

CONTENTS

■ SPECTROSCOPIC METHODOLOGY

Rapid Communication

- Ultrafast Magnetic Resonance Spectroscopic Imaging Using SPICE with Learned Subspaces,** Fan Lam, Yudu Li, Rong Guo, Bryan Clifford, and Zhi-Pei Liang377
Published online 4 September 2019

Full Paper

- Simultaneous Optimization of Crusher and Phase Cycling Schemes for Magnetic Resonance Spectroscopy: An Extension of Dephasing Optimization Through Coherence Order Pathway Selection,** Karl Landheer and Christoph Juchem391
Published online 17 September 2019

■ IMAGING METHODOLOGY

Rapid Communication

- Magnetic Resonance Imaging of The Vocal Fold Oscillations with Sub-Millisecond Temporal Resolution,** Johannes Fischer, Timo Abels, Ali Caglar Özen, Matthias Echternach, Bernhard Richter, and Michael Bock403
Published online 13 September 2019

Full Papers

- Long-T₂-Suppressed Zero Echo Time Imaging With Weighted Echo Subtraction and Gradient Error Correction,** Hyo Min Lee, Markus Weiger, Caspar Giehr, Romain Froidevaux, David Otto Brunner, Manuela Barbara Rösler, and Klaas Paul Pruessmann412
Published online 10 September 2019

- Retrospective Correction of Head Motion Using Measurements from an Electromagnetic Tracker,** Onur Afacan, Tess E. Wallace, and Simon K. Warfield427
Published online 10 August 2019

- Fast Myocardial T₁ Mapping Using Cardiac Motion Correction,** Kirsten M. Becker, Edyta Blaszczyk, Stephanie Funk, André Nuesslein, Jeanette Schulz-Menger, Tobias Schaeffter, and Christoph Kolbitsch438
Published online 16 August 2019

- Dynamic Susceptibility Contrast ¹⁹F-MRI of Inhaled Perfluoropropane: A Novel Approach to Combined Pulmonary Ventilation and Perfusion Imaging,** Mary A. Neal, Benjamin J. Pippard, A. John Simpson, and Peter E. Thelwall452
Published online 29 August 2019

- CEST MR-Fingerprinting: Practical Considerations and Insights for Acquisition Schedule Design and Improved Reconstruction,** Or Perlman, Kai Herz, Moritz Zaiss, Ouri Cohen, Matthew S. Rosen, and Christian T. Farrar462
Published online 9 August 2019

- Simultaneous Multislice MRI Thermometry with a Single Coil Using Incoherent Blipped-Controlled Aliasing,** Kristin Quah, Megan E. Poorman, Steven P. Allen, and William A. Grissom479
Published online 11 August 2019

- Practical Considerations for Territorial Perfusion Mapping in the Cerebral Circulation Using Super-Selective Pseudo-Continuous Arterial Spin Labeling,** Jonas Schollenberger, C. Alberto Figueroa, Jon-Fredrik Nielsen, and Luis Hernandez-Garcia492
Published online 16 August 2019

- Efficient Triple-VENC Phase-Contrast MRI for Improved Velocity Dynamic Range,** Liliana E. Ma, Michael Markl, Kelvin Chow, Alireza Vali, Can Wu, and Susanne Schnell505
Published online 18 August 2019

- Fast Multi-Component Analysis Using a Joint Sparsity Constraint for MR Fingerprinting,** Martijn Nagtegaal, Peter Koken, Thomas Amthor, and Mariya Doneva521
Published online 16 August 2019

- Motion Robust Respiratory-Resolved 3D Radial Flow MRI and its Application in Neonatal Congenital Heart Disease,** Eric M. Schrauben, Jessie Mei Lim, Datta Singh Goolaub, Davide Marini, Mike Seed, and Christopher K. Macgowan535
Published online 29 August 2019

CONTENTS

Perfusion and Apparent Oxygenation in the Human Placenta (PERFOX), Jana Hutter, Anita A. Hartevelde, Laurence H. Jackson, Suzanne Franklin, Clemens Bos, Matthias J. P. van Osch, Jonathan O'Muircheartaigh, Alison Ho, Lucy Chappell, Joseph V. Hajnal, Mary Rutherford, and Enrico De Vita.....549
Published online 21 August 2019

Time Optimal Control-Based RF Pulse Design Under Gradient Imperfections, Christoph S. Aigner, Armin Rund, Samy Abo Seada, Anthony N. Price, Joseph V. Hajnal, Shaihan J. Malik, Karl Kunisch, and Rudolf Stollberger561
Published online 23 August 2019

Rapid Measurement and Correction of Spatiotemporal B_0 Field Changes Using Fid Navigators and a Multi-Channel Reference Image, Tess E. Wallace, Onur Afacan, Tobias Kober, and Simon K. Warfield575
Published online 29 August 2019

Transceive Phase Mapping Using the PLANET Method and its Application for Conductivity Mapping in the Brain, Soraya Gavazzi, Yulia Shcherbakova, Lambertus W. Bartels, Lukas J. A. Stalpers, Jan J. W. Lagendijk, Hans Crezee, Cornelis A. T. van den Berg, and Astrid L. H. M. W. van Lier.....590
Published online 4 September 2019

Tensor-Valued Diffusion MRI in Under 3 Minutes: An Initial Survey of Microscopic Anisotropy and Tissue Heterogeneity in Intracranial Tumors, Markus Nilsson, Filip Szczepankiewicz, Jan Brabec, Marie Taylor, Carl-Fredrik Westin, Alexandra Golby, Danielle van Westen, and Pia C. Sundgren.....608
Published online 13 September 2019

MR Fingerprinting for Water T1 and Fat Fraction Quantification in Fat Infiltrated Skeletal Muscles, Benjamin Marty and Pierre G. Carlier621
Published online 10 September 2019

Notes

Respiratory Motion Corrected 4D Flow Using Golden Radial Phase Encoding, Christoph Kolbitsch, Rene Bastkowski, Tobias Schäffter, Claudia Prieto Vasquez, Kilian Weiss, David Maintz, and Daniel Giese635
Published online 29 August 2019

Using Variable-Rate Selective Excitation (VERSE) Radiofrequency Pulses to Reduce Power Deposition in Pulsed Arterial Spin Labeling Sequence at 7 Tesla, Hacene Serrai, Sagar Buch, Omer Oran, and Ravi S. Menon645
Published online 4 September 2019

Fat/Water Separation in k-space with Real-Valued Estimates and its Combination with POCS, Johan Berglund, Henric Rydén, Enrico Avventi, Ola Norbeck, Tim Sprenger, and Stefan Skare653
Published online 16 August 2019

■ PRECLINICAL AND CLINICAL IMAGING

Full Paper

Measuring Extracellular Volume Fraction by MRI: First Verification of Values Given by Clinical Sequences, David Nordlund, Christos Xanthis, Sebastian Bidhult, Robert Jablonowski, Mikael Kanski, Sascha Kopic, Marcus Carlsson, Henrik Engblom, Anthony H. Aletras, and Håkan Arheden.....662
Published online 16 August 2019

■ BIOPHYSICS AND BASIC BIOMEDICAL RESEARCH

Note

Sensitivity of Quantitative Relaxometry and Susceptibility Mapping to Microscopic Iron Distribution, Timothy J. Colgan, Gesine Knobloch, Scott B. Reeder, and Diego Hernando673
Published online 18 August 2019

Full Paper

More than BOLD: Dual-Spin Populations Create Functional Contrast, Amanda J. Taylor, Jung H. Kim, Vimal Singh, Elizabeth J. Halfen, Josef Pfeuffer, and David Ress681
Published online 18 August 2019

■ COMPUTER PROCESSING AND MODELING

Full Papers

A Deep Learning Method for Image-Based Subject-Specific Local SAR Assessment, E.F. Meliadó, A.J.E Raaijmakers, A. Sbrizzi, B.R. Steensma, M. Maspero, M.H.F. Savenije, P.R. Luijten, and C.A.T. van den Berg.....695
Published online 4 September 2019

Automatic In-Line Quantitative Myocardial Perfusion Mapping: Processing Algorithm and Implementation, Hui Xue, Louise A.E. Brown, Sonia Nielles-Vallespin, Sven Plein, and Peter Kellman712
Published online 23 August 2019

CONTENTS

Quantification of Cerebral Perfusion and Cerebrovascular Reserve Using Turbo-QUASAR Arterial Spin Labeling MRI, Moss Y. Zhao, Lena Václavů, Esben T. Petersen, Bart J. Biemond, Magdalena J. Sokolska, Yuriko Suzuki, David L. Thomas, Aart J. Nederveen, and Michael A. Chappell731
Published online 12 September 2019

■ HARDWARE AND INSTRUMENTATION

A 32-Channel Multi-Coil Setup Optimized for Human Brain Shimming at 9.4T, Ali Aghaeifar, Jiazheng Zhou, Rahel Heule, Behzad Tabibian, Bernhard Schölkopf, Feng Jia, Maxim Zaitsev, and Klaus Scheffler749
Published online 4 September 2019

Whole Brain ³¹P MRSI at 7T with a Dual-Tuned Receive Array, Benjamin C. Rowland, Ian D. Driver, Mohamed Tachrount, Dennis W. J. Klomp, Debra Rivera, Ria Forner, Anh Pham, Michel Italiaander, and Richard G. Wise765
Published online 23 August 2019