 T.* J Craniomaxillofac Surg. 2014 Oct;42(7):1356-63. doi: 10.1016/j.jcms.2014.03.026

Sedlacik J, Boelmans K, Löbel U, Holst B, Siemonsen S, Fiehler J. *Reversible, irreversible and effective transverse relaxation rates in normal aging brain at 3T.* Neuroimage. 2014 Jan 1;84:1032-41. doi: 10.1016/j.neuroimage.2013.08.051

2013

Brockmann MD, Kukovic M, Schönfeld M, **Sedlacik J**, Hanganu-Opatz IL. *Hypoxia-Ischemia Disrupts Directed Interactions within Neonatal Prefrontal-Hippocampal Networks.* PLoS One. 2013 Dec 20;8(12):e83074. doi: 10.1371/journal.pone.0083074

Remus CC, **Sedlacik J**, Wedegaertner U, Arck P, Hecher K, Adam G, Forkert ND. *Application of the steepest slope model reveals different perfusion territories within the mouse placenta.* Placenta. 2013 Oct;34(10):899-906. doi: 10.1016/j.placenta.2013.06.30

Ludewig P, **Sedlacik J**, Gelderblom M, Bernreuther C, Korkusuz Y, Wagener C, Gerloff C, Fiehler J, Magnus T, Horst AK. *Carcinoembryonic antigen-related cell adhesion molecule 1 inhibits MMP-9-mediated blood-brain-barrier breakdown in a mouse model for ischemic stroke.* Circ Res. 2013 Sep 27;113(8):1013-22. doi: 10.1161/CIRCRESAHA.113.301207

Paniagua Bravo A, Forkert ND, Schulz A, Löbel U, Fiehler J, Ding X, **Sedlacik J**, Rosenkranz M, Goebell E. *Quantitative t2 measurements in juvenile and late infantile neuronal ceroid lipofuscinosis.* Clin Neuroradiol. 2013 Sep;23(3):189-96. doi: 10.1007/s00062-012-0189-3

Sedlacik J, Winchell A, Kocak M, Loeffler RB, Broniscer A, Hillenbrand CM. *MR imaging assessment of tumor perfusion and 3D segmented volume at baseline, during treatment, and at tumor progression in children with newly diagnosed diffuse intrinsic pontine glioma.* AJNR Am J

Neuroradiol. 2013 Jul;34(7):1450-5. doi: 10.3174/ajnr.A3421

Forkert ND, Fiehler J, Schönfeld M, **Sedlacik J**, Regelsberger J, Handels H, Illies T. *Intranidal Signal Distribution in Post-Contrast Time-of-Flight MRA is Associated with Rupture Risk Factors in Arteriovenous Malformations*. Clin Neuroradiol. 2013 Jun;23(2):97-101. doi: 10.1007/s00062-012-0168-8

Sedlacik J, Myers A, Loeffler RB, Williams RF, Davidoff AM, Hillenbrand CM. *A dedicated automated injection system for dynamic contrast-enhanced MRI experiments in mice*. J Magn Reson Imaging. 2013 Mar;37(3):746-51. doi: 10.1002/jmri.23810

Reitz M, Demestre M, **Sedlacik J**, Meissner H, Fiehler J, Kim SU, Westphal M, Schmidt NO. *Intranasal delivery of neural stem/progenitor cells: a noninvasive passage to target intracerebral glioma*. Stem Cells Transl Med. 2012 Dec;1(12):866-73. doi: 10.5966/sctm.2012-0045

Goebell E, Fiehler J, Martens T, Hagel C, Forkert ND, Russjan A, Rosenkranz M, Buhk JH, Groth M, **Sedlacik J**. *Impact of Protein Content on Proton Diffusibility in Intracranial Cysts*. Rofo. 2013 Jan;185(1):60-5. doi: 10.1055/s-0032-1325406

2012

Siemonsen S, Löbel U, **Sedlacik J**, Forkert ND, Mouridsen K, Ostergaard L, Thomalla G, Fiehler J. *Elevated T2-values in MRI of stroke patients shortly after symptom onset do not predict irreversible tissue infarction*. Brain. 2012 Jun;135(Pt 6):1981-9. doi: 10.1093/brain/aws079

2011

Löbel U, **Sedlacik J**, Reddick WE, Kocak M, Ji Q, Broniscer A, Hillenbrand CM, Patay Z. *Quantitative diffusion-weighted and dynamic susceptibility-weighted contrast-enhanced perfusion MR imaging analysis of T2 hypointense lesion components in pediatric diffuse intrinsic pontine glioma*. AJNR Am J Neuroradiol. 2011 Feb;32(2):315-22. doi: 10.3174/ajnr.A2277

Teitz T, Stanke JJ, Federico S, Bradley CL, Brennan R, Zhang J, Johnson MD, **Sedlacik J**, Inoue M, Zhang ZM, Frase S, Rehg JE, Hillenbrand CM, Finkelstein D, Calabrese C, Dyer MA, Lahti JM. *Preclinical models for neuroblastoma: establishing a baseline for treatment*. PLoS One. 2011 Apr 29;6(4):e19133. doi: 10.1371/journal.pone.0019133

2010

Löbel U, **Sedlacik J**, Sabin ND, Kocak M, Broniscer A, Hillenbrand CM, Patay Z. *Three-dimensional susceptibility-weighted imaging and two-dimensional T2*-weighted gradient-echo imaging of intratumoral hemorrhages in pediatric diffuse intrinsic pontine glioma*. Neuroradiology. 2010 Dec;52(12):1167-77. doi: 10.1007/s00234-010-0771-9

Sedlacik J, Reichenbach JR. *Validation of Quantitative Estimation of Tissue Oxygen Extraction*

Fraction and Deoxygenated Blood Volume Fraction in Phantom and In Vivo Experiments by Using MRI. Magn Reson Med. 2010 Apr;63(4):910-21. doi: 10.1002/mrm.22274

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2009

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Rauscher A, **Sedlacik J**, Barth M, Mentzel H-J, Reichenbach JR. *Magnetic susceptibility sensitive MR-phase imaging of the human brain*. AJNR Am J Neuroradiol. 2005 Apr;26(4):736-42

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Toyoda M, **Sedlacik J**, Inagaki M. *Intercalation of formic acid into carbon fibers and their exfoliation*. Synthetic Metals. 2002 Aug;130(1):39-43. doi: 10.1016/S0379-6779(02)00104-2

1.2 Book Chapters

2011

Jan Sedlacik. Alexander Rauscher, Jürgen R. Reichenbach, and E. Mark Haacke.

Understanding T2-Related Signal Loss chapter 5, pages 73-88 In: *Susceptibility Weighted Imaging in MRI - Basic Concepts and Clinical Applications*. Edited by E. Mark Haacke and Jürgen

Reichenbach, ISBN: 9780470043431, Published by John Wiley & Sons, 2011

Jan Sedlacik. Song Lai, and Jürgen R, Reichenbach.

Quantification of Oxygen Saturation of Single Cerebral Veins, the Blood Capillary Network, and Its Dependency on Perfusion chapter 28, pages 529-542 In: *Susceptibility Weighted Imaging in MRI - Basic Concepts and Clinical Applications*. Edited by E. Mark Haacke and Jürgen Reichenbach, ISBN: 9780470043431, Published by John Wiley & Sons, 2011

1.3 Invited Talks

Das MRT als Thermometer

Wissenschaftsfortbildung, 4. January 2017, Clinic for Radiology and Neuroradiology, University Medical Center Schleswig-Holstein, Kiel, Germany

MRT physics at the UKE

Visit Experimental Radiology, Medical Physics, Department of Radiology, University Medical Center Freiburg 04.-05.10.2016, Freiburg, Germany

Blood flow measurement and iron quantification using Magnetic Resonance Imaging

Symposium, Images and Network of the Brain – New Methods and Perspectives, 26.-27. April 2016, University Medical Center Hamburg-Eppendorf, Germany

Wie funktioniert die MRT – Grundlagen

Bayer MTRA-Symposium, 14.11.2015, Hamburg, Empire Riverside HH

Assessing tissue iron content and venous blood oxygenation by MRI

Lunchtime Seminar, 29. April 2015, Hugh Greenwood lecture theatre at Southampton General hospital, Southampton, UK

Magnetic tissue properties in MRI

Imaging and Biophysics Seminar, 2. Februar 2015, ICH Wolfson Centre, London, UK

Magnetic susceptibility in MRI

Neuroradiology Seminar, 26. November 2014, Genoa, Italy

MRI brain iron quantification

Fortbildungsveranstaltung, 19. July 2013, DKFZ, Heidelberg, Germany

MRI brain iron quantification

Seminar on Biomedical Magnetic Resonance, 21. March 2013, Medical Physics, University Medical Center, Freiburg, Germany

Diffusion Tensor Imaging

Weiterbildungsveranstaltung, 6. February 2013, Ev. Krankenhaus Alsterdorf Fachbereich Epilepsie und Neurologie, Hamburg, Germany

Suszeptibilitätsgewichtete Bildgebung – Physikalisches Prinzip und Bildberechnung

Symposium, Images and Network of the Brain – New Methods and Perspectives, 24.-25. September

2012, University Medical Center Hamburg-Eppendorf, Germany

SWI - mehr als Blut und Eisen!

Neuroradiologie Aktuell 2011, 14.-16. April 2011, Hamburg, Germany.

Measurement and Physiological Modulation of Blood Oxygen Saturation

1. International Workshop on MRI Phase Contrast and Quantitative Susceptibility Imaging, 15. January 2011, Jena, Germany.

Design and setup of dynamic contrast enhanced experiments for longitudinal preclinical studies of tumor response to anti-angiogenic therapy

UBC MRI Research Centre Seminar, 15. Mai 2009, Vancouver, Canada.

New approaches in susceptibility weighted imaging (SWI); Extraction and Quantification of Physiological Parameters

St. Jude, Radiological Sciences Monthly Research Meeting, 24. Juli 2007, Memphis, TN, USA.

Bestimmung der venösen Blutoxygenierung einzelner Gefäße anhand des MR Signalzerfalls

Dreiländertagung, Medizinphysik, 25. September 2007, Bern, Schweiz.

Impact of carbogen and caffeine on venous contrast in SWI

7th Annual SWI Meeting, 23. Mai 2007, Berlin.

Extraction and quantification of physiological parameters using SWI

7th Management Committee Meeting & WG1, WG2, WG3 Meetings, 19. Oktober 2006. Brüssel, Belgien.

Oxygenation extraction from single vessels

6th Annual SWI Meeting, 10. Mai 2006, Seattle, WA, USA.

1.4 Conference Talks

2018

Faizy T, Kumar D, Broocks G, Thaler C, Flottmann F, Leischner H, Hewera S, Kutzner D, Dotzauer D, Jan-Patrick S, Reddy R, Fiehler J, **Sedlacik J**, Gellissen S. *Age-Related Measurements of the Myelin Water Fraction Derived from 3-D Multi-Echo GRASE Reflect the Cerebral White-Matter Microstructure*. ASNR 56:O-120, ASNR 2018.

Nawka M, **Sedlacik J**, Frölich A, Bester M, Fiehler J, Buhk J. *Multiparametric MRI Follow-Up of Intracranial Aneurysms Treated with the Woven EndoBridge (WEB): A Case of Faraday's Cage?* ASNR 56:O-115, ASNR 2018.

Faizy T, Broocks G, Kumar D, **Sedlacik J**, Flottmann F, Leischner H, Hanning U, Grosser M, Jan-Patrick S, Kemmling A, Fiehler J, Gellissen S. *Quantitative Myelin Water Imaging Detects Age-Dependent Demyelinating Alterations of the Cerebral White-Matter Microstructure: A Multiparametric MRI Study*. ASNR 56:O-80, ASNR 2018.

2017

Nawka MT, **Sedlacik J**, Frölich A, Bester M, Fiehler J, Buhk J-H. *Follow-up von WEB behandelten intrakraniellen Aneurysmen mittels multiparametrischer MRT: ist das WEB ein Faraday'scher Käfig?* 52. Jahrestagung der DGNR, Köln 2017, 0103

Faizy TD, Broocks G, Thaler C, Kumar D, **Sedlacik J**, Flottmann F, Leischner H, Stellmann J-P, Heesen C, Fiehler J, Siemonsen S. *Age-related declines of the cerebral white matter integrity quantified by Myelin Water Imaging – A 3D GRASE study* 52. Jahrestagung der DGNR, Köln 2017, 0254

Faizy TD, Broocks G, Thaler C, Rauch G, **Sedlacik J**, Stürner K, Flottmann F, Ceyrowski T, Stellmann J-P, Heesen C, Fiehler J, Siemonsen S. *Cortical lesion volume changes in high-inflammatory Relapse-Onset Multiple Sclerosis patients – A 16 months follow-up study* 52. Jahrestagung der DGNR, Köln 2017, 0256

Flottmann F, Watermann L, Leischner H, Kniep H, Faizy TD, **Sedlacik J**, Fiehler J, Siemonsen S. *Thrombektomie unter Vollnarkose und unter Sedierung – Training eines multiparametrischen Modells zur Vorhersage des Infarktvolumens* 52. Jahrestagung der DGNR, Köln 2017, 0274

Sedlacik J, Frölich A, Spallek J, Forkert ND, Werner F, Knopp T, Krause D, Fiehler J, Buhk J-H. *Detection of flow dynamic changes in 3D printed aneurysm models after treatment*. 7. IWMPPI, Prague, Czech Republic, Mar.23-24 2017

Schöllchen M, Rendenbach C, Gauer T, Fiehler J, **Sedlacik J**, Heiland M, Smeets R, Assaf A, Siemonsen S, Semmusch J. *Quantifizierung von Metallartefakten durch dentale Implantate im DVT – Eine in vitro Untersuchung*. 67. Kongress der Deutschen Gesellschaft für Mund-, Kiefer- und Gesichtschirurgie, Köln/Bonn 2017

Assaf A, Schöllchen M, Semmusch J, Smeets R, Fiehler J, Friedrich RE, Heiland M, **Sedlacik J**, Siemonsen S. *Differenzierte Darstellung und Abgrenzung ossärer Läsionen bei Medikamenten-Assoziierter Kiefernekrose (MRONJ) im 3 Tesla-MRT*. 67. Kongress der Deutschen Gesellschaft für Mund-, Kiefer- und Gesichtschirurgie, Köln/Bonn 2017

2016

Thaler C, Faizy TD, **Sedlacik J**, Stellmann J-P, Heesen C, Fiehler J, Siemonsen S. *MTR und T1-Zeiten in unterschiedlichen MS-Läsionen*. 51. Jahrestagung der DGNR, Köln 2016, 0259

Thaler C, Faizy TD, **Sedlacik J**, Stellmann J-P, Heesen C, Fiehler J, Siemonsen S. *T1-Recovery in MS-Läsionen*. 51. Jahrestagung der DGNR, Köln 2016, 0260

Brandenstein L, Ariunbat H, Jankowiak W, Hagel C, Schweizer M, **Sedlacik J**, Fiehler J, Bartsch U, Storch S. *Lysosomal dysfunction and neurodegeneration in the brain and retina of a mouse model for CLN7 disease*. The 15th International Conference on Neuronal Ceroid Lipofuscinosis (Batten Disease), Boston, October 5-8, 2016, O25

Hochstein J-N, Nickel M, Löbel U, Grosser M, **Sedlacik J**, Schulz A. *Longitudinal 8-years brain volumetric analysis in 35 CLN3 patients: Successful development of a sensitive marker to measure*

clinical outcome. The 15th International Conference on Neuronal Ceroid Lipofuscinosis (Batten Disease), Boston, October 5-8, 2016, O47

Mönch L, **Sedlacik J.** *Die quantitative Suszeptibilitätskartierung der weißen Hirnsubstanz in Abhängigkeit von der Nervenbahnorientierung zur Hauptmagnetfeldrichtung in der Magnetresonanztomographie.* 47. Jahrestagung der DGMP und 19. Jahrestagung der ISMRM-DS, Würzburg, 7.–10. September 2016, 40

Sedlacik J. *Quantitative Susceptibility Mapping in MRI* 18th Workshop of the German - Japanese Radiological Affiliation, Munic, Germany, 2016

Siemonsen S, Heesen C, Stellmann J, Fiehler J, **Sedlacik J.** *Effect of Geometric Distortion Correction on Thickness and Volume Measurements of Cortical Parcellations* ASNR 54:O-32, ASNR 2016.

Siemonsen S, Stellmann J, Stuermer K, Heesen C, Fiehler J, **Sedlacik J.** *Longitudinal Monitoring of Gadolinium Retention in the Dentate Nucleus and Globus Pallidus in Multiple Sclerosis Patients Within a 16-Months Period* ASNR 54:O-206, ASNR 2016.

Faizy T, Ceyrowski T, Thaler C, Stellmann J, Stuermer K, Heesen C, **Sedlacik J,** Fiehler J, Siemonsen S. *Reproducibility of Cortical Lesion Detection on Double Inversion Recovery MRI applying the MAGNIMS-Criteria in Multiple Sclerosis Patients Within a 16-Months Period* ASNR 54:O-169, ASNR 2016.

Siemonsen S, Schneider T, Kutzner D, Fiehler J, **Sedlacik J.** *T1 Dark Blood Technique Increases Sensitivity for Detection of Contrast Enhancing Lesion in MS* ASNR 54:O-170, ASNR 2016.

Thaler C, Faizy T, **Sedlacik J,** Stellmann J, Heesen C, Fiehler J, Siemonsen S. *T1 Relaxation Times in Multiple Sclerosis Lesions Improve Correlation with Clinical Disability in Multiple Sclerosis Patients: A Longitudinal Survey* ASNR 54:O-168, ASNR 2016.

Sedlacik J, Frölich AM, Spallek J, Forkert ND, Faizy TD, Werner F, Knopp T, Krause D, Fiehler J, Buhk J-H. *Flow dynamics in a 3D printed brain aneurysm model assessed by magnetic particle imaging, magnetic resonance imaging and dynamic subtraction angiography.* ISMRM 24:0604, Singapore 2016

Sedlacik J, Frölich A, Spallek J, Forkert ND, Faizy TD, Werner F, Knopp T, Krause D, Fiehler J, Buhk J-H *Assessing flow dynamics in a 3D printed aneurysm model by magnetic particle imaging.* in Proc. IWMPI, Lübeck, Germany, Mar.16-18 2016, p.145

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Borchert P, Dührsen L, Buhk J-H, Schmidt N-O, Fiehler J, **Sedlacik J.** *Tumormetabolismus-Mapping im Nativ-MRT* 50. Jahrestagung der DGMR, Köln 2015, 0217

Löbel U, Nickel M, **Sedlacik J,** Lezius S, Fiehler J, Nestrasil I, Kohlschütter A, Schulz A. *Longitudinal MRI volumetry of gray matter reveals a remarkable uniformity of disease progression in CLN2 neuronal ceroid lipofuscinosis.* 13. Congress of the European Society of Magnetic Resonance in

Neuropediatrics (ESMRN), Porto 2015

Sedlacik J, Löbel U, Schweser F, Nickel M, Deistung A, Fiehler J, Schulz A, Reichenbach JR, Kohlschütter A. *Brain iron quantification by irreversible/reversible/effective transverse relaxation ($R_2/R_2'/R_2^*$) and quantitative susceptibility mapping (QSM) in healthy controls and mitochondrial membrane protein-associated neurodegeneration (MPAN) under iron-chelating therapy.* 13. Congress of the European Society of Magnetic Resonance in Neuropediatrics (ESMRN), Porto 2015

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Remus CC, Forkert ND, **Sedlacik J**, Adam GB, Arck P, Kording F. *Automatic Differentiation of Functional Placental Compartments for Perfusion Analysis in the Mouse Using the Time-to-peak Model at 7T* RSNA 100:SSA10-08, Chicago 2014

Remus CC, Kording F, Forkert ND, **Sedlacik J**, Solano E, Adam GB, Arck P. *DCE MRI of the Placenta Reveals Alterations of Placenta Perfusion after a Stress Challenge during Pregnancy in Mice* RSNA 100:SSA10-09, Chicago 2014

Sedlacik J, Schüre J-R, Boelmans K, Fiehler J. DTI der sub-kortikalen weißen Substanz zur Untersuchung kurzer Assoziationsfasern (U-Fasern) bei Parkinson und gesunden Kontrollen 49. Jahrestagung der DGNR, Köln 2014, 0074

Sedlacik J, Reitz M, Schmidt N-O, Fiehler J. Validation of Oxygenation and Perfusion Sensitive MRI Methods in Brain Tumor Mice by Invasive Micro Probe Measurements 49. Jahrestagung der DGNR, Köln 2014, 0075

Siemonsen S, **Sedlacik J**, Stellmann P, Heesen C, Fiehler J, Kumar D. Preliminary Analysis of Fast T2 Relaxometry Based Myelin Water Imaging Data in Multiple Sclerosis Patients 49. Jahrestagung der DGNR, Köln 2014, 0155

Sedlacik J. *Quantification of reversible, irreversible and effective transverse relaxation rates in normal aging brain at 3 Tesla* 17th Workshop of the German - Japanese Radiological Affiliation, Fukuoka, Japan, 2014

Schüre J-R, Boelmans K, **Sedlacik J**. *Entwicklung eines Algorithmus zur Segmentierung und Untersuchung kurzer Assoziationsfasern bei Morbus Parkinson* 17. Jahrestagung der Deutschen Sektion ISMRM e.V., Jena 2014

Langley J, Huddleston D, Xiangchuan C, **Sedlacik J**, Shiyang C, Xiaoping H *A Multimodal Approach for Comprehensive Segmentation of the Substantia Nigra* ISMRM 22:573, Milan 2014

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Brehmer L, Buhk J, Schoenfeld M, **Sedlacik J**, Fiehler J, Kemmling A. *Rapid Prototyping für Hirnarterien: Hochauflösende originalgetreue Aneurysmamodelle aus dem 3D-Drucker* 48. Jahrestagung der DGNR, Köln 2013, 0198

Schoenfeld MH, Ritzel R, **Sedlacik J**, Cheng B, Thomalla G, Fiehler J. *Improved detectability of ischemic brainstem lesions by sagittal DWI acquisition* 22. European Stroke Conference, London 2013, Cerebrovasc Dis 2013; 35 (suppl 3):43

Löbel U, Nickel M, Nestrasil I, **Sedlacik J**, Kohlschütter A, Schulz A. *Brain volumetry and clinical scoring in patients with CLN2 disease: a diagnostic tool to monitor disease progression*. Brussels EPNS 2013, O70-1720

Schweser F, **Sedlacik J**, Deistung A, Reichenbach JR. *Non-Invasive Investigation of the Compartmentalization of Iron in the Human Brain*. ISMRM 21:460, Salt Lake City 2013

2012

Ban S, **Sedlacik J**. *ICE functor for correct phase image reconstruction of phased array coils*. IDEA User Group Meeting 2012, Centre d'Imagerie BioMédicale Lausanne 2012

Schmidt NO, Reitz M, **Sedlacik J**, Kim SU, Demestre M, Westphal M. *Intranasal delivery of neural stem/progenitor cells: A non-invasive passage to target intracerebral glioma*. 19. International Conference on Brain Tumor Research and Therapy, Niagara Falls 2012

Reitz M, Demestre M, **Sedlacik J**, Meissner H, Westphal M, Schmidt NO. *Intranasal administration: A non-invasive, direct passage for the delivery of glioma-targeting neural stem/progenitor cells*. 63. Jahrestagung der Deutschen Gesellschaft für Neurochirurgie (DGNC), Joint Meeting mit der Japanischen Gesellschaft für Neurochirurgie (JNS), Leipzig 2012, SA.01.04

Bester M, Steinbach K, **Sedlacik J**, Fiehler J, Friese M. *Measuring brain volume changes by ventricular enlargement in experimental autoimmune encephalomyelitis*. 47. Jahrestagung der DGNR, Köln 2012, V070

Siemonsen S, Radelfahr K, **Sedlacik J**, Kumar D, Stellmann JP, Heesen C, Fiehler J. *3T MRI Multiparametric Lesional Analysis in Multiple Sclerosis Patients*. 47. Jahrestagung der DGNR, Köln 2012, V038

Siemonsen S, Radelfahr K, **Sedlacik J**, Kumar D, Stellmann JP, Heesen C, Fiehler J. *Characterization of Multiple Sclerosis Lesions Using Susceptibility Weighted Imaging*. 47. Jahrestagung der DGNR, Köln 2012, V037

Paniagua A, Forkert ND, Löbel U, Fiehler J, Schulz A, Ding X, **Sedlacik J**, Goebell E. *Quantitative T2 measurements in juvenile and late infantile neuronal ceroid lipofuscinosis*. 47. Jahrestagung der DGNR, Köln 2012, V029

Kumar D, Ludewig P, Raj A, Magnus T, Fiehler J, Christoph H, **Sedlacik J**, Siemonsen S. *Reconstructing Myelin Water Fraction Maps from Multi Echo Spin Echo (MESE-) T2 Relaxometry in an Animal Model*. 47. Jahrestagung der DGNR, Köln 2012, V028

Sedlacik J, Boelmans K, Löbel U, Holst B, Siemonsen S, Fiehler J. *Age dependency of transversal relaxation rates (R_2 , R_2^* , R_2') and subsequent iron quantification in gray matter structures of the normal aging brain*. 47. Jahrestagung der DGNR, Köln 2012, DW011

Kumar D, **Sedlacik J**, Ludewig P, Raj A, Magnus T, Heesen C, Fiehler J, Siemonsen S. *A multi-voxel spatial approach of reconstructing myelin water fraction map from Multi Echo Spin Echo (MESE-) T2 relaxometry in animal model*. 43. Jahrestagung der Deutschen Gesellschaft für Medizinische Physik, Jena 2012

Sedlacik J, Boelmans K, Löbel U, Holst B, Siemonsen S, Fiehler J. *Age dependency of transversal relaxation rates (R_2 , R_2^* and R_2') and subsequent iron quantification in gray matter structures of the normal aging brain*. 43. Jahrestagung der Deutschen Gesellschaft für Medizinische Physik, Jena 2012

Zrnc T, Assaf A, Blessmann M, Heiland M, Habermann C, Fiehler J, Friedrich R, **Sedlacik J**. *Optimizing parameters of 3T MRI data for visualization of dental structures*. 13. European Congress of DentoMaxilloFacial Radiology, Leipzig 2012, OP 131

Assaf A, Zrnc T, Blessmann M, Heiland M, Habermann C, Fiehler J, Friedrich R, Schönfeld M, **Sedlacik J**. *3T-MRI for the evaluation of BRONJ in comparison to results from 1.5T-MRI*. 13. European Congress of Dento-Maxillo-Facial Radiology, Leipzig 2012, OP 134

Zrnc T, Assaf A, Blessmann M, Friedrich R, Habermann C, Fiehler J, Heiland M, **Sedlacik J**. *Optimizing parameters of magnetic-resonance-imaging (MRI) data for visualization of dental and maxillo-mandibular structures by 3T-MRI*. 21. Congress of the European Association for Cranio-Maxillo-Facial Surgery, Dubrovnik 2012, Croatia, O212

Assaf A, Zrnc T, Heiland M, Friedrich R, Smeets R, Blessmann M, Fiehler J, Habermann C, **Sedlacik J**, Riecke B. *Optimierung und Darstellung bildmorphologischer Parameter im Kieferbereich mittels 3-Tesla-Magnetresonanztomographie*. 62. Kongress der Deutschen Gesellschaft für Mund-, Kiefer- und Gesichtschirurgie, Freiburg 2012

Löbel U, Magnus T, Meier-Cillien M, Gerloff C, Röther J, **Sedlacik J**, Eckert B, Fiehler J. *MR Imaging Findings in Adult Patients with Hemolytic Uremic Syndrome following an Infection with a Novel Mutation of E. Coli (Subtype O104:H4)*. 50:0-149, ASNR 2012.

2011

Loitz J, **Sedlacik J**, Löbel U, Siemonsen S, Holst B, Fiehler J. *Normdaten der reversiblen Transversalen Relaxationsrate bei 3 Tesla MRT. Unter Korrektur statischerlokaler makroskopischer Magnetfeld-Inhomogenitäten*. 46. Jahrestagung der DGMR, Köln 2011, V021.

Sedlacik J, Hillenbrand CM, Broniscer A. *Treatment effects of diffuse intrinsic pontine gliomas on tumor and normal appearing cortical gray matter assessed by arterial spin labeling perfusion and 3D volumetric measurements*. ISMRM 19:251, Montreal 2011.

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Sedlacik J, Broniscer A, Hillenbrand CM. *Treatment Response of Diffuse Intrinsic Pontine Gliomas Assessed by Arterial Spin Labeling Perfusion Measurements*. ASNR 48:O-811, ASNR 2010.

Sedlacik J, Jain N, Morris EB, Krull KR, Armstrong GT, Hudson MM, Hillenbrand CM. *Late*

Effects of Cancer Treatment on Gray Matter Perfusion Assessed by Arterial Spin Labeling MR Imaging. ASNR 48:O-420, ASNR 2010.

Löbel U, **Sedlacik J**, Ji Q, Kocak M, Broniscer A, Hillenbrand CM, Reddick WE, Patay Z. *T2 Hypointense Foci in Pediatric Diffuse Intrinsic Pontine Glioma Characterized by Diffusion Tensor Imaging and Dynamic Susceptibility-Weighted Contrast-Enhanced Perfusion MR Imaging.* ASNR 48:O-768, ASNR 2010.

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Löbel U, **Sedlacik J**, Kocak M, Broniscer A, Hillenbrand CM, Patay Z. *Incidence and clinical significance of hemorrhagic lesions in diffuse pontine gliomas assessed by 2D T2*-weighted and 3D susceptibility-weighted imaging.* Neuroradiology 51(Suppl 1):79-80, ESNR 2009.

Löbel U, **Sedlacik J**, Kocak M, Broniscer A, Hillenbrand CM, Reddick WE, Patay Z. *Quantitative characterization of T2 hypointense foci in diffuse pontine gliomas using dynamic susceptibility-weighted contrast-enhanced perfusion MR and diffusion-weighted imaging.* Neuroradiology 51(Suppl 1):80, ESNR 2009.

Löbel U, **Sedlacik J**, Kocak M, Broniscer A, Hillenbrand CM, Patay Z. *Hemorrhagic lesions in patients with diffuse brainstem glioma treated with radiation and antiangiogenic therapy: Assessment by 2D gradient echo imaging (2D-GRE) and 3D susceptibility weighted imaging (3D-SWI).* ASNR 47:O-327, ASNR 2009.

Löbel U, **Sedlacik J**, Kocak M, Broniscer A, Hillenbrand CM, Patay Z. *Quantitative comparison of hemodynamic parameters in hemorrhagic versus non-hemorrhagic areas of diffuse brainstem gliomas treated by combined conformal radiation and antiangiogenic therapy using dynamic susceptibility-weighted contrast-enhanced perfusion MRI.* ASNR 47:O-330, ASNR 2009.

Sedlacik J, Broniscer A, Löbel U, Laningham FH, Reichenbach JR, Patay Z, Hillenbrand CM. *Susceptibility-weighted imaging (SWI) in children with diffuse brainstem glioma during combined anti-angiogenesis and radiation therapy.* Eur Radiol 19(Suppl 1):B-320, ECR 2009.

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Burmeister HP, Hause F, Baltzer PA, Schmidt P, Guntinas-Lichius O, **Sedlacik J**, Mentzel H-J, Kaiser WA. *Verbesserung der Bildgebung des Nervus facialis im Felsenbein bei 3 Tesla.* RoFo 180(Suppl 1):VO_203_3, 2008.

Hause F, Burmeister HP, Baltzer PA, Schmidt P, Guntinas-Lichius O, **Sedlacik J**, Mentzel H-J, Kaiser WA. *Vergleichende Darstellung des Nervus intermediofacialis - Fortschritte durch 3T-MRT.* RoFo 180(Suppl 1):VO_203_4, 2008.

Sedlacik J, Deistung A, Witoszynskyj S, Rauscher A, Menzel H-J, Kutschbach C, Kaiser WA, Reichenbach JR. *Sensitivity of susceptibility weighted imaging (SWI) towards BOLD-signal changes induced with low CO₂ concentrations.* Eur Radiol 18(Suppl 1):B-304, 2008.

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