

CONTENTS

■ SPECTROSCOPIC METHODOLOGY

Rapid Communication

- Functional Diffusion-Weighted Magnetic Resonance Spectroscopy of the Human Primary Visual Cortex at 7 T**, Francesca Branzoli, Aranee Techawiboonwong, Hermien Kan, Andrew Webb, and Itamar Ronen 303
Published online 19 November 2012

Full Paper

- Selective Homonuclear Polarization Transfer for Spectroscopic Imaging of GABA at 7T**, J. W. Pan, R. B. Duckrow, D. D. Spencer, N. I. Avdievich, and H. P. Hetherington 310
Published online 13 April 2012

Note

- Absence of Changes in GABA Concentrations with Age and Gender in the Human Anterior Cingulate Cortex: A MEGA-PRESS Study with Symmetric Editing Pulse Frequencies for Macromolecule Suppression**, E. Aufhaus, W. Weber-Fahr, M. Sack, N. Tunc-Skarka, G. Oberthuer, M. Hoerst, A. Meyer-Lindenberg, U. Boettcher, and G. Ende .. 317
Published online 5 April 2012

■ IMAGING METHODOLOGY

Rapid Communication

- Sagittal Fresh Blood Imaging with Interleaved Acquisition of Systolic and Diastolic Data for Improved Robustness to Motion**, Iliyana P. Atanasova, Daniel Kim, Pippa Storey, Andrew B. Rosenkrantz, Ruth P. Lim, and Vivian S. Lee 321
Published online 8 January 2013

Full Papers

- Modified Look-Locker T_1 Evaluation Using Bloch Simulations: Human and Phantom Validation**, Neville D. Gai, Christian Stehning, Marcelo Nacif, and David A. Bluemke 329
Published online 27 March 2012

Simultaneous Noncontrast Angiography and intraPlaque hemorrhage (SNAP) Imaging for Carotid Atherosclerotic Disease

- Evaluation**, Jinnan Wang, Peter Börnert, Huilin Zhao, Daniel S. Hippe, Xihai Zhao, Niranjan Balu, Marina S. Ferguson, Thomas S. Hatsukami, Jianrong Xu, Chun Yuan, and William S. Kerwin 337
Published online 22 March 2012

- Rapid Time-Resolved Magnetic Resonance Angiography via a Multiecho Radial Trajectory and GraDeS Reconstruction**, Gregory R. Lee, Nicole Seiberlich, Jeffrey L. Sunshine, Timothy J. Carroll, and Mark A. Griswold 346
Published online 3 April 2012

- Incorporation of Prior Knowledge in Compressed Sensing for Faster Acquisition of Hyperpolarized Gas Images**, S. Ajraoui, J. Parra-Robles, and J. M. Wild 360
Published online 3 April 2012

- Fast 3D Contrast Enhanced MRI of the Liver using Temporal Resolution Acceleration with Constrained Evolution Reconstruction**, Bo Xu, Pascal Spincemaille, Gang Chen, Mukta Agrawal, Thanh D. Nguyen, Martin R. Prince, and Yi Wang 370
Published online 22 March 2012

- Functional Perfusion Imaging Using Pseudocontinuous Arterial Spin Labeling with Low-Flip-Angle Segmented 3D Spiral Readouts**, Jon-Fredrik Nielsen and Luis Hernandez-Garcia 382
Published online 4 April 2012

- Chemical Shift-Induced Phase Errors in Phase-Contrast MRI**, Matthew J. Middione and Daniel B. Ennis 391
Published online 6 April 2012

- Pseudo-Continuous Arterial Spin Labeling at 7 T for Human Brain: Estimation and Correction for Off-Resonance Effects Using a Prescan**, Wen-Ming Luh, S. Lalith Talagala, Tie-Qiang Li, and Peter A. Bandettini 402
Published online 9 April 2012

- Transperineal Prostate MR Elastography: Initial In Vivo Results**, Ramin S. Sahebjavaher, Ali Baghani, Mohammad Honarvar, Ralph Sinkus, and Septimiu E. Salcudean 411
Published online 13 April 2012

- Parallel and Partial Fourier Imaging with Prospective Motion Correction**, Suchandrima Banerjee, Phillip J. Beatty, Jian Z. Zhang, and Ajit Shankaranarayanan 421
Published online 9 April 2012

- Highly Undersampled Phase-Contrast Flow Measurements Using Compartment-Based k - t Principal Component Analysis**, Daniel Giese, Tobias Schaeffter, and Sebastian Kozerke 434
Published online 23 April 2012

CONTENTS

In Vivo O-Space Imaging with a Dedicated 12 cm Z2 Insert Coil on a Human 3T Scanner Using Phase Map Calibration, Jason P. Stockmann, Gigi Galiana, Leo Tam, Christoph Juchem, Terence W. Nixon, and R. Todd Constable 444
Published online 14 May 2012

Chemical Shift Encoded Water-Fat Separation Using Parallel Imaging and Compressed Sensing, Samir D. Sharma, Houchun H. Hu, and Krishna S. Nayak 456
Published online 13 April 2012

Nonlinear Formulation of the Magnetic Field to Source Relationship for Robust Quantitative Susceptibility Mapping, Tian Liu, Cynthia Wisnieff, Min Lou, Weiwei Chen, Pascal Spincemaille, and Yi Wang 467
Published online 9 April 2012

Real-Time MRI of Speaking at a Resolution of 33 ms: Undersampled Radial FLASH with Nonlinear Inverse Reconstruction, Aaron Niebergall, Shuo Zhang, Esther Kunay, Götz Keydana, Michael Job, Martin Uecker, and Jens Frahm 477
Published online 12 April 2012

Prospective Respiratory Motion Correction for Coronary MR Angiography Using a 2D Image Navigator, Markus Henningsson, Jouke Smink, Reza Razavi, and René M. Botnar 486
Published online 23 April 2012

Notes

Performance of Sampling Density-Weighted and Postfiltered Density-Adapted Projection Reconstruction in Sodium Magnetic Resonance Imaging, Simon Konstandin and Armin M. Nagel 495
Published online 3 April 2012

Reduced Field-of-View Excitation Using Second-Order Gradients and Spatial-Spectral Radiofrequency Pulses, Chao Ma, Dan Xu, Kevin F. King, and Zhi-Pei Liang 503
Published online 5 April 2012

Rapid Measurement and Correction of Phase Errors From B_0 Eddy Currents: Impact on Image Quality for Non-Cartesian Imaging, Ethan K. Brodsky, Jessica L. Klaers, Alexey A. Samsonov, Richard Kijowski, and Walter F. Block 509
Published online 5 April 2012

Normalized Magnetization Ratio (NOMAR) Filtering for Creation of Tissue Selective Contrast Maps, Guanshu Liu, Kannie W. Y. Chan, Xiaolei Song, Jiangyang Zhang, Assaf A. Gilad, Jeff W. M. Bulte, Peter C. M. van Zijl, and Michael T. McMahon 516
Published online 12 April 2012

Regional Effects of Magnetization Dispersion on Quantitative Perfusion Imaging for Pulsed and Continuous Arterial Spin Labeling, Mustafa Çavuşoğlu, Rolf Pohmann, Harold Christopher Burger, and Kâmil Uludağ 524
Published online 9 April 2012

Improved Partial Volume Correction for Single Inversion Time Arterial Spin Labeling Data, Xiaoyun Liang, Alan Connelly, and Fernando Calamante 531
Published online 23 April 2012

PCr/ATP Ratio Mapping of the Human Head by Simultaneously Imaging of Multiple Spectral Peaks with Interleaved Excitations and Flexible Twisted Projection Imaging Readout Trajectories at 9.4 T, Aiming Lu, Ian C. Atkinson, Xiaohong Joe Zhou, and Keith R. Thulborn 538
Published online 23 April 2012

■ PRECLINICAL AND CLINICAL IMAGING

Rapid Communication

Fat Confounds the Observed Apparent Diffusion Coefficient in Patients with Hepatic Steatosis, Jan Hansmann, Diego Hernando, and Scott B. Reeder 545
Published online 14 November 2012

Full Paper

Intravoxel Incoherent Motion MR Imaging for Prostate Cancer: An Evaluation of Perfusion Fraction and Diffusion Coefficient Derived from Different b -Value Combinations, Yuxi Pang, Baris Turkbey, Marcelino Bernardo, Jochen Kruecker, Samuel Kadoury, Maria J. Merino, Bradford J. Wood, Peter A. Pinto, and Peter L. Choyke 553
Published online 9 April 2012

■ COMPUTER PROCESSING AND MODELING

Full Papers

Modeling Dispersion in Arterial Spin Labeling: Validation Using Dynamic Angiographic Measurements, Michael A. Chappell, Mark W. Woolrich, Samira Kazan, Peter Jezzard, Stephen J. Payne, and Bradley J. MacIntosh 563
Published online 5 April 2012

Coil Compression for Accelerated Imaging with Cartesian Sampling, Tao Zhang, John M. Pauly, Shreyas S. Vasanaawala, and Michael Lustig 571
Published online 9 April 2012

■ HARDWARE AND INSTRUMENTATION

Full Paper

Gradient System Characterization by Impulse Response Measurements with a Dynamic Field Camera, Signe J. Vannesjo, Maximilian Haeberlin, Lars Kasper, Matteo Pavan, Bertram J. Wilm, Christoph Barmet, and Klaas P. Pruessmann 583
Published online 12 April 2012

CONTENTS

■ ESR

Full Paper

**Fast Gated EPR Imaging of the Beating Heart:
Spatiotemporally Resolved 3D Imaging of
Free-Radical Distribution During the Cardiac
Cycle,** Zhiyu Chen, Levy A. Reyes,

David H. Johnson, Murugesan Velayutham,
Changjun Yang, Alexandre Samouilov,

and Jay L. Zweier..... 594

Published online 3 April 2012