

Publikationen 2014

Zaiss M, Xu J, Goerke S, Khan IS, Singer RJ, Gore JC, Gochberg DF, Bachert P: Inverse Z-spectrum analysis for spillover-, MT- and T1-corrected steady-state pulsed CEST-MRI - application to pH-weighted MRI of acute stroke. *NMR in Biomedicine* 27 (3), 240-252, 2014.

Konstandin S, Nagel AM: Measurement Techniques for Magnetic Resonance Imaging of Fast Relaxing Nuclei. *Magnetic Resonance Materials in Physics Biology and Medicine* 27 (1), 5-19, 2014.

Braun K, Hotz-Wagenblatt A, Wiessler M, Pipkorn R, Komljenović D, Semmler W, Waldeck W: Cigarette Smoke Extracts induce and repress Genes in human embryonic Lung Cells. *International Journal of Pharmaceutical Sciences and Research* 5 (3), 2014.

Heusser T, Brehm M, Ritschl L, Sawall S, Kachelriess M: Prior-based artifact correction (PBAC) in computed tomography. *Medical Physics* 41 (2), Art. Nr.: 021906, 2014.

Hofmann C, Knaup M, Kachelriess M: Effects of ray profile modeling on resolution recovery in clinical CT. *Medical Physics* 41 (2), Art. Nr.: 021907, 2014.

Braun K, Wiessler M, Komljenovic D, Schrenk HH, Lorenz P, Fleischhacker H, Waldeck W, Pipkorn R: Amide-based Disulfide Building Blocks for the Enlargement of the Solid Phase Peptide Synthesis for Molecular Diagnostics and Imaging. *Pharmaceutical Regulatory Affairs* 3 (1), 115-124, 2014.

Ivchenko O, Whittleston CS, Carr JM, Imhof P, Goerke S, Bachert P, Wales DJ: Proton transfer pathways, energy landscape, and kinetics in creatine-water systems. *Journal of Physical Chemistry / B* 118 (8), 1969-1975, 2014.

Theysohn JM, Kraff O, Theysohn N, Orzada S, Landgraeber S, Ladd ME, Lauenstein TC: Hip imaging of avascular necrosis at 7 Tesla compared with 3 Tesla. *Skeletal Radiology* 43 (5), 623-632, 2014.

Xu J, Zaiss M, Zu Z, Li H, Xie J, Gochberg DF, Bachert P, Gore JC: On the origins of chemical exchange saturation transfer (CEST) contrast in tumors at 9.4 T. *NMR in Biomedicine* 27 (4), 406-416, 2014.

Benkhedah N, Bachert P, Nagel AM: Two-pulse biexponential-weighted ^{23}Na imaging. *Journal of Magnetic Resonance* 240, 67-76, 2014.

Ivchenko O, Bachert P, Imhof P: Umbrella sampling of proton transfer in a creatine-water system. *Chemical Physics Letters* 600, 51-55, 2014.

Gnahm C, Bock M, Bachert P, Semmler W, Behl NGR, Nagel AM: Iterative 3D projection reconstruction of ^{23}Na data with an ^1H MRI constraint. *Magnetic Resonance in Medicine* 71 (5), 1720-1732, 2014.

Nagel AM, Lehmann-Horn F, Weber MA, Jurkat-Rott K, Wolf MB, Radbruch A, Umathum R, Semmler W: In vivo Chloride-35 Magnetic Resonance Imaging in Humans: A Feasibility Study. *Radiology* 271 (2), 585-595, 2014.

Cardinale J, Ermert J, Humpert S, Coenen HH: Iodonium ylides for one-step, no-carrier-added radiofluorination of electron rich arenes, exemplified with 4-(([F-18] fluorophenoxy)-phenylmethyl) piperidine NET and SERT ligands. *RSC Advances* 4 (33), 17293-17299, 2014.

Goerke S, Zaiss M, Bachert P: Characterization of creatine guanidinium proton exchange by water-exchange (WEX) spectroscopy for absolute-pH CEST imaging in vitro. *NMR in Biomedicine* 27 (5), 507-518, 2014.

Grychtol B, Adler A: Choice of reconstructed tissue properties affects interpretation of lung EIT images. *Physiological measurement* 35 (6), 1035-1050, 2014.

Doepfert J, Zaiss M, Witte C, Schroeder L: Ultrafast CEST imaging. *Journal of Magnetic Resonance* 243, 47-53, 2014.

Fischer A, Maderwald S, Johst S, Orzada S, Ladd ME, Umutlu L, Lauenstein TC, Kniemeyer HW, Nassenstein K: Initial Evaluation of Non-Contrast-Enhanced Magnetic Resonance Angiography in Patients With Peripheral Arterial Occlusive Disease at 7 T. *Investigative Radiology* 49 (5), 331-338, 2014.

Jiang X, Cao L, Peter J: Surface reconstruction from multiview projection data employing a micro-lens array based optical detector -- A simulation study. *Optical Engineering* 53 (2), 2014.

Rauschenberg J, Nagel AM, Ladd SC, Theysohn JM, Ladd ME, Moeller HE, Trampe, R, Turner R, Pohmann R, Scheffler K, Brechmann A, Stadler J, Felder J, Shah NJ, Semmler W: Multicenter Study of Subjective Acceptance During Magnetic Resonance Imaging at 7 and 9.4 Tesla. *Investigative Radiology* 49 (5), 249-259, 2014.

Fischer A, Kraff O, Maderwald S, Beiderwellen K, Ladd ME, Forsting M, Lauenstein TC, Umutlu L: Non-enhanced t1-weighted liver vessel imaging at 7 tesla. *PLoS ONE* 9 (6), e97465, 2014.

Hu J, Srivastava K, Wieland M, Runge A, Mogler C, Besemfelder E, Terhardt D, Vogel MJ, Cao L, Korn C, Bartels S, Thomas M, Augustin HG: Endothelial cell-derived angiopoietin-2 controls liver regeneration as a spatiotemporal rheostat. *Science* 343 (6169), 416-419, 2014.

Fraenzle A, Sumkauskaitė M, Hillengass J, Baeuerle T, Bendl R: Fully automated shape model positioning for bone segmentation in whole-body CT scans. *Journal of Physics / Conference Series* 489, Art. Nr. 012029, 2014.

Socher M, Kuntz J, Sawall S, Bartling S, Kachelriess M: The retrobulbar sinus is superior to the lateral tail vein for the injection of contrast media in small animal cardiac imaging. *Laboratory Animals* 48 (2), 105-113, 2014.

Simons D, Kachelriess M, Schlemmer HP: Recent developments of dual-energy CT in oncology. *European Radiology* 24 (4), 930-939, 2014.

Theysohn JM, Kraff O, Eilers K, Andrade D, Gerwig M, Timmann D, Schmitt F, Ladd ME, Ladd SC, Bitz AK: Vestibular effects of a 7 Tesla MRI examination compared to 1.5 T and 0 T in healthy volunteers. *PLoS ONE* 9 (3), e92104, 2014.

Cucciati G, Auffray E, Bugalho R, Cao L, Di Vara N, Farina F, Felix N, Frisch B, Ghezzi A, Juhan V, Jun D, Lasaygues P, Lecoq P, Mensah S, Mundler O, Neves J, Paganoni M, Peter J, Pizzichemi M, Siles P, Silva JC, Silva R, Tavernier S, Tessonniere L, Varela J: Development of ClearPEM-Sonic, a multimodal mammography system for PET and Ultrasound. *Journal of Instrumentation* 9, Art. Nr.: C03008, 2014.

Maier J, Sawall S, Kachelriess M: Assessment of dedicated low-dose cardiac micro-CT reconstruction algorithms using the left ventricular volume of small rodents as a performance measure. *Medical Physics* 41 (5), Art. Nr.: 051908, 2014.

Hofmann C, Sawall S, Knaup M, Kachelriess M: Alpha image reconstruction (AIR): A new iterative CT image reconstruction approach using voxel-wise alpha blending. *Medical Physics* 41 (6), Art. Nr.: 061914, 2014.

Lesparre N, Grychtol B, Gibert D, Komorowski JC, Adler A: Cross-section electrical resistance tomography of La Soufriere of Guadeloupe lava dome. *Geophysical Journal International* 197 (3), 1516-1526, 2014.

Grychtol B, Elke G, Meybohm P, Weiler N, Frerichs I, Adler A: Functional validation and comparison framework for EIT lung imaging. *PLoS ONE* 9 (8), e103045, 2014.

Heinrich A, Szostek A, Meyer P, Reinhard I, Gilles M, Paslakis G, Rauschenberg J, Groebner J, Semmler W, Deuschle M, Meyer-Lindenberg A, Flor H, Nees F: Women are more strongly affected by dizziness in static magnetic fields of magnetic resonance imaging scanners. *Neuroreport* 25 (14), 1081-1084, 2014.

Rathi Y, Michailovich O, Laun F, Setsompop K, Grant PE, Westin CF: Multi-shell diffusion signal recovery from sparse measurements. *Medical Image Analysis* 18 (7), 1143-1156, 2014.

Runge A, Hu J, Wieland M, Bergeest JP, Mogler C, Neumann A, Geraud C, Arnold B, Rohr K, Komljenovic D, Schirmacher P, Goerdt S, Augustin HG: An inducible hepatocellular carcinoma model for preclinical evaluation of antiangiogenic therapy in adult mice. *Cancer Research* 74 (15), 4157-4169, 2014.

Cao L, Bugalho R, Ferreira C, Ortigao C, Capote R, Varela J, Peter J: A Fast List-Mode Reconstruction Algorithm with Dedicated Correction for Random Coincidences for the Clear-PEM System. *IEEE Transactions on Nuclear Science* 61 (3), 1182-1191, 2014.

Wrede KH, Johst S, Dammann P, Ozkan N, Monninghoff C, Kraemer M, Maderwald S, Ladd ME, Sure U, Umutlu L, Schlamann M: Improved Cerebral Time-of-Flight Magnetic Resonance Angiography at 7 Tesla - Feasibility Study and Preliminary Results Using Optimized Venous Saturation Pulses. *PLoS ONE* 9 (9), e106697, 2014.

Hauser T, Essig M, Jensen A, Laun FB, Muenter M, Maier-Hein KH, Stieltjes B: Prediction of treatment response in head and neck carcinomas using IVIM-DWI: Evaluation of lymph node metastasis. *European Journal of Radiology* 83 (5), 783-787, 2014.

Vos EK, Lagemaat MW, Barentsz JO, Fütterer JJ, Zámečník P, Roozen H, Orzada S, Bitz AK, Maas MC, Scheenen TW: Image quality and cancer visibility of T2-weighted magnetic resonance imaging of the prostate at 7 Tesla. *European Radiology* 24 (8), 1950-1958, 2014.

Lagemaat MW, Vos EK, Maas MC, Bitz AK, Orzada S, van Uden MJ, Kobus T, Heerschap A, Scheenen TW: Phosphorus magnetic resonance spectroscopic imaging at 7 T in patients with prostate cancer. *Investigative Radiology* 49 (5), 363-372, 2014.

Maas MC, Vos EK, Lagemaat MW, Bitz AK, Orzada S, Kobus T, Kraff O, Maderwald S, Ladd ME, Scheenen TW: Feasibility of T2-weighted turbo spin echo imaging of the human prostate at 7 Tesla. *Magnetic Resonance in Medicine* 71 (5), 1711-1719, 2014.

Johst S, Orzad, S, Fischer A, Schäfer LC, Nassenstein K, Umutlu L, Lauenstein TC, Ladd ME, Maderwald S: Sequence comparison for non-enhanced MRA of the lower extremity arteries at 7 Tesla. *PLoS ONE* 9 (1), 2014.

Wrede KH, Dammann P, Mönnighoff C, Johst S, Maderwald S, Sandalcioglu IE, Müller O, Özkan N, Ladd ME, Forsting M, Schlamann MU, Sure U, Umutlu L: Non-enhanced MR imaging of cerebral aneurysms: 7 Tesla versus 1.5 Tesla. *PLoS ONE* 9 (1), 2014.

Gizewski ER, Maderwald S, Linn J, Dassinger B, Bochmann K, Forsting M, Ladd ME: High-resolution anatomy of the human brain stem using 7-T MRI: improved detection of inner structures and nerves?. *Neuroradiology* 56 (3), 177-186, 2014.

Fischer A, Kraff O, Orzada S, Nensa F, Schäfer LC, Ladd ME, Umutlu L, Lauenstein TC: Ultrahigh-field imaging of the biliary tract at 7 T: Initial results of gadoxetic acid-enhanced magnetic resonance cholangiography. *Investigative Radiology* 49 (5), 346-353, 2014.

Zahedi Y, Zaun G, Maderwald S, Orzada S, Pütter C, Scherag A, Winterhager E, Ladd ME, Grüninger, R: Impact of repetitive exposure to strong static magnetic fields on pregnancy and embryonic development of mice. *Journal of Magnetic Resonance Imaging* 39 (3), 691-699, 2014.

Zaun G, Zahedi Y, Maderwald S, Orzada S, Pütter C, Scherag A, Winterhager E, Ladd ME, Grüninger, R: Repetitive exposure of mice to strong static magnetic fields in utero does not impair fertility in adulthood but may affect placental weight of offspring. *Journal of Magnetic Resonance Imaging* 39 (3), 683-690, 2014.

Johst S, Orzada S, Fischer A, Umutlu L, Ladd ME, Maderwald S: Comparison of fat saturation techniques for single-shot fast spin echo sequences for 7-T Body imaging. *Investigative Radiology* 49 (2), 101-108, 2014.

Naßenstein K, Nensa F, Schlosser T, Bruder O, Umutlu L, Lauenstein T, Maderwald S, Ladd ME: Cardiac MRI: T2-Mapping Versus T2-Weighted Dark-Blood TSE Imaging for Myocardial Edema Visualization in Acute Myocardial Infarction. *Rofo - Fortschritte Auf dem Gebiet der Roentgenstrahlen und der Bildgebenden Verfahren* 186 (2), 166-172, 2014.

Umutlu L, Ladd ME, Forsting M, Lauenstein T: 7 Tesla MR imaging: opportunities and challenges. *Rofo - Fortschritte Auf dem Gebiet der Roentgenstrahlen und der Bildgebenden Verfahren* 186 (2), 121-129, 2014.

Flach B, Brehm M, Sawall S, Kachelrieß M: Deformable 3D-2D registration for CT and its application to low dose tomographic fluoroscopy. *Physics in Medicine and Biology* 59 (24), 7865-7887, 2014.

Solbach K, Kraff O, Minnero, M, Beck A, Schöl, L, Gizewski ER, Ladd ME, Timmann D: Cerebellar pathology in Friedreich's ataxia: Atrophied dentate nuclei with normal iron content. *NeuroImage: Clinical* 23 (6), 93-99, 2014.

Küper M, Wünnemann MJ, Thürling M, Stefanescu RM, Maderwald S, Elles HG, Görcke S, Ladd ME, Timmann D: Activation of the cerebellar cortex and the dentate nucleus in a prism adaptation fMRI study. *Human Brain Mapping* 35 (4), 1574-1586, 2014.

Nehe, PF, Laun FB, Stieltjes B, Maier-Hein KH: Fiberfox: Facilitating the creation of realistic white matter software phantoms. *Magnetic Resonance in Medicine* 72 (5), 1460-1470, 2014.

Bach M, Laun FB, Leemans A, Tax CM, Biessels GJ, Stieltjes B, Maier-Hein KH: Methodological considerations on tract-based spatial statistics (TBSS). *Neuroimage* 100, 358-369, 2014.

Nordbeck P, Quick HH, Bauer WR, Ertl G, Ladd ME, Ritter O: Initial clinical application of real-time MR imaging-guided ablation of cardiac arrhythmia in patients with atrial flutter. *Radiology* 273 (1), 310-311, 2014.

Pipkorn R, Braun K, Wiessler M, Waldeck W, Schrenk HH, Koch M, Semmler W, Komljenovic D: A peptide & peptide nucleic acid synthesis technology for transporter molecules and theranostics-the SPPS. *International Journal of Medical Sciences* 11 (7), 697-706, 2014.

Bretschi M, Fraenzle A, Merz M, Hillengass J, Semmler W, Bendl R, Baeuerle T: Assessing Treatment Response of Osteolytic Lesions by Manual Volumetry, Automatic Segmentation, and RECIST in Experimental Bone Metastases. *Academic Radiology* 21 (9), 1177-1184, 2014.

Braun J, Strittmatter K, Nuebel T, Komljenovic D, Sator-Schmitt M, Baeuerle T, Angel P, Schorpp-Kistner M: Loss of stromal JUNB does not affect tumor growth and angiogenesis. *International Journal of Cancer* 134 (6), 1511-1516, 2014.

Bach M, Maier-Hein (Fritzsche) KH, Stieltjes B, Laun F: Investigation of resolution effects using a specialized diffusion tensor phantom. *Magnetic Resonance in Medicine* 71 (3), 1108-1116, 2014.

Brunner A, Groebner J, Umathum R, Maier F, Semmler W, Bock M: An MR-compatible stereoscopic in-room 3D display for MR-guided interventions. *Magnetic Resonance Materials in Physics Biology and Medicine* 27 (4), 277-282, 2014.

Paech D, Zaiss M, Meissner JE, Windschuh J, Wiestler B, Bachert P, Neumann JO, Kickingereder P, Schlemmer HP, Wick W, Nagel AM, Heiland S, Ladd ME, Bendszus M, Radbruch A: Nuclear overhauser enhancement mediated chemical exchange saturation transfer imaging at 7 Tesla in glioblastoma patients. *PLoS ONE* 9 (8), e104181, 2014.

Hoffmann S, Radbruch A, Bock M, Semmler W, Nagel AM: Direct (¹⁷O) MRI with partial volume correction: first experiences in a glioblastoma patient. *Magnetic Resonance Materials in Physics Biology and Medicine* 27 (6), 579-587, 2014.

Falquez R, Couto B, Ibanez A, Freitag MT, Berger M, Arens EA, Lang S, Barnow S: Detaching from the negative by reappraisal: the role of right superior frontal gyrus (BA9/32) AND: Falquez R, Couto B, Ibanez A, Freitag MT, Berger M, Arens EA, Lang S, Barnow S: Corrigendum: Detaching from the

negative by reappraisal: the role of right superior frontal gyrus (BA9/32). *Frontiers in Behavioral Neuroscience* 8, Art.Nr.: 264, 2014.. *Frontiers in Behavioral Neuroscience* 8, Art. Nr.: 165, 2014.

Buchbeitrag:

Pete J: Dual-Modality Preclinical PET/OI Instrumentation. In: *Multimodality Molecular Imaging of Small Animals*. Zaidi,H., Springer, 427-445, 2014.

Komljenovic D, Baeuerle T: Ultrasound Imaging of Cancer Therapy (Chapter 8). In: *Cancer Theranostics*. X. Chen and S. Wong, Elsevier, 2014.

Nagel AM, Weber MA, Borthakur A, Reddy R: Skeletal Muscle MR Imaging Beyond Protons: With a Focus on Sodium MRI in Musculoskeletal Applications. In: *Magnetic Resonance Imaging of the Skeletal Musculature*. Weber, M-A (Ed.), Springer, 115-133, 2014