

CONTENTS

■ SPECTROSCOPIC METHODOLOGY

Full Paper

- J-Difference Editing of Gamma-Aminobutyric Acid (GABA): Simulated and Experimental Multiplet Patterns,** Jamie Near, C. John Evans, Nicolaas A. J. Puts, Peter B. Barker, and Richard A. E. Edden..... 1183
Published online 4 December 2012

■ PRECLINICAL AND CLINICAL SPECTROSCOPY

Rapid Communication

- Enabling Hyperpolarized ^{129}Xe MR Spectroscopy and Imaging of Pulmonary Gas Transfer to the Red Blood Cells in Transgenic Mice Expressing Human Hemoglobin,** Matthew S. Freeman, Zackary I. Cleveland, Yi Qi, and Bastiaan Driehuys..... 1192
Published online 4 September 2013

Full Paper

- Spin Echo Measurements of the Extravasation and Tumor Cell Uptake of Hyperpolarized $[1-^{13}\text{C}]\text{Lactate}$ and $[1-^{13}\text{C}]\text{Pyruvate}$,** Mikko I. Kettunen, Brett W. C. Kennedy, De-en Hu, and Kevin M. Brindle..... 1200
Published online 27 December 2012

■ IMAGING METHODOLOGY

Rapid Communication

- Cardiac Imaging at 7 Tesla: Single- and Two-Spoke Radiofrequency Pulse Design with 16-Channel Parallel Excitation,** Sebastian Schmitter, Lance DelaBarre, Xiaoping Wu, Andreas Greiser, Dingxin Wang, Edward J. Auerbach, J. Thomas Vaughan, Kâmil Uğurbil, and Pierre-François Van de Moortele 1210
Published online 10 September 2013

Full Papers

- PexLoc—Parallel Excitation Using Local Encoding Magnetic Fields with Nonlinear and Nonbijective Spatial Profiles,** M. Haas, P. Ullmann, J. T. Schneider, H. Post, W. Ruhm, J. Hennig, and M. Zaitsev..... 1220
Published online 30 November 2012

- Off-Resonance-Robust Velocity-Selective Magnetization Preparation for Non-Contrast-Enhanced Peripheral MR Angiography,** Taehoon Shin, Bob S. Hu, and Dwight G. Nishimura 1229
Published online 28 November 2012

- Optimized 3D Ultrashort Echo Time Pulmonary MRI,** Kevin M. Johnson, Sean B. Fain, Mark L. Schiebler, and Scott Nagle 1241
Published online 4 December 2012

- Optimal Sampling Schedule for Chemical Exchange Saturation Transfer,** Y. K. Tee, A. A. Khrapitchev, N. R. Sibson, S. J. Payne, and M. A. Chappell 1251
Published online 11 January 2013

- Accelerating MR Parameter Mapping Using Sparsity-Promoting Regularization in Parametric Dimension,** Julia V. Velikina, Andrew L. Alexander, and Alexey Samsonov..... 1263
Published online 4 December 2012

- Arrhythmia Insensitive Rapid Cardiac T_1 Mapping Pulse Sequence,** Michelle Fitts, Elodie Breton, Eugene G. Kholmovski, Derek J. Dossdall, Sathya Vijayakumar, Kyung P. Hong, Ravi Ranjan, Nassir F. Marrouche, Leon Axel, and Daniel Kim.. 1274
Published online 27 December 2012

- Voxel Spread Function Method for Correction of Magnetic Field Inhomogeneity Effects in Quantitative Gradient-Echo-Based MRI,** Dmitriy A. Yablonskiy, Alexander L. Sukstanskii, Jie Luo, and Xiaoqi Wang 1283
Published online 11 December 2012

- Prospective and Retrospective High Order Eddy Current Mitigation for Diffusion Weighted Echo Planar Imaging,** Dan Xu, Joseph K. Maier, Kevin F. King, Bruce D. Collick, Gaohong Wu, Robert D. Peters, and R. Scott Hinks 1293
Published online 16 January 2013

- High-Frequency Subband Compressed Sensing MRI Using Quadruplet Sampling,** Kyunghyun Sung and Brian A. Hargreaves 1306
Published online 27 December 2012

- Multipeak Fat-Corrected Complex R_2^* Relaxometry: Theory, Optimization, and Clinical Validation,** Diego Hernando, J. Harald Kramer, and Scott B. Reeder 1319
Published online 28 January 2013

Notes

- Utility of Respiratory-Navigator-Rejected k-Space Lines for Improved Signal-to-Noise Ratio in Three-Dimensional Cardiac MR,** Mehmet Akçakaya, Jaime L. Shaw, Thomas H. Hauser, and Reza Nezafat 1332
Published online 11 December 2012

CONTENTS

Transverse Relaxometry with Reduced Echo Train Lengths via Stimulated Echo Compensation, Md. Nasir Uddin, R. Marc Lebel, and Alan H. Wilman..... 1340
Published online 16 January 2013

Turbo Fast Three-Dimensional Carotid Artery Black-Blood MRI by Combining Three-Dimensional MERGE Sequence with Compressed Sensing, Bo Li, Li Dong, Bin Chen, Shuangxi Ji, Wenchao Cai, Ye Wang, Jue Zhang, Zhaoqi Zhang, Xiaoying Wang, and Jing Fang..... 1347
Published online 27 December 2012

Accelerated Fractional Ventilation Imaging with Hyperpolarized Gas MRI, Kiarash Emami, Yinan Xu, Hooman Hamedani, Harrilla Profka, Stephen Kadlecsek, Yi Xin, Masaru Ishii, and Rahim R. Rizi..... 1353
Published online 11 February 2013

■ PRECLINICAL AND CLINICAL IMAGING

Full Papers

Motion and Flow Insensitive Adiabatic T₂-Preparation Module for Cardiac MR Imaging at 3 Tesla, Elizabeth R. Jenista, Wolfgang G. Rehwald, Enn-Ling Chen, Han W. Kim, Igor Klem, Michele A. Parker, and Raymond J. Kim 1360
Published online 4 December 2012

Improved First-Pass Spiral Myocardial Perfusion Imaging with Variable Density Trajectories, Michael Salerno, Christopher Sica, Christopher M. Kramer, and Craig H. Meyer 1369
Published online 27 December 2012

Enhanced Tissue Differentiation in the Developing Mouse Brain Using Magnetic Resonance Micro-Histology, Francesca C. Norris, Joanne Betts-Henderson, Jack A. Wells, Jon O. Cleary, Bernard M. Siow, Simon Walker-Samuel, Karen McCue, Paolo Salomoni, Peter J. Scambler, and Mark F. Lythgoe 1380
Published online 4 December 2012

Cine-ASL: A Steady-Pulsed Arterial Spin Labeling Method for Myocardial Perfusion Mapping in Mice. Part I. Experimental Study, Thomas Troalen, Thibaut Capron, Patrick J. Cozzone, Monique Bernard, and Frank Kober..... 1389
Published online 2 January 2013

Cine-ASL: A Steady-Pulsed Arterial Spin Labeling Method for Myocardial Perfusion Mapping in Mice. Part II. Theoretical Model and Sensitivity Optimization, Thibaut Capron, Thomas Troalen, Patrick J. Cozzone, Monique Bernard, and Frank Kober..... 1399
Published online 27 December 2012

Quantitation of MRI Sensitivity to Quasi-Monodisperse Microbubble Contrast Agents for Spatially Resolved Manometry, Martin Bencsik, Amgad Al-Rwaili, Robert Morris, David J. Fairhurst, Victoria Mundell, Gareth Cave, Jonathan McKendry, and Stephen Evans 1409
Published online 11 December 2012

Contrast Enhanced Lung MRI in Mice Using Ultra-Short Echo Time Radial Imaging and Intratracheally Administrated Gd-DOTA-Based Nanoparticles, Andrea Bianchi, François Lux, Olivier Tillement, and Yannick Crémillieux..... 1419
Published online 11 December 2012

R₁ and R₂ Changes in the Human Placenta in Response to Maternal Oxygen Challenge, Isaac Huen, David M. Morris, Caroline Wright, Geoff J. M. Parker, Colin P. Sibley, Edward D. Johnstone, and Josephine H. Naish ... 1427
Published online 27 December 2012

Note

High-Resolution Fourier-Encoded Sub-Millisecond Echo Time Musculoskeletal Imaging at 3 Tesla and 7 Tesla, X. Deligianni, P. Bär, K. Scheffler, S. Trattinig, and O. Bieri..... 1434
Published online 11 December 2012

■ BIOPHYSICS AND BASIC BIOMEDICAL RESEARCH

Full Papers

Detection of RF Unsafe Devices Using a Parallel Transmission MR System, Ingmar Graesslin, Sascha Krueger, Peter Vernickel, Johannes Achtzehn, Kay Nehrke, and Steffen Weiss..... 1440
Published online 30 November 2012

Characterizing Inter-Compartmental Water Exchange in Myelinated Tissue Using Relaxation Exchange Spectroscopy, Richard D. Dortch, Kevin D. Harkins, Meher R. Juttukonda, John C. Gore, and Mark D. Does 1450
Published online 11 December 2012

■ COMPUTER PROCESSING AND MODELING

Full Papers

Error Model for Reduction of Cardiac and Respiratory Motion Effects in Quantitative Liver DW-MRI, Paul Murphy, Tanya Wolfson, Anthony Gamst, Claude Sirlin, and Mark Bydder . 1460
Published online 27 December 2012

Perfusion Quantification by Model-Free Arterial Spin Labeling Using Nonlinear Stochastic Regularization Deconvolution, André Ahlgren, Ronnie Wirestam, Esben Thade Petersen, Freddy Ståhlberg, and Linda Knutsson..... 1470
Published online 27 December 2012

Pattern Analysis Accounts for Heterogeneity Observed in MRI Studies of Tumor Angiogenesis, Marco Dominietto, Steffi Lehmann, Ruth Keist, and Markus Rudin 1481
Published online 27 December 2012