

Nikolaos V Tsekos

List of Publications by Year in descending order

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Version: 2024-02-01

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	Simulations of MRI Guided and Powered Ferric Applicators for Tetherless Delivery of Therapeutic Interventions. , 2022, , .		3
2	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
3	End-user evaluation of software-generated intervention planning environment for transrectal magnetic resonance-guided prostate biopsies. International Journal of Medical Robotics and Computer Assisted Surgery, 2021, 17, 1-12.	1.2	21
4	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
5	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
6	Evaluation of how users interface with holographic augmented reality surgical scenes: Interactive planning MR-guided prostate biopsies. International Journal of Medical Robotics and Computer Assisted Surgery, 2021, 17, e2290.	1.2	26
7	A Comparative Study of Collider Types & Input Methods for Interaction with Nested Holograms. , 2021, , .		0
8	Educational Robotics Competitions and Involved Methodological Aspects. Advances in Intelligent Systems and Computing, 2020, , 305-312.	0.5	5
9	Evaluation of Interventional Planning Software Features for MR-guided Transrectal Prostate Biopsies. , 2020, , .		17
10	Studies on Positioning Manipulators Actuated by Solid Media Transmissions. , 2019, , .		0
11	3D Reconstruction of Tubular Structure Using Radially Deployed Projections. , 2019, , .		0
12	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
13	BNU-Net: A Novel Deep Learning Approach for LV MRI Analysis in Short-Axis MRI. , 2019, , .		6
14	Interactive and Immersive Image-Guided Control of Interventional Manipulators with a Prototype Holographic Interface. , 2019, , .		2
15	Preliminary Evaluation of Robotic Transrectal Biopsy System on an Interventional Planning Software. , 2019, , .		19
16	Automated Segmentation and 4D Reconstruction of the Heart Left Ventricle from CINE MRI. , 2019, , .		2
17	Manipulator-driven selection of semi-active MR-visible markers. International Journal of Medical Robotics and Computer Assisted Surgery, 2018, 14, e1846.	1.2	2
18	MRI-GUIDED ROBOTIC BREAST BIOPSY AND THERAPEUTICS. , 2018, , 355-380.		0

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19	Magnetic Hammer Actuation for Tissue Penetration using a Millirobot. IEEE Robotics and Automation Letters, 2017, , 1-1.	3.3	7
20	Holographic Interface for three-dimensional Visualization of MRI on HoloLens: A Prototype Platform for MRI Guided Neurosurgeries. , 2017, , .		13
21	Towards MRI-guided and actuated tetherless milli-robots: Preoperative planning and modeling of control. , 2017, , .		5
22	Early Studies of a Transmission Mechanism for MR-Guided Interventions. , 2017, , .		2
23	Towards a Modular, Customizable Robotic System for Needle-Based Image-Guided Interventions: Preliminary Designs, Implementation, and Testing. , 2017, , .		0
24	Noise Sensitive Trajectory Planning for MR Guided TAVI. Lecture Notes in Computer Science, 2017, , 195-203.	1.0	1
25	Two missing components for Solid Media Transmission: Amplifiers and manifolds. , 2016, , .		3
26	A New Transmission Mechanism for the Actuation of Manipulators for Magnetic Resonance Imaging (MRI) Guided Interventions. IFMBE Proceedings, 2016, , 679-684.	0.2	4
27	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
28	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
29	GPU-Accelerated Interactive Visualization and Planning of Neurosurgical Interventions. IEEE Computer Graphics and Applications, 2014, 34, 22-31.	1.0	22
30	Using motion correction to improve real-time cardiac MRI reconstruction. , 2013, , .		1
31	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
32	Implementation of a force-feedback interface for robotic assisted interventions with real-time MRI guidance. , 2013, , .		2
33	An actuated phantom for developing and studying MRI-guided interventions in dynamic environments. , 2012, , .		1
34	Development and initial testing of a prototype concentric tube robot for surgical interventions. , 2012, , .		2
35	Left endocardium tracking via collaborative trackers and shape prior. , 2012, , .		1
36	Image guided mechanically scanned and co-registered localized optical and MR spectroscopies. , 2012, , .		0

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37	Intraoperative registration of preoperative 4D cardiac anatomy with real-time MR images. , 2012, , .		15
38	Robot-assisted mechanical scanning and co-registration of Magnetic Resonance Imaging and light-induced fluorescence. , 2012, , .		1
39	Development and initial testing of a general-purpose, MR-compatible, manually-actuated manipulator for image-guided interventions. , 2012, , .		0
40	Visual and force-feedback guidance for robot-assisted interventions in the beating heart with real-time MRI. , 2012, , .		30
41	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
42	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
43	An approach for robot-assisted biosensing: Demonstration with MRI-guided MR spectroscopy. , 2011, , .		0
44	Robot-facilitated scanning and co-registration of multi-modal and multi-level sensing: Demonstration with magnetic resonance imaging and spectroscopy. , 2011, , .		4
45	Magnetic resonance based control of a robotic manipulator for interventions in the beating heart. , 2011, , .		17
46	Simulations and experimental demonstration of coupling molecular and macroscopic level modalities with a robotic manipulator. , 2011, 2011, 7446-9.		0
47	Extracting geometric features of aortic valve annulus motion from dynamic MRI for guiding interventions. , 2011, , .		3
48	Robot-Assisted Procedures with MRI Guidance. , 2011, , 21-31.		0
49	IMAGE-BASED METHODOLOGIES AND THEIR INTEGRATION IN A CYBER-PHYSICAL SYSTEM FOR MINIMALLY INVASIVE AND ROBOTIC CARDIAC SURGERIES. , 2011, , 55-63.		0
50	MR-Based Real Time Path Planning for Cardiac Operations with Transapical Access. Lecture Notes in Computer Science, 2011, 14, 25-32.	1.0	15
51	Cardiac MRI Intervention and Diagnosis via Deformable Collaborative Tracking. Lecture Notes in Computer Science, 2011, , 188-194.	1.0	0
52	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
53	An approach to MR-guided interventions with a manually-operated manipulator. , 2010, , .		0
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	Consideration of geometric constraints regarding MR-compatible interventional robotic devices. , 2010, , .		5
56	Design and analysis of a prototype haptic device for cardiovascular interventions. , 2010, , .		0
57	Towards a new cyber-physical system for MRI-guided and robot-assisted cardiac procedures. , 2010, , .		9
58	Visualization and Planning of Neurosurgical Interventions with Straight Access. Lecture Notes in Computer Science, 2010, , 1-11.	1.0	26
59	MRI-Guided Robot-Assisted Interventions: An Opportunity and a Challenge in Computational Surgery. , 2010, , 171-190.		0
60	MRI-guided robotics at the U of houston: Evolving Methodologies for interventions and surgeries. , 2009, 2009, 5637-40.		3
61	Design of MR-compatible robotic devices: magnetic and geometric compatibility aspects. , 2009, , .		3
62	A General-Purpose MR-Compatible Robotic System. IEEE Engineering in Medicine and Biology Magazine, 2008, 27, 51-58.	1.1	19
63	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
64	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
65	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
66	A REGRESSION MIXTURE MODEL WITH SPATIAL CONSTRAINTS FOR CLUSTERING SPATIOTEMPORAL DATA. International Journal on Artificial Intelligence Tools, 2008, 17, 1023-1041.	0.7	9
67	Curve Clustering with Spatial Constraints for Analysis of Spatiotemporal Data. , 2007, , .		5
68	Magnetic Resonance "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
69	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
70	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
71	Fast and Efficient Radiological Interventions via a Graphical User Interface Commanded Magnetic Resonance Compatible Robotic Device. , 2006, 2006, 1762-7.		9
72	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

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73	Fast magnetization-driven preparation for imaging of contrast-enhanced coronary arteries during intra-arterial injection of contrast agent. <i>Journal of Magnetic Resonance Imaging</i> , 2006, 24, 1151-1158.	1.9	8
74	An Archetype for MRI guided Tele-interventions. , 2006, , 476-483.		3
75	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
76	Logarithmic transformation for high-field BOLD fMRI data. <i>Experimental Brain Research</i> , 2005, 165, 447-453.	0.7	10
77	A Prototype Manipulator for Magnetic Resonance-Guided Interventions Inside Standard Cylindrical Magnetic Resonance Imaging Scanners. <i>Journal of Biomechanical Engineering</i> , 2005, 127, 972.	0.6	56
78	Design of an MRI-Compatible Robotic Stereotactic Device for Minimally Invasive Interventions in the Breast. <i>Journal of Biomechanical Engineering</i> , 2004, 126, 458-465.	0.6	107
79	Magnetic resonance imaging-guided coronary interventions. <i>Journal of Magnetic Resonance Imaging</i> , 2004, 19, 734-749.	1.9	14
80	Cerebellar Activation During Copying Geometrical Shapes. <i>Journal of Neurophysiology</i> , 2003, 90, 3874-3887.	0.9	26
81	Dynamic coronary MR angiography and first-pass perfusion with intracoronary administration of contrast agent. <i>Journal of Magnetic Resonance Imaging</i> , 2002, 16, 311-319.	1.9	12
82	Tagging of the Magnetization with the Transition Zones of 360° Rotations Generated by a Tandem of Two Adiabatic DANTE Inversion Sequences. <i>Journal of Magnetic Resonance</i> , 2002, 156, 187-194.	1.2	3
83	Design of a Robotic Stereotactic Device for Biopsy and Minimally Invasive Interventions in the Breast With Real Time MRI Guidance. , 2002, , .		2
84	Tagged MR Cardiac Imaging. , 2002, , 167-188.		0
85	Quantitative measurements of cerebral blood flow in rats using the FAIR technique: Correlation with previous Iodoantipyrine autoradiographic studies. <i>Magnetic Resonance in Medicine</i> , 1998, 39, 564-573.	1.9	106
86	T2 relaxation time study of iron overload in b-thalassemia. <i>Magnetic Resonance Materials in Physics, Biology, and Medicine</i> , 1998, 6, 7-12.	1.1	24
87	Perfusion imaging by a flow-sensitive alternating inversion recovery (Fair) technique: Application to functional brain imaging. <i>Magnetic Resonance in Medicine</i> , 1997, 37, 425-435.	1.9	238
88	Multi-slice perfusion-based functional MRI using the FAIR technique: comparison of CBF and BOLD effects. <i>NMR in Biomedicine</i> , 1997, 10, 191-196.	1.6	92
89	Myocardial tagging with B1 insensitive adiabatic DANTE inversion sequences. <i>Magnetic Resonance in Medicine</i> , 1995, 34, 395-401.	1.9	17
90	Fast anatomical imaging of the heart and assessment of myocardial perfusion with arrhythmia insensitive magnetization preparation. <i>Magnetic Resonance in Medicine</i> , 1995, 34, 530-536.	1.9	59