Nikolaos V Tsekos

List of Publications by Year
in descending order

90 papers	1,485 citations	471371 17 h-index	345118 36 g-index
93 all docs	93 docs citations	93 times ranked	1212 citing authors

#	Article	IF	Citations
1	Perfusion imaging by a flow-sensitive alternating inversion recovery (Fair) technique: Application to functional brain imaging. Magnetic Resonance in Medicine, 1997, 37, 425-435.	1.9	238
2	Magnetic Resonanceâ€"Compatible Robotic and Mechatronics Systems for Image-Guided Interventions and Rehabilitation: A Review Study. Annual Review of Biomedical Engineering, 2007, 9, 351-387.	5.7	179
3	Design of an MRI-Compatible Robotic Stereotactic Device for Minimally Invasive Interventions in the Breastâ€. Journal of Biomechanical Engineering, 2004, 126, 458-465.	0.6	107
4	Quantitative measurements of cerebral blood flow in rats using the FAIR technique: Correlation with previous lodoantipyrine autoradiographic studies. Magnetic Resonance in Medicine, 1998, 39, 564-573.	1.9	106
5	Multi-slice perfusion-based functional MRI using the FAIR technique: comparison of CBF and BOLD effects. NMR in Biomedicine, 1997, 10, 191-196.	1.6	92
6	Fast anatomical imaging of the heart and assessment of myocardial perfusion with arrhythmia insensitive magnetization preparation. Magnetic Resonance in Medicine, 1995, 34, 530-536.	1.9	59
7	A Prototype Manipulator for Magnetic Resonance-Guided Interventions Inside Standard Cylindrical Magnetic Resonance Imaging Scanners. Journal of Biomechanical Engineering, 2005, 127, 972.	0.6	56
8	Performance of interventions with manipulator-driven real-time MR guidance: implementation and initial in vitro tests. Magnetic Resonance Imaging, 2007, 25, 69-77.	1.0	50
9	Visual and force-feedback guidance for robot-assisted interventions in the beating heart with real-time MRI. , 2012, , .		30
10	Cerebellar Activation During Copying Geometrical Shapes. Journal of Neurophysiology, 2003, 90, 3874-3887.	0.9	26
11	Evaluation of how users interface with holographic augmented reality surgical scenes: Interactive planning MRâ€Guided prostate biopsies. International Journal of Medical Robotics and Computer Assisted Surgery, 2021, 17, e2290.	1.2	26
12	Visualization and Planning of Neurosurgical Interventions with Straight Access. Lecture Notes in Computer Science, 2010, , 1-11.	1.0	26
13	T2 relaxation time study of iron overload in b-thalassemia. Magnetic Resonance Materials in Physics, Biology, and Medicine, 1998, 6, 7-12.	1.1	24
14	GPU-Accelerated Interactive Visualization and Planning of Neurosurgical Interventions. IEEE Computer Graphics and Applications, 2014, 34, 22-31.	1.0	22
15	Endâ€user evaluation of softwareâ€generated intervention planning environment for transrectal magnetic resonanceâ€guided prostate biopsies. International Journal of Medical Robotics and Computer Assisted Surgery, 2021, 17, 1-12.	1.2	21
16	A novel, general-purpose, MR-compatible, manually actuated robotic manipulation system for minimally invasive interventions under direct MRI guidance. International Journal of Medical Robotics and Computer Assisted Surgery, 2014, 10, 22-34.	1.2	20
17	A General-Purpose MR-Compatible Robotic System. IEEE Engineering in Medicine and Biology Magazine, 2008, 27, 51-58.	1.1	19
18	Preliminary Evaluation of Robotic Transrectal Biopsy System on an Interventional Planning Software. , 2019, , .		19

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19	Myocardial tagging with B1 insensitive adiabatic DANTE inversion sequences. Magnetic Resonance in Medicine, 1995, 34, 395-401.	1.9	17
20	Magnetic resonance based control of a robotic manipulator for interventions in the beating heart. , 2011, , .		17
21	A Framework for Integrating Real-Time MRI With Robot Control: Application to Simulated Transapical Cardiac Interventions. IEEE Transactions on Biomedical Engineering, 2013, 60, 1023-1033.	2.5	17
22	Evaluation of Interventional Planning Software Features for MR-guided Transrectal Prostate Biopsies. , 2020, , .		17
23	Design and Testing of a Robotic System for mr Image-guided Interventions. Journal of Intelligent and Robotic Systems: Theory and Applications, 2006, 47, 175-196.	2.0	16
24	Deep learning methods for automatic evaluation of delayed enhancement-MRI. The results of the EMIDEC challenge. Medical Image Analysis, 2022, 79, 102428.	7.0	16
25	Intraoperative registration of preoperative 4D cardiac anatomy with real-time MR images. , 2012, , .		15
26	MR-Based Real Time Path Planning for Cardiac Operations with Transapical Access. Lecture Notes in Computer Science, 2011, 14, 25-32.	1.0	15
27	Magnetic resonance imaging-guided coronary interventions. Journal of Magnetic Resonance Imaging, 2004, 19, 734-749.	1.9	14
28	Holographic Interface for three-dimensional Visualization of MRI on HoloLens: A Prototype Platform for MRI Guided Neurosurgeries. , 2017, , .		13
29	Dynamic coronary MR angiography and first-pass perfusion with intracoronary administration of contrast agent. Journal of Magnetic Resonance Imaging, 2002, 16, 311-319.	1.9	12
30	A Holographic Augmented Reality Interface for Visualizing of MRI Data and Planning of Neurosurgical Procedures. Journal of Digital Imaging, 2021, 34, 1014-1025.	1.6	12
31	Logarithmic transformation for high-field BOLD fMRI data. Experimental Brain Research, 2005, 165, 447-453.	0.7	10
32	Fast and Efficient Radiological Interventions via a Graphical User Interface Commanded Magnetic Resonance Compatible Robotic Device. , 2006, 2006, 1762-7.		9
33	A REGRESSION MIXTURE MODEL WITH SPATIAL CONSTRAINTS FOR CLUSTERING SPATIOTEMPORAL DATA. International Journal on Artificial Intelligence Tools, 2008, 17, 1023-1041.	0.7	9
34	Towards a new cyber-physical system for MRI-guided and robot-assisted cardiac procedures. , 2010, , .		9
35	An Approach for Preoperative Planning and Performance of MR-guided Interventions Demonstrated With a Manual Manipulator in a 1.5T MRI Scanner. CardioVascular and Interventional Radiology, 2012, 35, 359-367.	0.9	9
36	A modular and scalable computational framework for interactive immersion into imaging data with a holographic augmented reality interface. Computer Methods and Programs in Biomedicine, 2021, 198, 105779.	2.6	9

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37	Fast magnetization-driven preparation for imaging of contrast-enhanced coronary arteries during intra-arterial injection of contrast agent. Journal of Magnetic Resonance Imaging, 2006, 24, 1151-1158.	1.9	8
38	A Platform Integrating Acquisition, Reconstruction, Visualization, and Manipulator Control Modules for MRI-Guided Interventions. Journal of Digital Imaging, 2019, 32, 420-432.	1.6	8
39	Magnetic Hammer Actuation for Tissue Penetration using a Millirobot. IEEE Robotics and Automation Letters, 2017, , 1-1.	3.3	7
40	The Interconnection of MRI Scanner and MR-Compatible Robotic Device: Synergistic Graphical User Interface to Form a Mechatronic System. IEEE/ASME Transactions on Mechatronics, 2008, 13, 362-369.	3.7	6
41	BNU-Net: A Novel Deep Learning Approach for LV MRI Analysis in Short-Axis MRI. , 2019, , .		6
42	Curve Clustering with Spatial Constraints for Analysis of Spatiotemporal Data. , 2007, , .		5
43	Dynamic imaging of contrast-enhanced coronary vessels with a magnetization prepared rotated stripe keyhole acquisition. Journal of Magnetic Resonance Imaging, 2007, 25, 222-230.	1.9	5
44	Consideration of geometric constraints regarding MR-compatible interventional robotic devices. , 2010, , .		5
45	A system for endoscopic mechanically scanned localized proton MR and light-induced fluorescence emission spectroscopies. Journal of Magnetic Resonance, 2012, 222, 16-25.	1.2	5
46	Design and Qualification of a Parallel Robotic Platform to Assist With Beating-Heart Intracardiac Interventions. Journal of Mechanisms and Robotics, 2014, 6, .	1.5	5
47	Towards MRI-guided and actuated tetherless milli-robots: Preoperative planning and modeling of control. , 2017, , .		5
48	Educational Robotics Competitions and Involved Methodological Aspects. Advances in Intelligent Systems and Computing, 2020, , 305-312.	0.5	5
49	Robot-facilitated scanning and co-registration of multi-modal and multi-level sensing: Demonstration with magnetic resonance imaging and spectroscopy. , 2011, , .		4
50	A New Transmission Mechanism for the Actuation of Manipulators for Magnetic Resonance Imaging (MRI) Guided Interventions. IFMBE Proceedings, 2016, , 679-684.	0.2	4
51	Tagging of the Magnetization with the Transition Zones of 360Â° Rotations Generated by a Tandem of Two Adiabatic DANTE Inversion Sequences. Journal of Magnetic Resonance, 2002, 156, 187-194.	1.2	3
52	MRI-guided robotics at the U of houston: EvolvingMethodologies for interventions and surgeries. , 2009, 2009, 5637-40.		3
53	Design of MR-compatible robotic devices: magnetic and geometric compatibility aspects. , 2009, , .		3
54	Design of an actuated phantom to mimic the motion of cardiac landmarks for the study of image-guided intracardiac interventions. , 2010, , .		3

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55	Extracting geometric features of aortic valve annulus motion from dynamic MRI for guiding interventions. , 2011, , .		3
56	Two missing components for Solid Media Transmission: Amplifiers and manifolds. , 2016, , .		3
57	An Archetype for MRI guided Tele-interventions. , 2006, , 476-483.		3
58	Simulations of MRI Guided and Powered Ferric Applicators for Tetherless Delivery of Therapeutic Interventions. , 2022, , .		3
59	Guest Editorial Introduction to the Focused Section on Mechatronic Systems for MRI Applications. IEEE/ASME Transactions on Mechatronics, 2008, 13, 265-267.	3.7	2
60	Development and initial testing of a prototype concentric tube robot for surgical interventions. , 2012, , .		2
61	Implementation of a force-feedback interface for robotic assisted interventions with real-time MRI guidance. , 2013, , .		2
62	Early Studies of a Transmission Mechanism for MR-Guided Interventions. , 2017, , .		2
63	Manipulator‐driven selection of semi‐active MR‐visible markers. International Journal of Medical Robotics and Computer Assisted Surgery, 2018, 14, e1846.	1.2	2
64	Interactive and Immersive Image-Guided Control of Interventional Manipulators with a Prototype Holographic Interface. , 2019, , .		2
65	Automated Segmentation and 4D Reconstruction of the Heart Left Ventricle from CINE MRI. , 2019, , .		2
66	Design of a Robotic Stereotactic Device for Biopsy and Minimally Invasive Interventions in the Breast With Real Time MRI Guidance. , 2002, , .		2
67	A novel virtual reality environment for preoperative planning and simulation of image guided intracardiac surgeries with robotic manipulators. Studies in Health Technology and Informatics, 2011, 163, 716-22.	0.2	2
68	An actuated phantom for developing and studying MRI-guided interventions in dynamic environments. , 2012, , .		1
69	Left endocardium tracking via collaborative trackers and shape prior. , 2012, , .		1
70	Robot-assisted mechanical scanning and co-registration of Magnetic Resonance Imaging and light-induced fluorescence. , 2012, , .		1
71	Using motion correction to improve real-time cardiac MRI reconstruction. , 2013, , .		1
72	Noise Sensitive Trajectory Planning for MR Guided TAVI. Lecture Notes in Computer Science, 2017, , 195-203.	1.0	1

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73	Erratum to "Guest Editorial: Introduction to the Focused Section on Mechatronic Systems for MRI Applications" IEEE/ASME Transactions on Mechatronics, 2008, 13, 490-490.	3.7	0
74	An approach to MR-guided interventions with a manually-operated manipulator. , 2010, , .		0
75	Design and analysis of a prototype haptic device for cardiovascular interventions. , 2010, , .		0
76	An approach for robot-assisted biosensing: Demonstration with MRI-guided MR spectroscopy. , 2011, , .		0
77	Simulations and experimental demonstration of coupling molecular and macroscopic level modalities with a robotic manipulator. , 2011, 2011, 7446-9.		0
78	Image guided mechanically scanned and co-registered localized optical and MR spectroscopies. , 2012, , .		0
79	Development and initial testing of a general-purpose, MR-compatible, manually-actuated manipulator for image-guided interventions. , 2012, , .		0
80	Towards a Modular, Customizable Robotic System for Needle-Based Image-Guided Interventions: Preliminary Designs, Implementation, and Testing. , 2017, , .		0
81	Studies on Positioning Manipulators Actuated by Solid Media Transmissions. , 2019, , .		0
82	3D Reconstruction of Tubular Structure Using Radially Deployed Projections. , 2019, , .		0
83	Tagged MR Cardiac Imaging. , 2002, , 167-188.		0
84	MRI-Guided Robot-Assisted Interventions: An Opportunity and a Challenge in Computational Surgery. , 2010, , 171-190.		0
85	Robot-Assisted Procedures with MRI Guidance. , 2011, , 21-31.		0
86	IMAGE-BASED METHODOLOGIES AND THEIR INTEGRATION IN A CYBER-PHYSICAL SYSTEM FOR MINIMALLY INVASIVE AND ROBOTIC CARDIAC SURGERIES. , 2011, , 55-63.		0
87	Cardiac MRI Intervention and Diagnosis via Deformable Collaborative Tracking. Lecture Notes in Computer Science, 2011, , 188-194.	1.0	0
88	MRI-GUIDED ROBOTIC BREAST BIOPSY AND THERAPEUTICS. , 2018, , 355-380.		0
89	A Comparative Study of Collider Types & Input Methods for Interaction with Nested Holograms. , 2021, , .		0
90	Fast and Efficient Radiological Interventions via a Graphical User Interface Commanded Magnetic Resonance Compatible Robotic Device. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , .	0.5	0