Nicolas Boulant

List of Publications by Year
in descending order

59 papers	2,036 citations	279798 23 h-index	243625 44 g-index
59 all docs	59 docs citations	59 times ranked	1326 citing authors

#	Article	IF	Citations
1	Measuring radiofrequency field–induced temperature variations in brain MRI exams with motion compensated MR thermometry and field monitoring. Magnetic Resonance in Medicine, 2022, 87, 1390-1400.	3.0	7
2	Standardized universal pulse: A fast RF calibration approach to improve flip angle accuracy in parallel transmission. Magnetic Resonance in Medicine, 2022, 87, 2839-2850.	3.0	6
3	Magnetic field strength dependent SNR gain at the center of a spherical phantom and up to 11.7T. Magnetic Resonance in Medicine, 2022, 88, 2131-2138.	3.0	21
4	Universal nonselective excitation and refocusing pulses with improved robustness to off–resonance for Magnetic Resonance Imaging at 7 Tesla with parallel transmission. Magnetic Resonance in Medicine, 2021, 85, 678-693.	3.0	16
5	RF heating measurement using MR thermometry and field monitoring: Methodological considerations and first in vivo results. Magnetic Resonance in Medicine, 2021, 85, 1282-1293.	3.0	7
6	General gradient delay correction method in bipolar multispoke RF pulses using trim blips. Magnetic Resonance in Medicine, 2021, 85, 1004-1012.	3.0	2
7	Temporal SNR optimization through RF coil combination in fMRI: The more, the better?. PLoS ONE, 2021, 16, e0259592.	2.5	1
8	A Statistical Robust Approach to Design Parallel Transmit Radiofrequency Excitations in MRI. Concepts in Magnetic Resonance Part A: Bridging Education and Research, 2020, 2020, 1-13.	0.5	4
9	Simultaneous proton density, T_1, T_2, and flip–angle mapping of the brain at 7 T using multiparametric 3D SSFP imaging and parallel–transmission universal pulses. Magnetic Resonance in Medicine, 2020, 84, 3286-3299.	3.0	8
10	SmartPulse, a machine learning approach for calibration–free dynamic RF shimming: Preliminary study in a clinical environment. Magnetic Resonance in Medicine, 2019, 82, 2016-2031.	3.0	16
11	Universal Pulses for MRI at 9.4 Tesla - a Feasibility Study. , 2019, , .		2
12	Robust nonadiabatic T_2 preparation using universal parallel–transmit k_T–point pulses for 3D FLAIR imaging at 7 T. Magnetic Resonance in Medicine, 2019, 81, 3202-3208.	3.0	16
13	Time-of-flight angiography at 7T using TONE double spokes with parallel transmission. Magnetic Resonance Imaging, 2019, 61, 104-115.	1.8	6
14	Optimizing BOLD sensitivity in the 7T Human Connectome Project resting-state fMRI protocol using plug-and-play parallel transmission. NeuroImage, 2019, 195, 1-10.	4.2	18
15	Comparison of SMS-EPI and 3D-EPI at 7T in an fMRI localizer study with matched spatiotemporal resolution and homogenized excitation profiles. PLoS ONE, 2019, 14, e0225286.	2.5	24
16	B_1 artifact reduction in abdominal DCE–MRI using k_T–points: First clinical assessment of dynamic RF shimming at 3T. Journal of Magnetic Resonance Imaging, 2018, 47, 1562-1571.	3.4	3
17	Design of universal parallel–transmit refocusing k_T–point pulses and application to 3D T_2–weighted imaging at 7T. Magnetic Resonance in Medicine, 2018, 80, 53-65.	3.0	36
18	Universal pulses: A new concept for calibration–free parallel transmission. Magnetic Resonance in Medicine, 2017, 77, 635-643.	3.0	93

#	ARTICLE	IF	CITATIONS
19	Probabilistic analysis of the specific absorption rate intersubject variability safety factor in parallel transmission MRI. Magnetic Resonance in Medicine, 2017, 78, 1217-1223.	3.0	28
20	New method to characterize and correct with sub‑µs precision gradient delays in bipolar multispoke RF pulses. Magnetic Resonance in Medicine, 2017, 78, 2194-2202.	3.0	10
21	In vivo demonstration of whole‑brain multislice multispoke parallel transmit radiofrequency pulse design in the small and large flip angle regimes at 7 Tesla. Magnetic Resonance in Medicine, 2017, 78, 1009-1019.	3.0	19
22	Homogeneous non-selective and slice-selective parallel-transmit excitations at 7 Tesla with universal pulses: A validation study on two commercial RF coils. PLoS ONE, 2017, 12, e0183562.	2.5	37
23	Signal‑domain optimization metrics for MPRAGE RF pulse design in parallel transmission at 7 tesla. Magnetic Resonance in Medicine, 2016, 76, 1431-1442.	3.0	8
24	Direct control of the temperature rise in parallel transmission by means of temperature virtual observation points: Simulations at 10.5 tesla. Magnetic Resonance in Medicine, 2016, 75, 249-256.	3.0	26
25	FID navigator‑based MR thermometry method to monitor small temperature changes in the brain of ventilated animals. NMR in Biomedicine, 2015, 28, 101-107.	2.8	6
26	Joint design of k_T-points trajectories and RF pulses under explicit SAR and power constraints in the large flip angle regime. Journal of Magnetic Resonance, 2015, 261, 181-189.	2.1	23
27	Parallel‑transmission‑enabled three‑dimensional T_2‑weighted imaging of the human brain at 7 Tesla. Magnetic Resonance in Medicine, 2015, 73, 2195-2203.	3.0	30
28	Two-spoke placement optimization under explicit specific absorption rate and power constraints in parallel transmission at ultra-high field. Journal of Magnetic Resonance, 2015, 255, 59-67.	2.1	15
29	Radiofrequency pulse design in parallel transmission under strict temperature constraints. Magnetic Resonance in Medicine, 2014, 72, 679-688.	3.0	14
30	On Variant Strategies to Solve the Magnitude Least Squares Optimization Problem in Parallel Transmission Pulse Design and Under Strict SAR and Power Constraints. IEEE Transactions on Medical Imaging, 2014, 33, 739-748.	8.9	71
31	Design of non-selective refocusing pulses with phase-free rotation axis by gradient ascent pulse engineering algorithm in parallel transmission at 7T. Journal of Magnetic Resonance, 2013, 230, 76-83.	2.1	20
32	Parallel-transmission-enabled magnetization-prepared rapid gradient-echo T1-weighted imaging of the human brain at 7T. NeuroImage, 2012, 62, 2140-2150.	4.2	35
33	Thermal simulations in the human head for high field MRI using parallel transmission. Journal of Magnetic Resonance Imaging, 2012, 35, 1312-1321.	3.4	37
34	Experimental demonstration of diffusion signal enhancement in 2D DESIRE images. Journal of Magnetic Resonance, 2012, 218, 44-48.	2.1	1
35	k_T‑points: Short three‑dimensional tailored RF pulses for flip‑angle homogenization over an extended volume. Magnetic Resonance in Medicine, 2012, 67, 72-80.	3.0	173
36	High tip angle approximation based on a modified Bloch‑Riccati equation. Magnetic Resonance in Medicine, 2012, 67, 339-343.	3.0	14

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37	B_1 and B_0 inhomogeneity mitigation in the human brain at 7 T with selective pulses by using average Hamiltonian theory. Magnetic Resonance in Medicine, 2011, 65, 680-691.	3.0	3
38	Local SAR reduction in parallel excitation based on channel‐dependent Tikhonov parameters. Journal of Magnetic Resonance Imaging, 2010, 32, 1209-1216.	3.4	34
39	Counteracting radio frequency inhomogeneity in the human brain at 7 Tesla using strongly modulating pulses. Magnetic Resonance in Medicine, 2009, 61, 1165-1172.	3.0	25
40	T1 and T2 effects during radio-frequency pulses in spoiled gradient echo sequences. Journal of Magnetic Resonance, 2009, 197, 213-218.	2.1	15
41	Strongly modulating pulses for counteracting RF inhomogeneity at high fields. Magnetic Resonance in Medicine, 2008, 60, 701-708.	3.0	22
42	Current to Frequency Conversion in a Josephson Circuit. Physical Review Letters, 2007, 99, 187005.	7.8	18
43	Signatures of Incoherence in a Quantum Information Processor. Quantum Information Processing, 2007, 6, 431-444.	2.2	4
44	Benchmarking Quantum Control Methods on a 12-Qubit System. Physical Review Letters, 2006, 96, 170501.	7.8	159
45	NMR Based Quantum Information Processing: Achievements and Prospects. , 2005, , 105-137.		3
46	Experimental Implementation of a Concatenated Quantum Error-Correcting Code. Physical Review Letters, 2005, 94, 130501.	7.8	41
47	NMR Quantum Information Processing. Quantum Information Processing, 2004, 3, 15-44.	2.2	33
48	Incoherent noise and quantum information processing. Journal of Chemical Physics, 2004, 121, 2955-2961.	3.0	29
49	Quantum process tomography of the quantum Fourier transform. Journal of Chemical Physics, 2004, 121, 6117-6133.	3.0	131
50	Experimental Simulation of Spin Squeezing by Nuclear Magnetic Resonance. Quantum Information Processing, 2003, 2, 433-448.	2.2	14
51	Robust control of quantum information. Journal of Chemical Physics, 2003, 119, 9993-10001.	3.0	81
52	Robust method for estimating the Lindblad operators of a dissipative quantum process from measurements of the density operator at multiple time points. Physical Review A, 2003, 67, .	2.5	66
53	Experimental demonstration of an entanglement swapping operation and improved control in NMR quantum-information processing. Physical Review A, 2003, 68, .	2.5	30
54	Entanglement transfer experiment in NMR quantum information processing. Physical Review A, 2002, 65, .	2.5	23

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55	Design of strongly modulating pulses to implement precise effective Hamiltonians for quantum information processing. Journal of Chemical Physics, 2002, 116, 7599-7606.	3.0	204
56	Quantum information processing by nuclear magnetic resonance spectroscopy. American Journal of Physics, 2002, 70, 345-362.	0.7	31
57	Experimental Concatenation of Quantum Error Correction with Decoupling. Quantum Information Processing, 2002, 1, 135-144.	2.2	21
58	NMR Based Quantum Information Processing: Achievements and Prospects. Fortschritte Der Physik, 2000, 48, 875-907.	4.4	183
59	NMR Based Quantum Information Processing: Achievements and Prospects. , 2000, 48, 875.		13