

Rachel Sparks

List of Publications by Year in descending order

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Version: 2024-02-01

65
papers

1,249
citations

430442

18
h-index

395343

33
g-index

65
all docs

65
docs citations

65
times ranked

1534
citing authors

#	ARTICLE	IF	CITATIONS
1	TorchIO: A Python library for efficient loading, preprocessing, augmentation and patch-based sampling of medical images in deep learning. <i>Computer Methods and Programs in Biomedicine</i> , 2021, 208, 106236.	2.6	257
2	Accuracy of intracranial electrode placement for stereoelectroencephalography: A systematic review and meta-analysis. <i>Epilepsia</i> , 2017, 58, 921-932.	2.6	124
3	Association of Piriform Cortex Resection With Surgical Outcomes in Patients With Temporal Lobe Epilepsy. <i>JAMA Neurology</i> , 2019, 76, 690.	4.5	69
4	Co-Occurring Gland Angularity in Localized Subgraphs: Predicting Biochemical Recurrence in Intermediate-Risk Prostate Cancer Patients. <i>PLoS ONE</i> , 2014, 9, e97954.	1.1	53
5	Automated trajectory planning for laser interstitial thermal therapy in mesial temporal lobe epilepsy. <i>Epilepsia</i> , 2018, 59, 814-824.	2.6	52
6	Utility of 3D multimodality imaging in the implantation of intracranial electrodes in epilepsy. <i>Epilepsia</i> , 2015, 56, 403-413.	2.6	50
7	Explicit shape descriptors: Novel morphologic features for histopathology classification. <i>Medical Image Analysis</i> , 2013, 17, 997-1009.	7.0	40
8	Automated multiple trajectory planning algorithm for the placement of stereo-electroencephalography (SEEG) electrodes in epilepsy treatment. <i>International Journal of Computer Assisted Radiology and Surgery</i> , 2017, 12, 123-136.	1.7	37
9	Anatomy-driven multiple trajectory planning (ADMTP) of intracranial electrodes for epilepsy surgery. <i>International Journal of Computer Assisted Radiology and Surgery</i> , 2017, 12, 1245-1255.	1.7	34
10	Computer-assisted planning for the insertion of stereoelectroencephalography electrodes for the investigation of drug-resistant focal epilepsy: an external validation study. <i>Journal of Neurosurgery</i> , 2018, , 1-10.	0.9	33
11	A crowdsourcing approach for reusing and meta-analyzing gene expression data. <i>Nature Biotechnology</i> , 2016, 34, 803-806.	9.4	32
12	Statistical shape model for manifold regularization: Gleason grading of prostate histology. <i>Computer Vision and Image Understanding</i> , 2013, 117, 1138-1146.	3.0	31
13	Comparison of computer-assisted planning and manual planning for depth electrode implantations in epilepsy. <i>Journal of Neurosurgery</i> , 2016, 124, 1820-1828.	0.9	31
14	Optimizing Trajectories for Cranial Laser Interstitial Thermal Therapy Using Computer-Assisted Planning: A Machine Learning Approach. <i>Neurotherapeutics</i> , 2019, 16, 182-191.	2.1	27
15	Automatic segmentation of stereoelectroencephalography (SEEG) electrodes post-implantation considering bending. <i>International Journal of Computer Assisted Radiology and Surgery</i> , 2018, 13, 935-946.	1.7	24
16	Stereoelectroencephalography electrode placement: Detection of blood vessel conflicts. <i>Epilepsia</i> , 2019, 60, 1942-1948.	2.6	19
17	Automated fiber tract reconstruction for surgery planning: Extensive validation in language-related white matter tracts. <i>NeuroImage: Clinical</i> , 2019, 23, 101883.	1.4	19
18	Comparison of robotic and manual implantation of intracerebral electrodes: a single-centre, single-blinded, randomised controlled trial. <i>Scientific Reports</i> , 2021, 11, 17127.	1.6	19

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19	Out-of-Sample Extrapolation utilizing Semi-Supervised Manifold Learning (OSE-SSL): Content Based Image Retrieval for Histopathology Images. <i>Scientific Reports</i> , 2016, 6, 27306.	1.6	18
20	Neuropathic Tissue Responds Preferentially to Stimulation by Intense Focused Ultrasound. <i>Ultrasound in Medicine and Biology</i> , 2013, 39, 111-116.	0.7	16
21	Computer-Assisted Planning for Stereoelectroencephalography (SEEG). <i>Neurotherapeutics</i> , 2019, 16, 1183-1197.	2.1	16
22	Fully automated prostate magnetic resonance imaging and transrectal ultrasound fusion via a probabilistic registration metric. , 2013, 8671, .		15
23	Multicenter validation of automated trajectories for selective laser amygdalohippocampectomy. <i>Epilepsia</i> , 2019, 60, 1949-1959.	2.6	15
24	Brain-Machine Interfaces: The Role of the Neurosurgeon. <i>World Neurosurgery</i> , 2021, 146, 140-147.	0.7	15
25	Multiattribute probabilistic prostate elastic registration (MAPPER): Application to fusion of ultrasound and magnetic resonance imaging. <i>Medical Physics</i> , 2015, 42, 1153-1163.	1.6	12
26	Novel Morphometric Based Classification via Diffeomorphic Based Shape Representation Using Manifold Learning. <i>Lecture Notes in Computer Science</i> , 2010, 13, 658-665.	1.0	12
27	A Pipeline for 3D Multimodality Image Integration and Computer-assisted Planning in Epilepsy Surgery. <i>Journal of Visualized Experiments</i> , 2016, , .	0.2	11
28	Resection planning in extratemporal epilepsy surgery using 3D multimodality imaging and intraoperative MRI. <i>British Journal of Neurosurgery</i> , 2017, 31, 468-470.	0.4	11
29	Improving patient safety during introduction of novel medical devices through cumulative summation analysis. <i>Journal of Neurosurgery</i> , 2018, 130, 213-219.	0.9	11
30	The Effect of Vascular Segmentation Methods on Stereotactic Trajectory Planning for Drug-Resistant Focal Epilepsy: A Retrospective Cohort Study. <i>World Neurosurgery: X</i> , 2019, 4, 100057.	0.6	10
31	Enhancing the estimation of fiber orientation distributions using convolutional neural networks. <i>Computers in Biology and Medicine</i> , 2021, 135, 104643.	3.9	10
32	High-Throughput Prostate Cancer Gland Detection, Segmentation, and Classification from Digitized Needle Core Biopsies. <i>Lecture Notes in Computer Science</i> , 2010, , 77-88.	1.0	10
33	Machine Learning for Localizing Epileptogenic-Zone in the Temporal Lobe: Quantifying the Value of Multimodal Clinical-Semiology and Imaging Concordance. <i>Frontiers in Digital Health</i> , 2021, 3, 559103.	1.5	9
34	Computer-assisted planning for minimally invasive anterior two-thirds laser corpus callosotomy: A feasibility study with probabilistic tractography validation. <i>NeuroImage: Clinical</i> , 2020, 25, 102174.	1.4	8
35	Computer-Assisted Versus Manual Planning for Stereotactic Brain Biopsy: A Retrospective Comparative Pilot Study. <i>Operative Neurosurgery</i> , 2020, 18, 417-422.	0.4	8
36	Probabilistic landscape of seizure semiology localizing values. <i>Brain Communications</i> , 2022, 4, .	1.5	7

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37	Segmentation of nodular medulloblastoma using Random Walker and Hierarchical Normalized Cuts. , 2011, , .		6
38	Gleason grading of prostate histology utilizing manifold regularization via statistical shape model of manifolds. , 2012, , .		6
39	Intense focused ultrasound stimulation can safely stimulate inflamed subcutaneous tissue and assess allodynia. Journal of Therapeutic Ultrasound, 2014, 2, 8.	2.2	6
40	Transfer Learning of Deep Spatiotemporal Networks to Model Arbitrarily Long Videos of Seizures. Lecture Notes in Computer Science, 2021, , 334-344.	1.0	6
41	Anisotropic smoothing regularization (AnSR) in Thirion's Demons registration evaluates brain MRI tissue changes post-laser ablation. , 2013, 2013, 4006-9.		5
42	A self-supervised learning strategy for postoperative brain cavity segmentation simulating resections. International Journal of Computer Assisted Radiology and Surgery, 2021, 16, 1653-1661.	1.7	5
43	Simulation of Brain Resection for Cavity Segmentation Using Self-supervised and Semi-supervised Learning. Lecture Notes in Computer Science, 2020, , 115-125.	1.0	5
44	Connecting Markov random fields and active contour models: application to gland segmentation and classification. Journal of Medical Imaging, 2017, 4, 021107.	0.8	4
45	Patient-specific prediction of SEEG electrode bending for stereotactic neurosurgical planning. International Journal of Computer Assisted Radiology and Surgery, 2021, 16, 789-798.	1.7	4
46	Intraoperative overlay of optic radiation tractography during anteromesial temporal resection: a prospective validation study. Journal of Neurosurgery, 2022, 136, 543-552.	0.9	4
47	Co-occurring gland tensors in localized cluster graphs: Quantitative histomorphometry for predicting biochemical recurrence for intermediate grade prostate cancer. , 2013, , .		3
48	Identifying in vivo DCE MRI parameters correlated with ex vivo quantitative microvessel architecture: A radiohistomorphometric approach. , 2013, , .		3
49	A Machine Learning Approach to Predict Instrument Bending in Stereotactic Neurosurgery. Lecture Notes in Computer Science, 2018, , 238-246.	1.0	3
50	Automated computation and analysis of accuracy metrics in stereoencephalography. Journal of Neuroscience Methods, 2020, 340, 108710.	1.3	3
51	Convolutional Neural Networks for Fiber Orientation Distribution Enhancement to Improve Single-Shell Diffusion MRI Tractography. Mathematics and Visualization, 2020, , 101-112.	0.4	3
52	Content-based image retrieval utilizing explicit shape descriptors: applications to breast MRI and prostate histopathology. Proceedings of SPIE, 2011, , .	0.8	2
53	Towards Uncertainty Quantification for Electrode Bending Prediction in Stereotactic Neurosurgery. , 2020, , .		2
54	A generative model of hyperelastic strain energy density functions for multiple tissue brain deformation. International Journal of Computer Assisted Radiology and Surgery, 2021, 16, 141-150.	1.7	2

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55	Occipitocervical instrumented fixation utilising patient-specific C2 3D-printed spinal screw trajectory guides in complex paediatric skeletal dysplasia. <i>Child's Nervous System</i> , 2021, 37, 2643-2650.	0.6	2
56	Efficient Anatomy Driven Automated Multiple Trajectory Planning for Intracranial Electrode Implantation. <i>Lecture Notes in Computer Science</i> , 2016, , 542-550.	1.0	2
57	Informative and Reliable Tract Segmentation for Preoperative Planning. <i>Frontiers in Radiology</i> , 2022, 2, .	1.2	2
58	An integrated framework for analyzing three-dimensional shape differences: Evaluating prostate morphometry. , 2010, , .		1
59	Medial axis based statistical shape model (MASSM): Applications to 3D prostate segmentation on MRI. , 2011, , .		1
60	Out-of-sample extrapolation using semi-supervised manifold learning (OSE-SSL): Content-based image retrieval for prostate histology grading. , 2011, , .		1
61	Spectral embedding-based registration (SERg) for multimodal fusion of prostate histology and MRI. , 2014, , .		1
62	A Generative Model of Hyperelastic Strain Energy Density Functions for Real-Time Simulation of Brain Tissue Deformation. <i>Lecture Notes in Computer Science</i> , 2019, , 218-226.	1.0	1
63	Correction to: Transfer Learning of Deep Spatiotemporal Networks to Model Arbitrarily Long Videos of Seizures. <i>Lecture Notes in Computer Science</i> , 2021, , C1-C1.	1.0	1
64	Spatially aware expectation maximization (SpAEM): application to prostate TRUS segmentation. <i>Proceedings of SPIE</i> , 2014, , .	0.8	0
65	012â€¦ Structural connectivity informed stereoelectroencephalography (SEEG) electrode targeting in suspected pseudotemporal and temporal plus epilepsy. <i>Journal of Neurology, Neurosurgery and Psychiatry</i> , 2022, 93, A104.3-A104.	0.9	0