

CONTENTS

■ SPECTROSCOPIC METHODOLOGY

Rapid Communication

- Macromolecule-Suppressed GABA-Edited Magnetic Resonance Spectroscopy at 3T,** Richard A. E. Edden, Nicolaas A. J. Puts, and Peter B. Barker..... 657
Published online 6 July 2012

Full Papers

- Multislice ¹H MRSI of the Human Brain at 7 T using Dynamic B₀ and B₁ Shimming,** Vincent O. Boer, Dennis W. J. Klomp, Christoph Juchem, Peter R. Luijten, and Robin A. de Graaf 662
Published online 12 December 2011

- ¹³C Magnetic Resonance Spectroscopy Detection of Changes in Serine Isotopomers Reflects Changes in Mitochondrial Redox Status,** C. Bryce Johnson, Andrey P. Tikunov, Haakil Lee, Justyna E. Wolak, Peter Pediaditakis, Doug A. Romney, Ekhsan Holmuhamedov, Michael P. Gamcsik, and Jeffrey M. Macdonald..... 671
Published online 21 December 2011

■ IMAGING METHODOLOGY

Full Papers

- Comparison of Optimized Soft-Tissue Suppression Schemes for Ultrashort Echo Time MRI,** Cheng Li, Jeremy F. Magland, Hamidreza Saligheh Rad, Hee Kwon Song, and Felix W. Wehrli 680
Published online 8 December 2011

- Nonuniform and Multidimensional Shinnar-Le Roux RF Pulse Design Method,** William A. Grissom, Graeme C. McKinnon, and Mika W. Vogel..... 690
Published online 9 December 2011

- Shared Velocity Encoding: A Method to Improve the Temporal Resolution of Phase-Contrast Velocity Measurements,** Hung-Yu Lin, Jacob A. Bender, Yu Ding, Yiu-Cho Chung, Alice M. Hinton, Michael L. Pennell, Kevin K. Whitehead, Subha V. Raman, and Orlando P. Simonetti..... 703
Published online 2 December 2011

- Multi-Angle Ratiometric Approach to Measure Chemical Exchange in Amide Proton Transfer Imaging,** Zhongliang Zu, Vaibhav A. Janve, Ke Li, Mark D. Does, John C. Gore, and Daniel F. Gochberg 711
Published online 8 December 2011

- Quantitative In Vivo Diffusion Imaging of Cartilage Using Double Echo Steady-State Free Precession,** Oliver Bieri, Carl Ganter, and Klaus Scheffler 720
Published online 12 December 2011

- Nonlinear GRAPPA: A Kernel Approach to Parallel MRI Reconstruction,** Yuchou Chang, Dong Liang, and Leslie Ying 730
Published online 12 December 2011

- Retrospective Reconstruction of High Temporal Resolution Cine Images from Real-Time MRI Using Iterative Motion Correction,** Michael S. Hansen, Thomas S. Sørensen, Andrew E. Arai, and Peter Kellman 741
Published online 21 December 2011

- Preserving the Accuracy and Resolution of the Sodium Bioscale from Quantitative Sodium MRI During Intrasubject Alignment Across Longitudinal Studies,** Ian C. Atkinson, Aiming Lu, and Keith R. Thulborn 751
Published online 2 December 2011

- Simultaneous Measurement of Cerebral Blood Flow and Transit Time with Turbo Dynamic Arterial Spin Labeling (Turbo-DASL): Application to Functional Studies,** Yuguang Meng, Ping Wang, and Seong-Gi Kim 762
Published online 9 December 2011

- k-t Sparse GROWL: Sequential Combination of Partially Parallel Imaging and Compressed Sensing in k-t Space Using Flexible Virtual Coil,** Feng Huang, Wei Lin, George R. Duensing, and Arne Reykowsky..... 772
Published online 9 December 2011

- Quantitative Assessment of Small Bowel Motility by Nonrigid Registration of Dynamic MR Images,** Freddy Odille, Alex Menys, Asia Ahmed, Shonit Punwani, Stuart A. Taylor, and David Atkinson 783
Published online 10 January 2012

- Mapping Apparent Eccentricity and Residual Ensemble Anisotropy in the Gray Matter Using Angular Double-Pulsed-Field-Gradient MRI,** Noam Shemesh, Daniel Barazany, Ofer Sadan, Leah Bar, Yuval Zur, Yael Barhum, Nir Sochen, Daniel Offen, Yaniv Assaf, and Yoram Cohen 794
Published online 29 November 2011

CONTENTS

Influence of Dense-Array EEG Cap on fMRI Signal, Qingfei Luo and Gary H. Glover 807
Published online 9 December 2011

SWIFT-CEST: A New MRI Method to Overcome T_2 Shortening Caused by PARACEST Contrast Agents, Todd C. Soesbe, Osamu Togao, Masaya Takahashi, and A. Dean Sherry 816
Published online 27 December 2011

Free-Breathing Inner-Volume Black-Blood Imaging of the Human Heart Using Two-Dimensionally Selective Local Excitation at 3 T, Khaled Z. Abd-Elmoniem, Christoph Barmet, and Matthias Stuber 822
Published online 9 December 2011

R_2^2 Mapping in the Presence of Macroscopic B_0 Field Variations, Diego Hernando, Karl K. Vigen, Ann Shimakawa, and Scott B. Reeder 830
Published online 9 December 2011

Reproducibility and Repeatability of Quantitative Sodium Magnetic Resonance Imaging in Vivo in Articular Cartilage at 3 T and 7 T, Guillaume Madelin, James S. Babb, Ding Xia, Gregory Chang, Alexej Jerschow, and Ravinder R. Regatte 841
Published online 16 December 2011

Notes

A Parallel Imaging Approach to Wide-Field MR Microscopy, Mary Preston McDougall and Steven M. Wright 850
Published online 2 December 2011

RF Pulse Optimization for Bloch-Siegert B_1^+ Mapping, Mohammad Mehdi Khalighi, Brian K. Rutt, and Adam B. Kerr 857
Published online 5 December 2011

Investigating the Magnetic Susceptibility Properties of Fresh Human Blood for Noninvasive Oxygen Saturation Quantification, Varsha Jain, Osheiza Abdulmalik, Kathleen Joy Propert, and Felix W. Wehrli 863
Published online 8 December 2011

Diffusion-Prepared Fast Imaging with Steady-State Free Precession (DP-FISP): A Rapid Diffusion MRI Technique at 7 T, Lan Lu, Bernadette Erokwu, Gregory Lee, Vikas Gulani, Mark A. Griswold, Katherine M. Dell, and Chris A. Flask 868
Published online 2 December 2011

3D FLAIRE: 3D Fluid Attenuated Inversion Recovery for Enhanced Detection of Lesions in Multiple Sclerosis, Paul Polak, Christopher Magnano, Robert Zivadinov, and Guy Poloni 874
Published online 2 December 2011

Correction of Vibration Artifacts in DTI Using Phase-Encoding Reversal (COVIPER), Siawoosh Mohammadi, Zoltan Nagy, Chloe Hutton, Oliver Josephs, and Nikolaus Weiskopf 882
Published online 27 December 2011

PRECLINICAL AND CLINICAL IMAGING

Full Papers

Comparisons of Multi b -Value DWI Signal Analysis With Pathological Specimen of Breast Cancer, Takayuki Tamura, Shuji Usui, Shigeru Murakami, Koji Arihiro, Takashi Fujimoto, Tamaki Yamada, Kumiko Naito, and Mitoshi Akiyama 890
Published online 8 December 2011

Longitudinal and Noninvasive Assessment of Emphysema Evolution in a Murine Model Using Proton MRI, Magdalena Zurek, Laurent Boyer, Philippe Caramelle, Jorge Boczkowski, and Yannick Crémillieux 898
Published online 12 December 2011

Measuring Brain Oxygenation in Humans Using a Multiparametric Quantitative Blood Oxygenation Level Dependent MRI Approach, Thomas Christen, Heiko Schmiedeskamp, Matus Straka, Roland Bammer, and Greg Zaharchuk 905
Published online 12 December 2011

Arterial Spin Labeling MRI Study of Age and Gender Effects on Brain Perfusion Hemodynamics, Yinan Liu, Xiaoping Zhu, David Feinberg, Matthias Guenther, Johannes Gregori, Michael W. Weiner, and Norbert Schuff 912
Published online 2 December 2011

Somatotopic Arrangement of Thermal Sensory Regions in the Healthy Human Spinal Cord Determined by Means of Spinal Cord Functional MRI, Patrick W. Stroman, Rachael L. Bosma, and Anastasia Tsyben 923
Published online 9 December 2011

ARFI-Prepared MRgHIFU in Liver: Simultaneous Mapping of ARFI-Displacement and Temperature Elevation, Using a Fast GRE-EPI Sequence, Vincent Auboiroux, Magalie Viallon, Joerg Roland, Jean-Noël Hyacinthe, Lorena Petrusca, Denis R. Morel, Thomas Goget, Sylvain Terraz, Patrick Gross, Christoph D. Becker, and Rares Salomir 932
Published online 13 January 2012

BIOPHYSICS AND BASIC BIOMEDICAL RESEARCH

Full Paper

Toward Understanding Transverse Relaxation in Human Brain Through Its Field Dependence, Fumiyuki Mitsumori, Hidehiro Watanabe, Nobuhiro Takaya, Michael Garwood, Edward J. Auerbach, Shalom Michaeli, and Silvia Mangia 947
Published online 8 December 2011

Note

Biexponential Diffusion Decay in Formalin-Fixed Prostate Tissue: Preliminary Findings, Roger M. Bourne, Nyoman Kurniawan, Gary Cowin, Timothy Stait-Gardner, Paul Sved, Geoffrey Watson, Supriya Chowdhury, and William S. Price 954
Published online 9 December 2011

CONTENTS

■ COMPUTER PROCESSING AND MODELING

Full Papers

- Numerical Simulation of SAR Induced Around Co-Cr-Mo Hip Prostheses In Situ Exposed to RF Fields Associated with 1.5 and 3 T MRI Body Coils,** John Powell, Annie Papadaki, Jeff Hand, Alister Hart, and Donald McRobbie 960
Published online 9 December 2011

- A Kinetic Model for Vessel-Encoded Dynamic Angiography with Arterial Spin Labeling,** Thomas W. Okell, Michael A. Chappell, Ursula G. Schulz, and Peter Jezzard 969
Published online 13 January 2012

■ HARDWARE AND INSTRUMENTATION

Full Paper

- Interventional Loopless Antenna at 7 T,** Mehmet Arcan Ertürk, AbdEl-Monem M. El-Sharkawy, and Paul A. Bottomley 980
Published online 12 December 2011

Note

- Sensitivity Enhancement of Remotely Coupled NMR Detectors Using Wirelessly Powered Parametric Amplification,** Chunqi Qian, Joseph Murphy-Boesch, Stephen Dodd, and Alan Koretsky 989
Published online 13 January 2012