

Theo van Walsum

List of Publications by Year in descending order

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Version: 2024-02-01

88
papers

2,359
citations

218677

26
h-index

243625

44
g-index

90
all docs

90
docs citations

90
times ranked

3050
citing authors

#	ARTICLE	IF	CITATIONS
1	Adaptive optics ophthalmoscopy: a systematic review of vascular biomarkers. Survey of Ophthalmology, 2022, 67, 369-387.	4.0	15
2	Automatic artery/vein classification in 2D-DSA images of stroke patients. , 2022, , .		2
3	Spatio-temporal deep learning for automatic detection of intracranial vessel perforation in digital subtraction angiography during endovascular thrombectomy. Medical Image Analysis, 2022, 77, 102377.	11.6	9
4	Signal-carrying speckle in optical coherence tomography: a methodological review on biomedical applications. Journal of Biomedical Optics, 2022, 27, .	2.6	7
5	Automatic Segmentation of the Optic Nerve Head Region in Optical Coherence Tomography: A Methodological Review. Computer Methods and Programs in Biomedicine, 2022, 220, 106801.	4.7	4
6	Automatic scan range for dose-reduced multiphase CT imaging of the liver utilizing CNNs and Gaussian models. Medical Image Analysis, 2022, 78, 102422.	11.6	1
7	Augmented reality navigation for minimally invasive craniostomosis surgery: a phantom study. International Journal of Computer Assisted Radiology and Surgery, 2022, 17, 1453-1460.	2.8	9
8	Inter-rater reliability for assessing intracranial collaterals in patients with acute ischemic stroke: comparing 29 raters and an artificial intelligence-based software. Neuroradiology, 2022, 64, 2277-2284.	2.2	8
9	Multimodal markers for technology-independent integration of augmented reality devices and surgical navigation systems. Virtual Reality, 2022, 26, 1637-1650.	6.1	9
10	Multi-modal and multi-scale clinical retinal imaging system with pupil and retinal tracking. Scientific Reports, 2022, 12, .	3.3	7
11	Mesenteric artery calcium scoring: a potential screening method for chronic mesenteric ischemia. European Radiology, 2021, 31, 4212-4220.	4.5	4
12	Validation of automated Alberta Stroke Program Early CT Score (ASPECTS) software for detection of early ischemic changes on non-contrast brain CT scans. Neuroradiology, 2021, 63, 491-498.	2.2	11
13	Optical Coherence Tomography Imaging of the Lamina Cribrosa: Structural Biomarkers in Nonglaucomatous Diseases. Journal of Ophthalmology, 2021, 2021, 1-31.	1.3	6
14	Efficiently compressing 3D medical images for teleinterventions via CNNs and anisotropic diffusion. Medical Physics, 2021, 48, 2877-2890.	3.0	1
15	autoTICI: Automatic Brain Tissue Reperfusion Scoring on 2D DSA Images of Acute Ischemic Stroke Patients. IEEE Transactions on Medical Imaging, 2021, 40, 2380-2391.	8.9	17
16	Virtual extensions improve perception-based instrument alignment using optical see-through devices. IEEE Transactions on Visualization and Computer Graphics, 2021, 27, 4332-4341.	4.4	6
17	Block-matching-based registration to evaluate ultrasound visibility of percutaneous needles in liver-mimicking phantoms. Medical Physics, 2021, 48, 7602.	3.0	2
18	OCTA Multilayer and Multisector Peripapillary Microvascular Modeling for Diagnosing and Staging of Glaucoma. Translational Vision Science and Technology, 2020, 9, 58.	2.2	16

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19	Microvascular damage assessed by optical coherence tomography angiography for glaucoma diagnosis: a systematic review of the most discriminative regions. <i>Acta Ophthalmologica</i> , 2020, 98, 537-558.	1.1	30
20	Dynamic coronary roadmapping via catheter tip tracking in X-ray fluoroscopy with deep learning based Bayesian filtering. <i>Medical Image Analysis</i> , 2020, 61, 101634.	11.6	26
21	Automatic Collateral Scoring From 3D CTA Images. <i>IEEE Transactions on Medical Imaging</i> , 2020, 39, 2190-2200.	8.9	26
22	Review on Retrospective Procedures to Correct Retinal Motion Artefacts in OCT Imaging. <i>Applied Sciences (Switzerland)</i> , 2019, 9, 2700.	2.5	19
23	Feasibility and relevance of discrete vasculature modeling in routine hyperthermia treatment planning. <i>International Journal of Hyperthermia</i> , 2019, 36, 800-810.	2.5	14
24	Automatic needle detection and real-time Bi-planar needle visualization during 3D ultrasound scanning of the liver. <i>Medical Image Analysis</i> , 2019, 53, 104-110.	11.6	37
25	Multiple-correlation similarity for block-matching based fast CT to ultrasound registration in liver interventions. <i>Medical Image Analysis</i> , 2019, 53, 132-141.	11.6	10
26	An Evaluation of CNN-based Liver Segmentation Methods using Multi-types of CT Abdominal Images from Multiple Medical Centers. , 2019, , .		9
27	Automated Quantification of Bileaflet Mechanical Heart Valve Leaflet Angles in CT Images. <i>IEEE Transactions on Medical Imaging</i> , 2019, 38, 753-761.	8.9	1
28	Needle Tip Visibility in 3D Ultrasound Images. <i>CardioVascular and Interventional Radiology</i> , 2018, 41, 145-152.	2.0	26
29	Evaluation of 2D and 3D ultrasound tracking algorithms and impact on ultrasound-guided liver radiotherapy margins. <i>Medical Physics</i> , 2018, 45, 4986-5003.	3.0	43
30	Accuracy of semi-automated versus manual localisation of liver tumours in CT-guided ablation procedures. <i>European Radiology</i> , 2018, 28, 4978-4984.	4.5	3
31	Classification of hemodynamically significant stenoses from dynamic CT perfusion and CTA myocardial territories. <i>Medical Physics</i> , 2017, 44, 1347-1358.	3.0	4
32	Epicardial Fat Volume and the Risk of Atrial Fibrillation in the General Population Free of Cardiovascular Disease. <i>JACC: Cardiovascular Imaging</i> , 2017, 10, 1405-1407.	5.3	38
33	Semiautomated registration of pre- and intraoperative CT for image-guided percutaneous liver tumor ablation interventions. <i>Medical Physics</i> , 2017, 44, 3718-3725.	3.0	13
34	Automatic online layer separation for vessel enhancement in X-ray angiograms for percutaneous coronary interventions. <i>Medical Image Analysis</i> , 2017, 39, 145-161.	11.6	23
35	Quantitative Analysis of Geometry and Lateral Symmetry of Proximal Middle Cerebral Artery. <i>Journal of Stroke and Cerebrovascular Diseases</i> , 2017, 26, 2427-2434.	1.6	1
36	Random Forest-Based Bone Segmentation in Ultrasound. <i>Ultrasound in Medicine and Biology</i> , 2017, 43, 2426-2437.	1.5	17

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37	Ultrasound Aided Vertebral Level Localization for Lumbar Surgery. IEEE Transactions on Medical Imaging, 2017, 36, 2138-2147.	8.9	47
38	Contour segmentation of the intima, media, and adventitia layers in intracoronary OCT images: application to fully automatic detection of healthy wall regions. International Journal of Computer Assisted Radiology and Surgery, 2017, 12, 1923-1936.	2.8	21
39	Cortical and vascular probability maps for analysis of human brain in computed tomography images. , 2017, , .		2
40	Non-Rigid Registration of Liver CT Images for CT-Guided Ablation of Liver Tumors. PLoS ONE, 2016, 11, e0161600.	2.5	24
41	An evaluation of automatic coronary artery calcium scoring methods with cardiac CT using the orCaScore framework. Medical Physics, 2016, 43, 2361-2373.	3.0	63
42	Fusion of fibrous cap thickness and wall shear stress to assess plaque vulnerability in coronary arteries: a pilot study. International Journal of Computer Assisted Radiology and Surgery, 2016, 11, 1779-1790.	2.8	6
43	4D Ultrasound Tracking of Liver and its Verification for TIPS Guidance. IEEE Transactions on Medical Imaging, 2016, 35, 52-62.	8.9	10
44	Improved Segmentation of Multiple Cavities of the Heart in Wide-View 3-D Transesophageal Echocardiograms. Ultrasound in Medicine and Biology, 2015, 41, 1991-2000.	1.5	7
45	Fast and robust 3D ultrasound registration – Block and game theoretic matching. Medical Image Analysis, 2015, 20, 173-183.	11.6	30
46	MRI integration into treatment planning of head and neck tumors: Can patient immobilization be avoided?. Radiotherapy and Oncology, 2015, 115, 191-194.	0.6	18
47	Accurate 3D temperature dosimetry during hyperthermia therapy by combining invasive measurements and patient-specific simulations. International Journal of Hyperthermia, 2015, 31, 686-692.	2.5	45
48	Epicardial fat volume is related to atherosclerotic calcification in multiple vessel beds. European Heart Journal Cardiovascular Imaging, 2015, 16, 1264-1269.	1.2	50
49	PCA-derived respiratory motion surrogates from X-ray angiograms for percutaneous coronary interventions. International Journal of Computer Assisted Radiology and Surgery, 2015, 10, 695-705.	2.8	8
50	The use of atlas registration and graph cuts for prostate segmentation in magnetic resonance images. Medical Physics, 2015, 42, 1614-1624.	3.0	27
51	An automatic registration method for pre- and post-interventional CT images for assessing treatment success in liver RFA treatment. Medical Physics, 2015, 42, 5559-5567.	3.0	24
52	Semi-automatic MRI segmentation and volume quantification of intra-plaque hemorrhage. International Journal of Computer Assisted Radiology and Surgery, 2015, 10, 67-74.	2.8	7
53	3D Catheter Tip Tracking in 2D X-Ray Image Sequences Using a Hidden Markov Model and 3D Rotational Angiography. Lecture Notes in Computer Science, 2015, , 38-49.	1.3	2
54	The relevance of MRI for patient modeling in head and neck hyperthermia treatment planning: A comparison of CT and CT+MRI based tissue segmentation on simulated temperature. Medical Physics, 2014, 41, 123302.	3.0	22

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55	3D/3D registration of coronary CTA and biplane XA reconstructions for improved image guidance. Medical Physics, 2014, 41, 091909.	3.0	8
56	Additional Diagnostic Value of Integrated Analysis of Cardiac CTA and SPECT MPI Using the SMARTVis System in Patients with Suspected Coronary Artery Disease. Journal of Nuclear Medicine, 2014, 55, 50-57.	5.0	18
57	Temperature simulations in hyperthermia treatment planning of the head and neck region. Strahlentherapie Und Onkologie, 2014, 190, 1117-1124.	2.0	25
58	CT-based patient modeling for head and neck hyperthermia treatment planning: Manual versus automatic normal-tissue-segmentation. Radiotherapy and Oncology, 2014, 111, 158-163.	0.6	41
59	Registration of $\langle \text{formula formulatype="inline"} \rangle \langle \text{tex Notation="TeX"} \rangle \$3\{m D\} + \{m t\} \$ \langle / \text{tex} \rangle \langle / \text{formula} \rangle$ Coronary CTA and Monoplane $\langle \text{formula formulatype="inline"} \rangle \langle \text{tex Notation="TeX"} \rangle \$2\{m D\} + \{m t\} \$ \langle / \text{tex} \rangle \langle / \text{formula} \rangle$ X-Ray Angiography. IEEE Transactions on Medical Imaging, 2013, 32, 919-931.	8.9	17
60	Automatic segmentation, detection and quantification of coronary artery stenoses on CTA. International Journal of Cardiovascular Imaging, 2013, 29, 1847-1859.	1.5	69
61	Vessel Specific Coronary Artery Calcium Scoring. Academic Radiology, 2013, 20, 1-9.	2.5	67
62	Regression-Based Cardiac Motion Prediction From Single-Phase CTA. IEEE Transactions on Medical Imaging, 2012, 31, 1311-1325.	8.9	21
63	Semiautomatic carotid lumen segmentation for quantification of lumen geometry in multispectral MRI. Medical Image Analysis, 2012, 16, 1202-1215.	11.6	47
64	Automated versus manual segmentation of atherosclerotic carotid plaque volume and components in CTA: associations with cardiovascular risk factors. International Journal of Cardiovascular Imaging, 2012, 28, 877-887.	1.5	21
65	Robust Shape Regression for Supervised Vessel Segmentation and its Application to Coronary Segmentation in CTA. IEEE Transactions on Medical Imaging, 2011, 30, 1974-1986.	8.9	51
66	Small coronary calcifications are not detectable by 64-slice contrast enhanced computed tomography. International Journal of Cardiovascular Imaging, 2011, 27, 143-152.	1.5	27
67	Reproducibility, Accuracy, and Predictors of Accuracy for the Detection of Coronary Atherosclerotic Plaque Composition by Computed Tomography. Investigative Radiology, 2010, 45, 693-701.	6.2	53
68	3D fusion of intravascular ultrasound and coronary computed tomography for in-vivo wall shear stress analysis: a feasibility study. International Journal of Cardiovascular Imaging, 2010, 26, 781-796.	1.5	69
69	Three-dimensional registration of histology of human atherosclerotic carotid plaques to in-vivo imaging. Journal of Biomechanics, 2010, 43, 2087-2092.	2.1	28
70	Carotid artery segmentation and plaque quantification in CTA. , 2009, , .		7
71	Standardized evaluation methodology and reference database for evaluating coronary artery centerline extraction algorithms. Medical Image Analysis, 2009, 13, 701-714.	11.6	295
72	Calcification Locates to Transglutaminases in Advanced Human Atherosclerotic Lesions. American Journal of Pathology, 2009, 175, 1374-1379.	3.8	16

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73	Averaging Centerlines: Mean Shift on Paths. Lecture Notes in Computer Science, 2008, 11, 900-907.	1.3	6
74	Image-guided vascular neurosurgery based on three-dimensional rotational angiography. Journal of Neurosurgery, 2007, 106, 501-506.	1.6	25
75	Navigation with Three-dimensional Rotational Radiographic Data for Transpedicular Percutaneous Needle Introduction: Feasibility and Comparison with Fluoroscopic Guidance. Journal of Vascular and Interventional Radiology, 2006, 17, 1511-1518.	0.5	13
76	Three-Dimensional Rotational X-Ray Navigation for Needle Guidance in Percutaneous Vertebroplasty: An Accuracy Study. Spine, 2006, 31, 1359-1364.	2.0	25
77	Accuracy evaluation of direct navigation with an isocentric 3D rotational X-ray system. Medical Image Analysis, 2006, 10, 113-124.	11.6	28
78	Three-Dimensional Rotational X-ray Imaging for Spine Surgery. Spine, 2005, 30, 556-561.	2.0	22
79	The Reduction of Endplate Fractures During Balloon Vertebroplasty. Spine, 2005, 30, 1840-1845.	2.0	47
80	Bone Displacement and the Role of Longitudinal Ligaments During Balloon Vertebroplasty in Traumatic Thoracolumbar Fractures. Spine, 2005, 30, 1832-1839.	2.0	29
81	Standardized evaluation methodology for 2-D-3-D registration. IEEE Transactions on Medical Imaging, 2005, 24, 1177-1189.	8.9	180
82	Guide wire reconstruction and visualization in 3DRA using monoplane fluoroscopic imaging. IEEE Transactions on Medical Imaging, 2005, 24, 612-623.	8.9	38
83	Noninvasive Magnetic Resonance to Three-Dimensional Rotational X-Ray Registration of Vertebral Bodies for Image-Guided Spine Surgery. Spine, 2004, 29, 293-297.	2.0	18
84	Endpoint localization in guide wire tracking during endovascular interventions ¹ . Academic Radiology, 2003, 10, 1424-1432.	2.5	7
85	Three-dimensional guide-wire reconstruction from biplane image sequences for integrated display in 3-d vasculature. IEEE Transactions on Medical Imaging, 2003, 22, 1252-1258.	8.9	55
86	Vessel diameter measurements in gadolinium contrast-enhanced three-dimensional MRA of peripheral arteries. Magnetic Resonance Imaging, 2000, 18, 13-22.	1.8	56
87	Global, geometric, and feature-based techniques for vector field visualization. Future Generation Computer Systems, 1999, 15, 87-98.	7.5	13
88	Selective Visualization of Vector Fields. Computer Graphics Forum, 1994, 13, 339-347.	3.0	19