

The highlighted papers are those papers recognized by the reviewers
as supporting MRM's goal of Reproducible Research.

CONTENTS

■ EDITORIAL

- On the open-source landscape of *Magnetic Resonance in Medicine*, Mathieu Boudreau, Nikola Stikov, and Peter Jezzard.....1495

■ ANNOUNCEMENT

- ISMRM Young Investigator Award Winners1498
Published online 01 July 2022

■ SPECTROSCOPIC METHODOLOGY

Research Articles

- Improved signal-to-noise performance of MultiNet GRAPPA ^1H FID MRSI reconstruction with semi-synthetic calibration data, Kimberly L. Chan, Theresia Ziegs, and Anke Henning1500
Published online 03 June 2022

- Metabolite-cycled echo-planar spectroscopic imaging of the human heart, Sophie M. Peereboom and Sebastian Kozerke1516
Published online 06 June 2022

■ IMAGING METHODOLOGY

Guidelines

- Velocity-selective arterial spin labeling perfusion MRI: A review of the state of the art and recommendations for clinical implementation, Qin Qin, David C. Alsop, Divya S. Bolar, Luis Hernandez-Garcia, James Meakin, Dapeng Liu, Krishna S. Nayak, Sophie Schmid, Matthias J. P. van Osch, Eric C. Wong, Joseph G. Woods, Greg Zaharchuk, Moss Y. Zhao, Zungho Zun, Jia Guo, and on Behalf of the ISMRM Perfusion Study Group.....1528
Published online 12 July 2022

Research Articles

- Deep learning-based quantitative susceptibility mapping (QSM) in the presence of fat using synthetically generated multi-echo phase training data, Jannis Hanspach, Steffen Bollmann, Johanna Grigo, Andre Karius, Michael Uder, and Frederik B. Laun1548
Published online 17 June 2022

- Cardio-respiratory motion-corrected 3D cardiac water-fat MRI using model-based image reconstruction, Johannes Mayer, Edyta Blaszczyk, Alberto Cipriani, Giulio Ferrazzi, Jeanette Schulz-Menger, Tobias Schaeffter, and Christoph Kolbitsch.....1561
Published online 01 July 2022

- Free-breathing motion-informed locally low-rank quantitative 3D myocardial perfusion imaging, Tobias Hoh, Valery Vishnevskiy, Małgorzata Polacin, Robert Manka, Maximilian Fuetterer, and Sebastian Kozerke1575
Published online 17 June 2022

- Iterative static field map estimation for off-resonance correction in non-Cartesian susceptibility weighted imaging, Guillaume Daval-Frérot, Aurélien Massire, Boris Mailhe, Mariappan Nadar, Alexandre Vignaud, and Philippe Ciuci1592
Published online 23 June 2022

- Development of a novel 10-echo multi-contrast sequence based on EPIK to deliver simultaneous quantification of T_2 and T_2^* with application to oxygen extraction fraction, Fabian Küppers, Seong Dae Yun, and N. Jon Shah1608
Published online 03 June 2022

- A probabilistic Bayesian approach to recover R_2^* map and phase images for quantitative susceptibility mapping, Shuai Huang, James J. Lah, Jason W. Allen, and Deqiang Qiu.....1624
Published online 07 June 2022

- Accelerated dual-venc 4D flow MRI with variable high-venc spatial resolution for neurovascular applications, Maria Aristova, Jianing Pang, Yue Ma, Liliana Ma, Haben Berhane, Vitaliy Rayz, Michael Markl, and Susanne Schnell.....1643
Published online 26 June 2022

- OSCILLATE: A low-rank approach for accelerated magnetic resonance elastography, Grace McIlvain, Alexander M. Cerjanic, Anthony G. Christodoulou, Matthew D. J. McGarry, and Curtis L. Johnson1659
Published online 01 June 2022

- Improving in situ acoustic intensity estimates using MR acoustic radiation force imaging in combination with multifrequency MR elastography, Ningrui Li, Pooja Gaur, Kristin Quah, and Kim Butts Pauly1673
Published online 28 June 2022

CONTENTS

Gradient-echo-train-based sub-millisecond periodic event encoded dynamic imaging with random (k, t) -space undersampling: $k\text{-}t$ get-SPEEDI, Qingfei Luo, Zheng Zhong, Kaibao Sun, Alessandro Scotti, and Xiaohong Joe Zhou 1690
Published online 06 June 2022

Improved TSE imaging at ultrahigh field using nonlocalized efficiency RF shimming and acquisition modes optimized for refocused echoes (AMORE), Xiaoxuan He, Simon Schmidt, Štefan Zbýň, Tobey Haluptzok, Steen Moeller, and Gregory J. Metzger 1702
Published online 12 June 2022

Quantification of changes in myocardial T_1^* values with exercise cardiac MRI using a free-breathing non-electrocardiograph radial imaging, Rui Guo, Haikun Qi, Amine Amyar, Xiaoying Cai, Selcuk Kucukseymen, Hassan Haji-Valizadeh, Jennifer Rodriguez, Amanda Paskavitz, Patrick Pierce, Beth Goddu, Richard B. Thompson, and Reza Nezafat 1720
Published online 12 June 2022

Accelerated fatty acid composition MRI of epicardial adipose tissue: Development and application to eplerenone treatment in a mouse model of obesity-induced coronary microvascular disease, Soham A. Shah, John T. Echols, Changyu Sun, Matthew J. Wolf, and Frederick H. Epstein 1734
Published online 20 June 2022

Free-breathing, non-ECG, simultaneous myocardial T_1 , T_2 , T_2^* , and fat-fraction mapping with motion-resolved cardiovascular MR multitasking, Tianle Cao, Nan Wang, Alan C. Kwan, Hsu-Lei Lee, Xianglun Mao, Yibin Xie, Kim-Lien Nguyen, Caroline M. Colbert, Fei Han, Pei Han, Hui Han, Anthony G. Christodoulou, and Debiao Li 1748
Published online 17 June 2022

Technical Notes
Phase-cycled balanced SSFP imaging for non-contrast-enhanced functional lung imaging, Efe Ilicak, Safa Ozdemir, Lothar R. Schad, Meike Weis, Stefan O. Schoenberg, Frank G. Zöllner, and Jascha Zapp 1764
Published online 24 May 2022

EPI phase error correction with deep learning (PEC-DL) at 7 T, Lili Wang, Chengyan Wang, Fanwen Wang, Ying-hua Chu, Zidong Yang, and He Wang 1775
Published online 13 June 2022

Accelerating Brain Imaging Using a Silent Spatial Encoding Axis, Edwin Versteeg, Dennis W. J. Klomp, and Jeroen C. W. Siero 1785
Published online 13 June 2022

■ PRECLINICAL AND CLINICAL IMAGING

Research Articles

Point-of-care magnetic resonance technology to measure liver fat: Phantom and first-in-human pilot study, Mark Barahman, Eduardo Grunvald, Pablo J. Prado, Alejandro Bussandri, Walter C. Henderson, Tanya Wolfson, Kathryn J. Fowler, and Claude B. Sirlin 1794
Published online 25 May 2022

Correcting for imaging gradients-related bias of T_2 relaxation times at high-resolution MRI, Natalie Bnaiahu, Noam Omer, Ella Wilczynski, Shir Levy, Tamar Blumenfeld-Katzir, and Noam Ben-Eliezer 1806
Published online 06 June 2022

Technical Note

Multicenter repeatability and reproducibility of MR fingerprinting in phantoms and in prostatic tissue, Wei-Ching Lo, Leonardo Kayat Bittencourt, Ananya Panda, Yun Jiang, Junichi Tokuda, Ravi Seethamraju, Clare Tempary-Afdhal, Verena Obmann, Katherine Wright, Mark Griswold, Nicole Seiberlich, and Vikas Gulani 1818
Published online 17 June 2022

■ BIOPHYSICS AND BASIC BIOMEDICAL RESEARCH

Research Articles

Characterization and correction of the effects of hepatic iron on T_{1p} relaxation in the liver at 3.0T, Yurui Qian, Jian Hou, Baiyan Jiang, Vincent Wai-Sun Wong, Jack Lee, Queenie Chan, Yixiang Wang, Winnie Chiu-Wing Chu, and Weitian Chen 1828
Published online 24 May 2022

Comparison of inversion methods in MR elastography: An open-access pipeline for processing multifrequency shear-wave data and demonstration in a phantom, human kidneys, and brain, Tom Meyer, Stephan Marticorena Garcia, Heiko Tschätzsch, Helge Herthum, Mehrgan Shahryari, Lisa Stencil, Jürgen Braun, Prateek Kalra, Arunark Kolipaka, and Ingolf Sack 1840
Published online 12 June 2022

■ COMPUTER PROCESSING AND MODELING

Research Articles

Accelerating multi-echo chemical shift encoded water-fat MRI using model-guided deep learning, Shuo Li, Chenfei Shen, Zekang Ding, Huajun She, and Yiping P. Du 1851
Published online 01 June 2022

CONTENTS

- Modeling the effect of hyperoxia on the spin-lattice relaxation rate R₁ of tissues,**
Emma Bluemke, Eleanor Stride,
and Daniel Peter Bulte..... 1867
Published online 09 June 2022

■ HARDWARE AND INSTRUMENTATION

Research Articles

- Development of a novel MR-conditional microwave needle for MR-guided interventional microwave ablation at 1.5T,** Xiaoyan Huang,
Yufu Zhou, Changliang Wang, Fulang Qi,
Penghui Luo, Huiyu Du, Qing Zhang,
Zhengrong Liu, Kecheng Yuan,
and Bensheng Qiu..... 1886
Published online 01 July 2022

- Systematic dimensional analysis of the scaling relationship for gradient and shim coil design parameters,**
Seung-Kyun Lee, and Matt A. Bernstein..... 1901
Published online 06 June 2022

- A 32-element loop/dipole hybrid array for human head imaging at 7 T,**
Nikolai I. Avdievich, Anton V. Nikulin,
Loreen Ruhm, Arthur W. Magill,
Felix Glang, Anke Henning,
and Klaus Scheffler 1912
Published online 29 June 2022

Technical Notes

- Compact MR-compatible ergometer and its application in cardiac MR under exercise stress: A preliminary study,**
Bo He, Yushu Chen, Lei Wang, Yang Yang,
Chunchao Xia, Jie Zheng, and Fabao Gao 1927
Published online 01 June 2022

- Direct comparison of gradient fidelity and acoustic noise of the same MRI system at 3 T and 0.75 T,** Hannes Dillinger,
Sebastian Kozerke, and Christian Guenthner 1937
Published online 01 June 2022