

# Bernhard K Kainz

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

98  
papers

2,812  
citations

22  
h-index

51  
g-index

112  
ext. papers

3,837  
ext. citations

3.8  
avg, IF

5.42  
L-index

#	Paper	IF	Citations
98	PRETUS: A plug-in based platform for real-time ultrasound imaging research. <i>SoftwareX</i> , <b>2022</b> , 17, 100959-7	2.7	1
97	MetaDetector: Detecting Outliers by Learning to Learn from Self-supervision. <i>Lecture Notes in Computer Science</i> , <b>2022</b> , 119-126	0.9	
96	Federated deep learning for detecting COVID-19 lung abnormalities in CT: a privacy-preserving multinational validation study. <i>Npj Digital Medicine</i> , <b>2021</b> , 4, 60	15.7	29
95	Towards automated extraction of 2D standard fetal head planes from 3D ultrasound acquisitions: A clinical evaluation and quality assessment comparison. <i>Radiography</i> , <b>2021</b> , 27, 519-526	2	2
94	Deep radiance caching: Convolutional autoencoders deeper in ray tracing. <i>Computers and Graphics</i> , <b>2021</b> , 94, 22-31	1.8	11
93	CAS-Net: Conditional Atlas Generation and Brain Segmentation for Fetal MRI. <i>Lecture Notes in Computer Science</i> , <b>2021</b> , 221-230	0.9	1
92	Ultrasound Video Transformers for Cardiac Ejection Fraction Estimation. <i>Lecture Notes in Computer Science</i> , <b>2021</b> , 495-505	0.9	7
91	RATCHET: Medical Transformer for Chest X-ray Diagnosis and Reporting. <i>Lecture Notes in Computer Science</i> , <b>2021</b> , 293-303	0.9	5
90	Can Non-specialists Provide High Quality Gold Standard Labels in Challenging Modalities?. <i>Lecture Notes in Computer Science</i> , <b>2021</b> , 251-262	0.9	0
89	Mutual Information-Based Disentangled Neural Networks for Classifying Unseen Categories in Different Domains: Application to Fetal Ultrasound Imaging. <i>IEEE Transactions on Medical Imaging</i> , <b>2021</b> , 40, 722-734	11.7	8
88	Artificial intelligence, fetal echocardiography, and congenital heart disease. <i>Prenatal Diagnosis</i> , <b>2021</b> , 41, 733-742	3.2	4
87	A survey on active learning and human-in-the-loop deep learning for medical image analysis. <i>Medical Image Analysis</i> , <b>2021</b> , 71, 102062	15.4	43
86	Non-invasive diagnosis of deep vein thrombosis from ultrasound imaging with machine learning. <i>Npj Digital Medicine</i> , <b>2021</b> , 4, 137	15.7	5
85	Detecting Hypo-plastic Left Heart Syndrome in Fetal Ultrasound via Disease-Specific Atlas Maps. <i>Lecture Notes in Computer Science</i> , <b>2021</b> , 207-217	0.9	1
84	Detecting Outliers with Poisson Image Interpolation. <i>Lecture Notes in Computer Science</i> , <b>2021</b> , 581-591	0.9	5
83	Contrastive Learning for View Classification of Echocardiograms. <i>Lecture Notes in Computer Science</i> , <b>2021</b> , 149-158	0.9	1
82	PialNN: A Fast Deep Learning Framework for Cortical Pial Surface Reconstruction. <i>Lecture Notes in Computer Science</i> , <b>2021</b> , 73-81	0.9	3

81	Surface Agnostic Metrics for Cortical Volume Segmentation and Regression. <i>Lecture Notes in Computer Science</i> , <b>2020</b> , 3-12	0.9	1
80	Image Registration via Stochastic Gradient Markov Chain Monte Carlo. <i>Lecture Notes in Computer Science</i> , <b>2020</b> , 3-12	0.9	
79	Projective Latent Interventions for Understanding and Fine-Tuning Classifiers. <i>Lecture Notes in Computer Science</i> , <b>2020</b> , 13-22	0.9	0
78	Ultrasound Video Summarization Using Deep Reinforcement Learning. <i>Lecture Notes in Computer Science</i> , <b>2020</b> , 483-492	0.9	6
77	Unsupervised Cross-domain Image Classification by Distance Metric Guided Feature Alignment. <i>Lecture Notes in Computer Science</i> , <b>2020</b> , 146-157	0.9	2
76	Automated Detection of Congenital Heart Disease in Fetal Ultrasound Screening. <i>Lecture Notes in Computer Science</i> , <b>2020</b> , 243-252	0.9	1
75	3D Probabilistic Segmentation and Volumetry from 2D Projection Images. <i>Lecture Notes in Computer Science</i> , <b>2020</b> , 48-57	0.9	1
74	Attention gated networks: Learning to leverage salient regions in medical images. <i>Medical Image Analysis</i> , <b>2019</b> , 53, 197-207	15.4	400
73	Weakly Supervised Estimation of Shadow Confidence Maps in Fetal Ultrasound Imaging. <i>IEEE Transactions on Medical Imaging</i> , <b>2019</b> , 38, 2755-2767	11.7	21
72	Automated quality control in image segmentation: application to the UK Biobank cardiovascular magnetic resonance imaging study. <i>Journal of Cardiovascular Magnetic Resonance</i> , <b>2019</b> , 21, 18	6.9	49
71	Three-dimensional visualisation of the fetal heart using prenatal MRI with motion-corrected slice-volume registration: a prospective, single-centre cohort study. <i>Lancet, The</i> , <b>2019</b> , 393, 1619-1627	4 <sup>0</sup>	4 <sup>1</sup>
70	Evaluating reinforcement learning agents for anatomical landmark detection. <i>Medical Image Analysis</i> , <b>2019</b> , 53, 156-164	15.4	68
69	Complete Fetal Head Compounding from Multi-view 3D Ultrasound. <i>Lecture Notes in Computer Science</i> , <b>2019</b> , 384-392	0.9	3
68	Semi-supervised Learning of Fetal Anatomy from Ultrasound. <i>Lecture Notes in Computer Science</i> , <b>2019</b> , 157-164	0.9	2
67	Automatic Detection of Bowel Disease with Residual Networks. <i>Lecture Notes in Computer Science</i> , <b>2019</b> , 151-159	0.9	1
66	Representation Disentanglement for Multi-task Learning with Application to Fetal Ultrasound. <i>Lecture Notes in Computer Science</i> , <b>2019</b> , 47-55	0.9	3
65	Flexible Conditional Image Generation of Missing Data with Learned Mental Maps. <i>Lecture Notes in Computer Science</i> , <b>2019</b> , 139-150	0.9	
64	Multiple Landmark Detection Using Multi-agent Reinforcement Learning. <i>Lecture Notes in Computer Science</i> , <b>2019</b> , 262-270	0.9	22

63	Confident Head Circumference Measurement from Ultrasound with Real-Time Feedback for Sonographers. <i>Lecture Notes in Computer Science</i> , <b>2019</b> , 683-691	0.9	9
62	Exploring the Relationship Between Segmentation Uncertainty, Segmentation Performance and Inter-observer Variability with Probabilistic Networks. <i>Lecture Notes in Computer Science</i> , <b>2019</b> , 51-60	0.9	2
61	Ensembles of Multiple Models and Architectures for Robust Brain Tumour Segmentation. <i>Lecture Notes in Computer Science</i> , <b>2018</b> , 450-462	0.9	164
60	Anatomically Constrained Neural Networks (ACNNs): Application to Cardiac Image Enhancement and Segmentation. <i>IEEE Transactions on Medical Imaging</i> , <b>2018</b> , 37, 384-395	11.7	333
59	Stresses and strains on the human fetal skeleton during development. <i>Journal of the Royal Society Interface</i> , <b>2018</b> , 15,	4.1	35
58	3-D Reconstruction in Canonical Co-Ordinate Space From Arbitrarily Oriented 2-D Images. <i>IEEE Transactions on Medical Imaging</i> , <b>2018</b> , 37, 1737-1750	11.7	32
57	Altered biomechanical stimulation of the developing hip joint in presence of hip dysplasia risk factors. <i>Journal of Biomechanics</i> , <b>2018</b> , 78, 1-9	2.9	16
56	Automatic View Planning with Multi-scale Deep Reinforcement Learning Agents. <i>Lecture Notes in Computer Science</i> , <b>2018</b> , 277-285	0.9	20
55	Fast Multiple Landmark Localisation Using a Patch-based Iterative Network. <i>Lecture Notes in Computer Science</i> , <b>2018</b> , 2018, 563-571	0.9	20
54	Computing CNN Loss and Gradients for Pose Estimation with Riemannian Geometry. <i>Lecture Notes in Computer Science</i> , <b>2018</b> , 756-764	0.9	7
53	AutoDVT: Joint Real-Time Classification for Vein Compressibility Analysis in Deep Vein Thrombosis Ultrasound Diagnostics. <i>Lecture Notes in Computer Science</i> , <b>2018</b> , 905-912	0.9	6
52	Human-level Performance On Automatic Head Biometrics In Fetal Ultrasound Using Fully Convolutional Neural Networks. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , <b>2018</b> , 2018, 714-717	0.9	17
51	Real-Time Prediction of Segmentation Quality. <i>Lecture Notes in Computer Science</i> , <b>2018</b> , 578-585	0.9	14
50	EchoFusion: Tracking and Reconstruction of Objects in 4D Freehand Ultrasound Imaging Without External Trackers. <i>Lecture Notes in Computer Science</i> , <b>2018</b> , 117-127	0.9	1
49	Automatic Shadow Detection in 2D Ultrasound Images. <i>Lecture Notes in Computer Science</i> , <b>2018</b> , 66-75	0.9	5
48	Standard Plane Detection in 3D Fetal Ultrasound Using an Iterative Transformation Network. <i>Lecture Notes in Computer Science</i> , <b>2018</b> , 392-400	0.9	18
47	3D Fetal Skull Reconstruction from 2DUS via Deep Conditional Generative Networks. <i>Lecture Notes in Computer Science</i> , <b>2018</b> , 383-391	0.9	14
46	Automated cardiovascular magnetic resonance image analysis with fully convolutional networks. <i>Journal of Cardiovascular Magnetic Resonance</i> , <b>2018</b> , 20, 65	6.9	285

45	Placenta Maps: In Utero Placental Health Assessment of the Human Fetus. <i>IEEE Transactions on Visualization and Computer Graphics</i> , <b>2017</b> , 23, 1612-1623	4	18
44	SonoNet: Real-Time Detection and Localisation of Fetal Standard Scan Planes in Freehand Ultrasound. <i>IEEE Transactions on Medical Imaging</i> , <b>2017</b> , 36, 2204-2215	11.7	145
43	DeepCut: Object Segmentation From Bounding Box Annotations Using Convolutional Neural Networks. <i>IEEE Transactions on Medical Imaging</i> , <b>2017</b> , 36, 674-683	11.7	146
42	PVR: Patch-to-Volume Reconstruction for Large Area Motion Correction of Fetal MRI. <i>IEEE Transactions on Medical Imaging</i> , <b>2017</b> , 36, 2031-2044	11.7	22
41	Predicting Slice-to-Volume Transformation in Presence of Arbitrary Subject Motion. <i>Lecture Notes in Computer Science</i> , <b>2017</b> , 296-304	0.9	25
40	Fetal Skull Segmentation in 3D Ultrasound via Structured Geodesic Random Forest. <i>Lecture Notes in Computer Science</i> , <b>2017</b> , 25-32	0.9	5
39	Context-Sensitive Super-Resolution for Fast Fetal Magnetic Resonance Imaging. <i>Lecture Notes in Computer Science</i> , <b>2017</b> , 116-126	0.9	9
38	Prenatal MRI visualisation of the aortic arch and fetal vasculature using motion-corrected slice-to-volume reconstruction. <i>Journal of Cardiovascular Magnetic Resonance</i> , <b>2016</b> , 18,	6.9	2
37	Real-Time Standard Scan Plane Detection and Localisation in Fetal Ultrasound Using Fully Convolutional Neural Networks. <i>Lecture Notes in Computer Science</i> , <b>2016</b> , 203-211	0.9	26
36	Fast Fully Automatic Segmentation of the Human Placenta from Motion Corrupted MRI. <i>Lecture Notes in Computer Science</i> , <b>2016</b> , 589-597	0.9	25
35	Fast Volume Reconstruction From Motion Corrupted Stacks of 2D Slices. <i>IEEE Transactions on Medical Imaging</i> , <b>2015</b> , 34, 1901-13	11.7	100
34	Interactive Volumetry Of Liver Ablation Zones. <i>Scientific Reports</i> , <b>2015</b> , 5, 15373	4.9	11
33	Machine learning for the automatic localisation of foetal body parts in cine-MRI scans <b>2015</b> ,		1
32	RFA-cut: Semi-automatic segmentation of radiofrequency ablation zones with and without needles via optimal s-t-cuts. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , <b>2015</b> , 2015, 2423-9	0.9	6
31	Flexible Reconstruction and Correction of Unpredictable Motion from Stacks of 2D Images. <i>Lecture Notes in Computer Science</i> , <b>2015</b> , 555-562	0.9	6
30	Automated Localization of Fetal Organs in MRI Using Random Forests with Steerable Features. <i>Lecture Notes in Computer Science</i> , <b>2015</b> , 620-627	0.9	9
29	Automatic Brain Localization in Fetal MRI Using Superpixel Graphs. <i>Lecture Notes in Computer Science</i> , <b>2015</b> , 13-22	0.9	7
28	Automated fetal brain segmentation from 2D MRI slices for motion correction. <i>NeuroImage</i> , <b>2014</b> , 101, 633-43	7.9	60

27	High-resolution contrast enhanced multi-phase hepatic Computed Tomography data from a porcine Radio-Frequency Ablation study <b>2014</b> ,		3
26	Parallel Irradiance Caching for Interactive Monte-Carlo Direct Volume Rendering. <i>Computer Graphics Forum</i> , <b>2014</b> , 33, 61-70	2.4	3
25	Fast fully automatic brain detection in fetal MRI using dense rotation invariant image descriptors <b>2014</b> ,		9
24	On-the-fly generation and rendering of infinite cities on the GPU. <i>Computer Graphics Forum</i> , <b>2014</b> , 33, 105-114	2.4	16
23	Parallel generation of architecture on the GPU. <i>Computer Graphics Forum</i> , <b>2014</b> , 33, 73-82	2.4	16
22	Spatio-temporal geometry fusion for multiple hybrid cameras using moving least squares surfaces. <i>Computer Graphics Forum</i> , <b>2014</b> , 33, 1-10	2.4	13
21	Motion corrected 3D reconstruction of the fetal thorax from prenatal MRI. <i>Lecture Notes in Computer Science</i> , <b>2014</b> , 17, 284-91	0.9	15
20	Noise-based volume rendering for the visualization of multivariate volumetric data. <i>IEEE Transactions on Visualization and Computer Graphics</i> , <b>2013</b> , 19, 2926-35	4	10
19	Intervention Planning of Hepatocellular Carcinoma Radio-Frequency Ablations. <i>Lecture Notes in Computer Science</i> , <b>2013</b> , 9-16	0.9	3
18	Procedural Texture Synthesis for Zoom-Independent Visualization of Multivariate Data. <i>Computer Graphics Forum</i> , <b>2012</b> , 31, 1355-1364	2.4	6
17	Volumetric Real-Time Particle-Based Representation of Large Unstructured Tetrahedral Polygon Meshes. <i>Lecture Notes in Computer Science</i> , <b>2012</b> , 159-168	0.9	
16	Ray prioritization using stylization and visual saliency. <i>Computers and Graphics</i> , <b>2012</b> , 36, 673-684	1.8	2
15	ScatterAlloc: Massively parallel dynamic memory allocation for the GPU <b>2012</b> ,		19
14	OmniKinect <b>2012</b> ,		30
13	Softshell. <i>ACM Transactions on Graphics</i> , <b>2012</b> , 31, 1-11	7.6	32
12	Volume Visualization in the Clinical Practice. <i>Lecture Notes in Computer Science</i> , <b>2012</b> , 74-84	0.9	1
11	Crepuscular rays for tumor accessibility planning. <i>IEEE Transactions on Visualization and Computer Graphics</i> , <b>2011</b> , 17, 2163-72	4	15
10	Stylization-based ray prioritization for guaranteed frame rates <b>2011</b> ,		1

9	Vessel segmentation for ablation treatment planning and simulation. <i>Lecture Notes in Computer Science</i> , <b>2010</b> , 13, 45-52	0.9	9
8	Computer oriented image acquisition of the liver: Toward a better numerical model for radiofrequency ablation. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , <b>2009</b> , 2009, 3755-8	0.9	0
7	Ray casting of multiple volumetric datasets with polyhedral boundaries on manycore GPUs. <i>ACM Transactions on Graphics</i> , <b>2009</b> , 28, 1-9	7.6	18
6	Ray casting of multiple volumetric datasets with polyhedral boundaries on manycore GPUs <b>2009</b> ,		6
5	In vivo interactive visualization of four-dimensional blood flow patterns. <i>Visual Computer</i> , <b>2009</b> , 25, 853-862	3.9	1
4	Magnetic resonance-derived 3-dimensional blood flow patterns in the main pulmonary artery as a marker of pulmonary hypertension and a measure of elevated mean pulmonary arterial pressure. <i>Circulation: Cardiovascular Imaging</i> , <b>2008</b> , 1, 23-30	3.9	168
3	Automatic Differentiation for GPU-Accelerated 2D/3D Registration. <i>Lecture Notes in Computational Science and Engineering</i> , <b>2008</b> , 259-269	0.3	11
2	Fast marker based C-Arm pose estimation. <i>Lecture Notes in Computer Science</i> , <b>2008</b> , 11, 652-9	0.9	9
1	Non-invasive Diagnosis of Deep Vein Thrombosis from Ultrasound with Machine Learning		1