

Anja Hennemuth

List of Publications by Year in descending order

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Version: 2024-02-01

120
papers

1,924
citations

279701

23
h-index

302012

39
g-index

132
all docs

132
docs citations

132
times ranked

2527
citing authors

#	ARTICLE	IF	CITATIONS
1	Benchmarking framework for myocardial tracking and deformation algorithms: An open access database. <i>Medical Image Analysis</i> , 2013, 17, 632-648.	7.0	140
2	Evaluation of current algorithms for segmentation of scar tissue from late Gadolinium enhancement cardiovascular magnetic resonance of the left atrium: an open-access grand challenge. <i>Journal of Cardiovascular Magnetic Resonance</i> , 2013, 15, 105.	1.6	136
3	Evaluation of state-of-the-art segmentation algorithms for left ventricle infarct from late Gadolinium enhancement MR images. <i>Medical Image Analysis</i> , 2016, 30, 95-107.	7.0	90
4	MRI-based computational fluid dynamics for diagnosis and treatment prediction: Clinical validation study in patients with coarctation of aorta. <i>Journal of Magnetic Resonance Imaging</i> , 2015, 41, 909-916.	1.9	87
5	A Comprehensive Approach to the Analysis of Contrast Enhanced Cardiac MR Images. <i>IEEE Transactions on Medical Imaging</i> , 2008, 27, 1592-1610.	5.4	78
6	Measurement of cardiac output from a test-bolus injection in multislice computed tomography. <i>European Radiology</i> , 2003, 13, 2498-2504.	2.3	69
7	Pressure Fields by Flow-Sensitive, 4D, Velocity-Encoded CMR in Patients With Aortic Coarctation. <i>JACC: Cardiovascular Imaging</i> , 2014, 7, 920-926.	2.3	57
8	3D Strain Assessment in Ultrasound (Straus): A Synthetic Comparison of Five Tracking Methodologies. <i>IEEE Transactions on Medical Imaging</i> , 2013, 32, 1632-1646.	5.4	54
9	Time-resolved 3-dimensional magnetic resonance phase contrast imaging (4D Flow MRI) analysis of hemodynamics in valve-sparing aortic root repair with an anatomically shaped sinus prosthesis. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2016, 152, 418-427.e1.	0.4	52
10	Three-dimensional visualization and virtual simulation of resections in pediatric solid tumors. <i>Journal of Pediatric Surgery</i> , 2005, 40, 364-370.	0.8	51
11	Image-Based Personalization of Cardiac Anatomy for Coupled Electromechanical Modeling. <i>Annals of Biomedical Engineering</i> , 2016, 44, 58-70.	1.3	48
12	Real-time magnetic resonance imaging of cardiac function and flow-recent progress. <i>Quantitative Imaging in Medicine and Surgery</i> , 2014, 4, 313-29.	1.1	44
13	In vivo analysis of physiological 3D blood flow of cerebral veins. <i>European Radiology</i> , 2015, 25, 2371-2380.	2.3	41
14	Balloon Dilatation and Stenting for Aortic Coarctation. <i>Circulation: Cardiovascular Interventions</i> , 2016, 9, .	1.4	40
15	One-click coronary tree segmentation in CT angiographic images. <i>International Congress Series</i> , 2005, 1281, 317-321.	0.2	39
16	Determination of aortic stiffness using 4D flow cardiovascular magnetic resonance - a population-based study. <i>Journal of Cardiovascular Magnetic Resonance</i> , 2018, 20, 43.	1.6	39
17	Aortic atheroma as a source of stroke – assessment of embolization risk using 3D CMR in stroke patients and controls. <i>Journal of Cardiovascular Magnetic Resonance</i> , 2017, 19, 67.	1.6	33
18	Synthesizing anonymized and labeled TOF-MRA patches for brain vessel segmentation using generative adversarial networks. <i>Computers in Biology and Medicine</i> , 2021, 131, 104254.	3.9	32

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19	MRI-based computational hemodynamics in patients with aortic coarctation using the lattice Boltzmann methods: Clinical validation study. <i>Journal of Magnetic Resonance Imaging</i> , 2017, 45, 139-146.	1.9	30
20	Survey of the Visual Exploration and Analysis of Perfusion Data. <i>IEEE Transactions on Visualization and Computer Graphics</i> , 2009, 15, 205-220.	2.9	28
21	A Survey of Cardiac 4D PC-MRI Data Processing. <i>Computer Graphics Forum</i> , 2017, 36, 5-35.	1.8	28
22	Time-resolved 3-dimensional magnetic resonance phase contrast imaging (4D Flow MRI) reveals altered blood flow patterns in the ascending aorta of patients with valve-sparing aortic root replacement. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2020, 159, 798-810.e1.	0.4	28
23	Prevalence of Potential Retrograde Embolization Pathways in the Proximal Descending Aorta in Stroke Patients and Controls. <i>Cerebrovascular Diseases</i> , 2014, 38, 410-417.	0.8	25
24	Age dependence of pulmonary artery blood flow measured by 4D flow cardiovascular magnetic resonance: results of a population-based study. <i>Journal of Cardiovascular Magnetic Resonance</i> , 2016, 18, 31.	1.6	25
25	Probabilistic 4D blood flow tracking and uncertainty estimation. <i>Medical Image Analysis</i> , 2011, 15, 720-728.	7.0	24
26	Fast interactive exploration of 4D MRI flow data. <i>Proceedings of SPIE</i> , 2011, , .	0.8	24
27	Wall shear stress estimation in the aorta: Impact of wall motion, spatiotemporal resolution, and phase noise. <i>Journal of Magnetic Resonance Imaging</i> , 2018, 48, 718-728.	1.9	23
28	Determination of Cardiac Output With Multislice Spiral Computed Tomography. <i>Investigative Radiology</i> , 2004, 39, 451-454.	3.5	21
29	Interactive virtual stent planning for the treatment of coarctation of the aorta. <i>International Journal of Computer Assisted Radiology and Surgery</i> , 2016, 11, 133-144.	1.7	20
30	Acute Cerebral Venous Thrombosis. <i>Stroke</i> , 2017, 48, 671-677.	1.0	20
31	Age-related changes of right atrial morphology and inflow pattern assessed using 4D flow cardiovascular magnetic resonance: results of a population-based study. <i>Journal of Cardiovascular Magnetic Resonance</i> , 2018, 20, 38.	1.6	18
32	Development of a modeling pipeline for the prediction of hemodynamic outcome after virtual mitral valve repair using image-based CFD. <i>International Journal of Computer Assisted Radiology and Surgery</i> , 2018, 13, 1795-1805.	1.7	18
33	Carotid geometry is an independent predictor of wall thickness – a 3D cardiovascular magnetic resonance study in patients with high cardiovascular risk. <i>Journal of Cardiovascular Magnetic Resonance</i> , 2020, 22, 67.	1.6	18
34	Accelerated analysis of three-dimensional blood flow of the thoracic aorta in stroke patients. <i>International Journal of Cardiovascular Imaging</i> , 2014, 30, 1571-1577.	0.7	17
35	Extraction of open-state mitral valve geometry from CT volumes. <i>International Journal of Computer Assisted Radiology and Surgery</i> , 2018, 13, 1741-1754.	1.7	17
36	Image fusion of coronary CT angiography and cardiac perfusion MRI: a pilot study. <i>European Radiology</i> , 2010, 20, 1174-1179.	2.3	16

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37	Non-contrast-enhanced magnetic resonance imaging for visualization and quantification of endovascular aortic prosthesis, their endoleaks and aneurysm sacs at 1.5T. <i>Magnetic Resonance Imaging</i> , 2019, 60, 164-172.	1.0	16
38	Deep learning methods for automatic evaluation of delayed enhancement-MRI. The results of the EMIDEC challenge. <i>Medical Image Analysis</i> , 2022, 79, 102428.	7.0	16
39	Detection and analysis of cerebral aneurysms based on X-ray rotational angiography - the CADA 2020 challenge. <i>Medical Image Analysis</i> , 2022, 77, 102333.	7.0	15
40	Retrograde aortic blood flow as a mechanism of stroke: MR evaluation of the prevalence in a population-based study. <i>European Radiology</i> , 2019, 29, 5172-5179.	2.3	13
41	Patient-specific requirements and clinical validation of MRI-based pressure mapping: A two-center study in patients with aortic coarctation. <i>Journal of Magnetic Resonance Imaging</i> , 2019, 49, 81-89.	1.9	13
42	The culprit lesion and its consequences: combined visualization of the coronary arteries and delayed myocardial enhancement in dual-source CT: a pilot study. <i>European Radiology</i> , 2010, 20, 2834-2843.	2.3	12
43	3D Fusion of Functional Cardiac Magnetic Resonance Imaging and Computed Tomography Coronary Angiography. <i>Investigative Radiology</i> , 2011, 46, 331-340.	3.5	12
44	Analyzing myocardial torsion based on tissue phase mapping cardiovascular magnetic resonance. <i>Journal of Cardiovascular Magnetic Resonance</i> , 2016, 18, 15.	1.6	12
45	Generating 3D TOF-MRA volumes and segmentation labels using generative adversarial networks. <i>Medical Image Analysis</i> , 2022, 78, 102396.	7.0	12
46	Automatic Transfer Function Specification for Visual Emphasis of Coronary Artery Plaque. <i>Computer Graphics Forum</i> , 2010, 29, 191-201.	1.8	11
47	Phase-based non-rigid registration of myocardial perfusion MRI image sequences. , 2010, , .		11
48	Context-based segmentation and analysis of multi-cycle real-time cardiac MRI. , 2014, , .		11
49	Probabilistic 4D Blood Flow Mapping. <i>Lecture Notes in Computer Science</i> , 2010, 13, 416-423.	1.0	11
50	CARDIOKIN1: Computational Assessment of Myocardial Metabolic Capability in Healthy Controls and Patients With Valve Diseases. <i>Circulation</i> , 2021, 144, 1926-1939.	1.6	11
51	Measurement of cardiac valve and aortic blood flow velocities in stroke patients: a comparison of 4D flow MRI and echocardiography. <i>International Journal of Cardiovascular Imaging</i> , 2018, 34, 939-946.	0.7	10
52	Hemodynamics of cerebral veins analyzed by 2d and 4d flow mri and ultrasound in healthy volunteers and patients with multiple sclerosis. <i>Journal of Magnetic Resonance Imaging</i> , 2020, 51, 205-217.	1.9	10
53	Wearable devices can predict the outcome of standardized 6-minute walk tests in heart disease. <i>Npj Digital Medicine</i> , 2020, 3, 92.	5.7	10
54	Assessment of hemodynamic responses to exercise in aortic coarctation using MRI-ergometry in combination with computational fluid dynamics. <i>Scientific Reports</i> , 2020, 10, 18894.	1.6	10

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55	Motion Analysis with Quadrature Filter Based Registration of Tagged MRI Sequences. Lecture Notes in Computer Science, 2012, , 78-87.	1.0	10
56	User-dependent variability in mitral valve segmentation and its impact on CFD-computed hemodynamic parameters. International Journal of Computer Assisted Radiology and Surgery, 2019, 14, 1687-1696.	1.7	9
57	Tissue Sodium Content and Arterial Hypertension in Obese Adolescents. Journal of Clinical Medicine, 2019, 8, 2036.	1.0	9
58	Interactive editing of virtual chordae tendineae for the simulation of the mitral valve in a decision support system. International Journal of Computer Assisted Radiology and Surgery, 2021, 16, 125-132.	1.7	9
59	Novel methods for parameter-based analysis of myocardial tissue in MR images. , 2007, , .		8
60	Mixture-Model-Based Segmentation of Myocardial Delayed Enhancement MRI. Lecture Notes in Computer Science, 2013, , 87-96.	1.0	7
61	Elevated diastolic wall shear stress in regurgitant semilunar valvular lesions. Journal of Magnetic Resonance Imaging, 2019, 50, 763-770.	1.9	7
62	Virtual downsizing for decision support in mitral valve repair. International Journal of Computer Assisted Radiology and Surgery, 2019, 14, 357-371.	1.7	7
63	Combining position-based dynamics and gradient vector flow for 4D mitral valve segmentation in TEE sequences. International Journal of Computer Assisted Radiology and Surgery, 2020, 15, 119-128.	1.7	6
64	Enhanced cardio vascular image analysis by combined representation of results from dynamic MRI and anatomic CTA. Proceedings of SPIE, 2008, , .	0.8	5
65	Simulation of a Right Anterior Thoracotomy Access for Aortic Valve Replacement Using a 3D Printed Model. Innovations: Technology and Techniques in Cardiothoracic and Vascular Surgery, 2019, 14, 428-435.	0.4	5
66	An extensible software platform for interdisciplinary cardiovascular imaging research. Computer Methods and Programs in Biomedicine, 2020, 184, 105277.	2.6	5
67	Blood Flow Computation in Phase-Contrast MRI by Minimal Paths in Anisotropic Media. Lecture Notes in Computer Science, 2011, , 436-443.	1.0	5
68	Carotid Geometry and Wall Shear Stress Independently Predict Increased Wall Thickness – A Longitudinal 3D MRI Study in High-Risk Patients. Frontiers in Cardiovascular Medicine, 2021, 8, 723860.	1.1	5
69	A Collaborative Approach for the Development and Application of Machine Learning Solutions for CMR-Based Cardiac Disease Classification. Frontiers in Cardiovascular Medicine, 2022, 9, 829512.	1.1	5
70	Using Position-Based Dynamics for Simulating Mitral Valve Closure and Repair Procedures. Computer Graphics Forum, 2022, 41, 270-287.	1.8	5
71	Toward Sharing Brain Images: Differentially Private TOF-MRA Images With Segmentation Labels Using Generative Adversarial Networks. Frontiers in Artificial Intelligence, 2022, 5, 813842.	2.0	4
72	A Novel Anisotropic Fast Marching Method and its Application to Blood Flow Computation in Phase-contrast MRI. Methods of Information in Medicine, 2012, 51, 423-428.	0.7	3

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73	OsiriX plugin for integrated cardiac imaging research. , 2014, , .		3
74	Intracranial Aneurysm Rupture Risk Estimation Utilizing Vessel-Graphs and Machine Learning. Lecture Notes in Computer Science, 2021, , 93-103.	1.0	3
75	Nonlinear Regression on Manifolds for Shape Analysis using Intrinsic BÄzier Splines. Lecture Notes in Computer Science, 2020, , 617-626.	1.0	3
76	A Fast and Noise-Robust Method for Computation of Intravascular Pressure Difference Maps from 4D PC-MRI Data. Lecture Notes in Computer Science, 2013, , 215-224.	1.0	3
77	Cardiac radiomics: an interactive approach for 4D data exploration. Current Directions in Biomedical Engineering, 2020, 6, .	0.2	3
78	Fusion of MR coronary angiography and viability imaging: Feasibility and clinical value for the assignment of myocardial infarctions. European Journal of Radiology, 2012, 81, 71-76.	1.2	2
79	Contour tracking and probabilistic segmentation of tissue phase mapping MRI. Proceedings of SPIE, 2016, , .	0.8	2
80	Cerebral Aneurysm Detection and Analysis Challenge 2020 (CADA). Lecture Notes in Computer Science, 2021, , 3-17.	1.0	2
81	Influence of Pulse Wave Velocity on Atherosclerosis and Blood Flow Reversal in the Aorta. Journal of Thoracic Imaging, 2022, 37, 42-48.	0.8	2
82	Automatic Perfusion Analysis Using Phase-Based Registration and Object-Based Image Analysis. Lecture Notes in Computer Science, 2015, , 51-60.	1.0	2
83	Image-based assessment of uncertainty in quantification of carotid lumen. Journal of Medical Imaging, 2018, 5, 1.	0.8	2
84	Using position-based dynamics to simulate deformation in aortic valve replacement procedure. Current Directions in Biomedical Engineering, 2020, 6, .	0.2	2
85	Fully automated quantification of in vivo viscoelasticity of prostate zones using magnetic resonance elastography with Dense U-net segmentation. Scientific Reports, 2022, 12, 2001.	1.6	2
86	New analysis tools for the comprehensive assessment of the coronary arteries and myocardial viability in CT data sets. , 2008, , .		1
87	Optimized assessment of both left and right ventricular parameters from multi-slice acquisitions of single orientations using reconstructed 3D cine data. Journal of Cardiovascular Magnetic Resonance, 2012, 14, .	1.6	1
88	A tool for the interactive analysis and exploration of in-vivo haemodynamics from 4D PC MRI. Journal of Cardiovascular Magnetic Resonance, 2012, 14, .	1.6	1
89	Evaluation of a phase-based motion tracking method for the calculation of myocardial stress and strain from tagged MRI. Journal of Cardiovascular Magnetic Resonance, 2014, 16, P365.	1.6	1
90	Analysis of cardiac interventricular septum motion in different respiratory states. , 2016, , .		1

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91	Avoidable costs of stenting for aortic coarctation in the United Kingdom: an economic model. BMC Health Services Research, 2017, 17, 258.	0.9	1
92	CMR-Based and Time-Shift Corrected Pressure Gradients Provide Good Agreement to Invasive Measurements in Aortic Coarctation. JACC: Cardiovascular Imaging, 2018, 11, 1725-1727.	2.3	1
93	Deep Learning-Based 3D U-Net Cerebral Aneurysm Detection. Lecture Notes in Computer Science, 2021, , 31-38.	1.0	1
94	Image-Based Computational Model Predicts Dobutamine-Induced Hemodynamic Changes in Patients With Aortic Coarctation. Circulation: Cardiovascular Imaging, 2021, 14, e011523.	1.3	1
95	Deep-Learning-Based Myocardial Pathology Detection. Lecture Notes in Computer Science, 2021, , 369-377.	1.0	1
96	Blood Particle Trajectories in Phase-Contrast-MRI as Minimal Paths Computed with Anisotropic Fast Marching. Informatik Aktuell, 2011, , 289-293.	0.4	1
97	Detection of Vortical Structures in 4D Velocity Encoded Phase Contrast MRI Data Using Vector Template Matching. Lecture Notes in Computer Science, 2013, , 276-283.	1.0	1
98	Multi-cycle Reconstruction of Cardiac MRI for the Analysis of Inter-ventricular Septum Motion During Free Breathing. Lecture Notes in Computer Science, 2017, 10263, 63-72.	1.0	1
99	Real-time myocardium segmentation for the assessment of cardiac function variation. Proceedings of SPIE, 2017, , .	0.8	1
100	Image-based assessment of uncertainty in quantification of carotid lumen. , 2018, , .		1
101	DL-based segmentation of endoscopic scenes for mitral valve repair. Current Directions in Biomedical Engineering, 2020, 6, .	0.2	1
102	Evaluation of Active Appearance Models for Cardiac MRI. , 0, , 171-175.		1
103	Integrierte Visualisierung kardialer MR-Daten zur Beurteilung von Funktion, Perfusion und Vitalität des Myokards. , 2007, , 212-216.		1
104	Intraindividual validation of 4D flow measurement against 2D flow measurements in complex flow patterns in routine clinical cardiovascular magnetic resonance of bicuspid aortic valve. Egyptian Journal of Radiology and Nuclear Medicine, 2020, 51, .	0.3	1
105	3D Right Ventricle Reconstruction from 2D U-Net Segmentation of Sparse Short-Axis and 4-Chamber Cardiac Cine MRI Views. Lecture Notes in Computer Science, 2022, , 352-359.	1.0	1
106	Automatic multi-cycle analysis of cardiac function from real-time MRI. Journal of Cardiovascular Magnetic Resonance, 2015, 17, P385.	1.6	0
107	Analysis of aortic blood-flow from ECG-free realtime PC MRI. Journal of Cardiovascular Magnetic Resonance, 2015, 17, .	1.6	0
108	Cardiac function analysis with cardiorespiratory-synchronized CMR. Journal of Cardiovascular Magnetic Resonance, 2016, 18, W24.	1.6	0

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109	Background Correction and Stitching of Histological Plaque Images. Informatik Aktuell, 2018, , 109-114.	0.4	0
110	Comparing Subjects with Reference Populations - A Visualization Toolkit for the Analysis of Aortic Anatomy and Pressure Distribution. Lecture Notes in Computer Science, 2019, , 370-378.	1.0	0
111	Patient-specific requirements and clinical validation of MRI-based pressure mapping: A two-center study in patients with aortic coarctation. Journal of Magnetic Resonance Imaging, 2019, 49, spcone.	1.9	0
112	Analysis of three-chamber view conventional and tagged cine MRI in patients with suspected hypertrophic cardiomyopathy. Magnetic Resonance Materials in Physics, Biology, and Medicine, 2020, 33, 613-626.	1.1	0
113	Intracranial Aneurysm Rupture Prediction with Computational Fluid Dynamics Point Clouds. Lecture Notes in Computer Science, 2021, , 104-112.	1.0	0
114	Comparison of a Hybrid Mixture Model and a CNN for the Segmentation of Myocardial Pathologies in Delayed Enhancement MRI. Lecture Notes in Computer Science, 2021, , 319-327.	1.0	0
115	Multi-Dimensional Computed Cardiac Visualization. Medical Radiology, 2009, , 297-338.	0.0	0
116	Adapted Transfer Function Design for Coronary Artery Evaluation. Informatik Aktuell, 2009, , 1-5.	0.4	0
117	Quadrature Filter Based Motion Analysis for 3D Ultrasound Sequences. Lecture Notes in Computer Science, 2013, , 169-177.	1.0	0
118	Analysis of Three-Chamber View Tagged Cine MRI in Patients with Suspected Hypertrophic Cardiomyopathy. Lecture Notes in Computer Science, 2019, , 425-432.	1.0	0
119	Digitale Transformation: Dies ist erst der Anfang , 0, , .		0
120	Virtual reality in cardiac interventions – New tools or new toys?. Journal of Cardiac Surgery, 0, , .	0.3	0