

## CONTENTS

### ■ SPECTROSCOPIC METHODOLOGY

#### Full Paper

- SPECIAL Semi-LASER with Lipid Artifact Compensation for  $^1\text{H}$  MRS at 7 T,** Alexander Fuchs, Mariska Luttje, Peter Boesiger, and Anke Henning ..... 603  
*Published online 19 April 2012*

### ■ PRECLINICAL AND CLINICAL SPECTROSCOPY

#### Full Paper

- 3-T Proton Magnetic Spectroscopy in Unmedicated First Episode Psychosis: A Focus on Creatine,** Philip G. Tibbo, Denise Bernier, Christopher C. Hanstock, Peter Seres, Bonnie Lakusta, and Scot E. Purdon ..... 613  
*Published online 17 April 2012*

### ■ IMAGING METHODOLOGY

#### Review

- Prospective Motion Correction in Brain Imaging: A Review,** Julian Maclaren, Michael Herbst, Oliver Speck, and Maxim Zaitsev ..... 621  
*Published online 8 May 2012*

#### Full Papers

- A New Method for Detecting Exchanging Amide Protons Using Chemical Exchange Rotation Transfer,** Zhongliang Zu, Vaibhav A. Janve, Junzhong Xu, Mark D. Does, John C. Gore, and Daniel F. Gochberg ..... 637  
*Published online 13 April 2012*

- High Frame Rate Retrospectively Triggered Cine MRI for Assessment of Murine Diastolic Function,** Bram F. Coolen, Desiree Abdurrachim, Abdallah G. Motaal, Klaas Nicolay, Jeanine J. Prompers, and Gustav J. Strijkers ..... 648  
*Published online 19 April 2012*

- Small-Tip Fast Recovery Imaging Using Non-Slice-Selective Tailored Tip-Up Pulses and Radiofrequency-Spoiling,** Jon-Fredrik Nielsen, Daehyun Yoon, and Douglas C. Noll ..... 657  
*Published online 17 April 2012*

- Measurement of Vibration-Induced Volumetric Strain in the Human Lung,** Sebastian Hirsch, Oleg Posnansky, Sebastian Papazoglou, Thomas Elgeti, Jürgen Braun, and Ingolf Sack ..... 667  
*Published online 23 April 2012*

- Test-Retest Reproducibility of a Rapid Method to Measure Brain Oxygen Metabolism,** Peiying Liu, Feng Xu, and Hanzhang Lu ..... 675  
*Published online 19 April 2012*

- Ultrashort TE  $T_{1\rho}$  Magic Angle Imaging,** Jiang Du, Sheronda Statum, Richard Znamirovski, Graeme M. Bydder, and Christine B. Chung ..... 682  
*Published online 26 April 2012*

- Simultaneous Quantification of Fat Content and Fatty Acid Composition Using MR Imaging,** Pernilla Peterson and Sven Månsson ... 688  
*Published online 24 April 2012*

- Perfusion Phantom: An Efficient and Reproducible Method to Simulate Myocardial First-Pass Perfusion Measurements with Cardiovascular Magnetic Resonance,** Amedeo Chiribiri, Andreas Schuster, Masaki Ishida, Gillion Hautvast, Niloufar Zarinabad, Geraint Morton, James Otton, Sven Plein, Marcel Breeuwer, Philip Batchelor, Tobias Schaeffter, and Eike Nagel ..... 698  
*Published online 24 April 2012*

- Noncontrast-Enhanced Three-Dimensional (3D) Intracranial MR Angiography Using Pseudocontinuous Arterial Spin Labeling and Accelerated 3D Radial Acquisition,** Huimin Wu, Walter F. Block, Patrick A. Turski, Charles A. Mistretta, and Kevin M. Johnson ..... 708  
*Published online 24 April 2012*

- Quantitative Susceptibility Mapping of Small Objects Using Volume Constraints,** Saifeng Liu, Jaladhar Neelavalli, Yu-Chung N. Cheng, Jin Tang, and E. Mark Haacke ..... 716  
*Published online 8 May 2012*

- Adapting MRI Acoustic Radiation Force Imaging for In Vivo Human Brain Focused Ultrasound Applications,** Elena A. Kaye and Kim Butts Pauly ..... 724  
*Published online 3 May 2012*

- Real-Time Correction by Optical Tracking with Integrated Geometric Distortion Correction for Reducing Motion Artifacts in Functional MRI,** David Rotenberg, Mark Chiew, Shawn Ranieri, Fred Tam, Rajiv Chopra, and Simon J. Graham ..... 734  
*Published online 14 May 2012*

- Prospective Motion Correction Using Tracking Coils,** Lei Qin, Ehud J. Schmidt, Zion Tsz Ho Tse, Juan Santos, William S. Hoge, Clare Tempany-Afdhal, Kim Butts-Pauly, and Charles L. Dumoulin ..... 749  
*Published online 7 May 2012*

# CONTENTS

**MR Imaging of the Amide-Proton Transfer Effect and the pH-Insensitive Nuclear Overhauser Effect at 9.4 T**, Tao Jin, Ping Wang, Xiaopeng Zong, and Seong-Gi Kim..... 760  
*Published online 10 May 2012*

**Arterial Input Function Measurements for Bolus Tracking Perfusion Imaging in the Brain**, Elias Kellner, Irina Mader, Michael Mix, Daniel Nico Splitthoff, Marco Reiser, Katharina Foerster, Thao Nguyen-Thanh, Peter Gall, and Valerij G. Kiselev..... 771  
*Published online 18 May 2012*

**Conversion of Arterial Input Functions for Dual Pharmacokinetic Modeling Using Gd-DTPA/MRI and <sup>18</sup>F-FDG/PET**, Eric Poulin, Réjean Lebel, Etienne Croteau, Marie Blanche, Luc Tremblay, Roger Lecomte, M'hamed Bentourkia, and Martin Lepage ..... 781  
*Published online 8 May 2012*

**High-Resolution Human Diffusion Tensor Imaging Using 2-D Navigated Multishot SENSE EPI at 7 T**, Ha-Kyu Jeong, John C. Gore, and Adam W. Anderson ..... 793  
*Published online 16 May 2012*

## Notes

**Combined Prospective and Retrospective Correction to Reduce Motion-Induced Image Misalignment and Geometric Distortions in EPI**, Melvyn B. Ooi, Jordan Muraskin, Xiaowei Zou, William J. Thomas, Sascha Krueger, Murat Aksoy, Roland Bammer, and Truman R. Brown ..... 803  
*Published online 12 April 2012*

**Spectrally Selective 3D TSE Imaging of Phosphocreatine in the Human Calf Muscle at 3 T**, Prodromos Parasoglou, Ding Xia, and Ravinder R. Regatte ..... 812  
*Published online 12 April 2012*

**On B<sub>1</sub> Inhomogeneity Correction of In Vivo Human Brain Glutamate Chemical Exchange Saturation Transfer Contrast at 7T**, Anup Singh, Kejia Cai, Mohammad Haris, Hari Hariharan, and Ravinder Reddy..... 818  
*Published online 17 April 2012*

**Reducing Localized Signal Fluctuation in fMRI Using Spectral-Spatial Fat Saturation**, Dan Xu, R. Scott Hinks, and Kevin F. King ..... 825  
*Published online 24 April 2012*

**An Optimized Velocity Selective Arterial Spin Labeling Module with Reduced Eddy Current Sensitivity for Improved Perfusion Quantification**, James A. Meakin and Peter Jezzard ..... 832  
*Published online 3 May 2012*

**Three-Dimensional First-Pass Myocardial Perfusion MRI Using a Stack-of-Spirals Acquisition**, Taehoon Shin, Krishna S. Nayak, Juan M. Santos, Dwight G. Nishimura, Bob S. Hu, and Michael V. McConnell..... 839  
*Published online 3 May 2012*

**Reduction of the Radiofrequency Heating of Metallic Devices Using a Dual-Drive Birdcage Coil**, Yigitcan Eryaman, Esra Abaci Turk, Cagdas Oto, Oktay Algin, and Ergin Atalar..... 845  
*Published online 10 May 2012*

## ■ PRECLINICAL AND CLINICAL IMAGING

### Full Papers

**Toxicity, Biodistribution, and Ex Vivo MRI Detection of Intravenously Injected Cationized Ferritin**, Scott C. Beeman, Joseph F. Georges, and Kevin M. Bennett..... 853  
*Published online 8 May 2012*

**On Shimming Approaches in 3T Breast MRI**, Ileana Hancu, Ambey Govenkara, Robert E. Lenkinski, and Seung-Kyun Lee ..... 862  
*Published online 3 May 2012*

**Quantification and Visualization of Flow in the Circle of Willis: Time-Resolved Three-Dimensional Phase Contrast MRI at 7 T Compared with 3 T**, P. van Ooij, J. J. M. Zwanenburg, F. Visser, C. B. Majoie, E. vanBavel, J. Hendrikse, and A. J. Nederveen ..... 868  
*Published online 22 May 2012*

### Note

**Segmentation Propagation Using a 3D Embryo Atlas for High-Throughput MRI Phenotyping: Comparison and Validation with Manual Segmentation**, Francesca C. Norris, Marc Modat, Jon O. Cleary, Anthony N. Price, Karen McCue, Peter J. Scambler, Sebastien Ourselin, and Mark F. Lythgoe..... 877  
*Published online 3 May 2012*

## ■ BIOPHYSICS AND BASIC BIOMEDICAL RESEARCH

### Note

**MOXE: A Model of Gas Exchange for Hyperpolarized <sup>129</sup>Xe Magnetic Resonance of the Lung**, Yulin V. Chang..... 884  
*Published online 7 May 2012*

## ■ COMPUTER PROCESSING AND MODELING

### Full Paper

**Assessment of Bias in Experimentally Measured Diffusion Tensor Imaging Parameters Using SIMEX**, Carolyn B. Lauzon, Ciprian Crainiceanu, Brian C. Caffo, and Bennett A. Landman ..... 891  
*Published online 18 May 2012*