Koen Van Leemput

List of Publications by Citations

93 papers	7,578 citations	33 h-index	87 g-index
102 ext. papers	9,320 ext. citations	4.6 avg, IF	5.54 L-index

#	Paper	IF	Citations
93	The Multimodal Brain Tumor Image Segmentation Benchmark (BRATS). *IEEE Transactions on Medical Imaging*, **2015**, 34, 1993-2024	11.7	2132
92	Automated model-based tissue classification of MR images of the brain. *IEEE Transactions on Medical Imaging*, **1999**, 18, 897-908	11.7	746
91	A computational atlas of the hippocampal formation using ex vivo, ultra-high resolution MRI: Application to adaptive segmentation of in vivo MRI. *NeuroImage*, **2015**, 115, 117-37	7.9	566
90	Automated model-based bias field correction of MR images of the brain. *IEEE Transactions on Medical Imaging*, **1999**, 18, 885-96	11.7	433
89	A generative model for image segmentation based on label fusion. *IEEE Transactions on Medical Imaging*, **2010**, 29, 1714-29	11.7	353
88	Automated segmentation of multiple sclerosis lesions by model outlier detection. *IEEE Transactions on Medical Imaging*, **2001**, 20, 677-88	11.7	346
87	Automated segmentation of hippocampal subfields from ultra-high resolution in vivo MRI. *Hippocampus*, **2009**, 19, 549-57	3.5	331
86	Quantitative comparison of 21 protocols for labeling hippocampal subfields and parahippocampal subregions in in vivo MRI: towards a harmonized segmentation protocol. *NeuroImage*, **2015**, 111, 526-41	7.9	209
85	Automatic brain tumor segmentation by subject specific modification of atlas priors. *Academic Radiology*, **2003**, 10, 1341-8	4.3	192
84	A unifying framework for partial volume segmentation of brain MR images. *IEEE Transactions on Medical Imaging*, **2003**, 22, 105-19	11.7	190
83	High-resolution magnetic resonance imaging reveals nuclei of the human amygdala: manual segmentation to automatic atlas. *NeuroImage*, **2017**, 155, 370-382	7.9	151
82	A probabilistic atlas of the human thalamic nuclei combining ex vivo MRI and histology. *NeuroImage* , **2018**, 183, 314-326	7.9	144
81	Bayesian segmentation of brainstem structures in MRI. *NeuroImage*, **2015**, 113, 184-95	7.9	108
80	A generative model for brain tumor segmentation in multi-modal images. *Lecture Notes in Computer Science*, **2010**, 13, 151-9	0.9	103
79	Patch-based generation of a pseudo CT from conventional MRI sequences for MRI-only radiotherapy of the brain. *Medical Physics*, **2015**, 42, 1596-605	4.4	99
78	Bayesian longitudinal segmentation of hippocampal substructures in brain MRI using subject-specific atlases. *NeuroImage*, **2016**, 141, 542-555	7.9	83
77	Mild cognitive impairment: differential atrophy in the hippocampal subfields. *American Journal of Neuroradiology*, **2011**, 32, 1658-61	4.4	80

76	Predicting the location of entorhinal cortex from MRI. *NeuroImage*, **2009**, 47, 8-17	7.9	78
75	A voxel-based investigation for MRI-only radiotherapy of the brain using ultra short echo times. *Physics in Medicine and Biology*, **2014**, 59, 7501-19	3.8	76
74	Is synthesizing MRI contrast useful for inter-modality analysis?. *Lecture Notes in Computer Science*, **2013**, 16, 631-8	0.9	68
73	Predicting the location of human perirhinal cortex, Brodmann's area 35, from MRI. *NeuroImage*, **2013**, 64, 32-42	7.9	59
72	Encoding probabilistic brain atlases using Bayesian inference. *IEEE Transactions on Medical Imaging*, **2009**, 28, 822-37	11.7	55
71	A Generative Probabilistic Model and Discriminative Extensions for Brain Lesion Segmentation--With Application to Tumor and Stroke. *IEEE Transactions on Medical Imaging*, **2016**, 35, 933-46	11.7	54
70	Segmentation of image ensembles via latent atlases. *Medical Image Analysis*, **2010**, 14, 654-65	15.4	53
69	A patch-based pseudo-CT approach for MRI-only radiotherapy in the pelvis. *Medical Physics*, **2016**, 43, 4742	4.4	53
68	Personalized Radiotherapy Design for Glioblastoma: Integrating Mathematical Tumor Models, Multimodal Scans, and Bayesian Inference. *IEEE Transactions on Medical Imaging*, **2019**, 38, 1875-1884	11.7	45
67	Systematic comparison of different techniques to measure hippocampal subfield volumes in ADNI2. *NeuroImage: Clinical*, **2018**, 17, 1006-1018	5.3	44
66	A unified framework for cross-modality multi-atlas segmentation of brain MRI. *Medical Image Analysis*, **2013**, 17, 1181-91	15.4	41
65	A generative approach for image-based modeling of tumor growth. *Lecture Notes in Computer Science*, **2011**, 22, 735-47	0.9	40
64	Regional Hippocampal Atrophy and Higher Levels of Plasma Amyloid-Beta Are Associated With Subjective Memory Complaints in Nondemented Elderly Subjects. *Journals of Gerontology - Series A Biological Sciences and Medical Sciences*, **2016**, 71, 1210-5	6.4	37
63	The relevance voxel machine (RVoxM): a self-tuning Bayesian model for informative image-based prediction. *IEEE Transactions on Medical Imaging*, **2012**, 31, 2290-306	11.7	37
62	Fast and sequence-adaptive whole-brain segmentation using parametric Bayesian modeling. *NeuroImage*, **2016**, 143, 235-249	7.9	37
61	Automatic Brain and Tumor Segmentation. *Lecture Notes in Computer Science*, **2002**, 372-379	0.9	34
60	Improved inference in Bayesian segmentation using Monte Carlo sampling: application to hippocampal subfield volumetry. *Medical Image Analysis*, **2013**, 17, 766-78	15.4	33
59	Cone beam computed tomography guided treatment delivery and planning verification for magnetic resonance imaging only radiotherapy of the brain. *Acta Oncologica*, **2015**, 54, 1496-500	3.2	31

58	PET/MRI in the Presence of Metal Implants: Completion of the Attenuation Map from PET Emission Data. *Journal of Nuclear Medicine*, **2017**, 58, 840-845	8.9	22
57	Asymmetric image-template registration. *Lecture Notes in Computer Science*, **2009**, 12, 565-73	0.9	22
56	Brain Tumor Segmentation Using a Generative Model with an RBM Prior on Tumor Shape. *Lecture Notes in Computer Science*, **2016**, 168-180	0.9	21
55	A GENERATIVE MODEL FOR MULTI-ATLAS SEGMENTATION ACROSS MODALITIES **2012**, 888-891	1.5	18
54	Model-based segmentation of hippocampal subfields in ultra-high resolution in vivo MRI. *Lecture Notes in Computer Science*, **2008**, 11, 235-43	0.9	18
53	PSACNN: Pulse sequence adaptive fast whole brain segmentation. *NeuroImage*, **2019**, 199, 553-569	7.9	17
52	Thalami and corona radiata in juvenile NCL (CLN3): a voxel-based morphometric study. *European Journal of Neurology*, **2007**, 14, 447-50	6	17
51	JNCL patients show marked brain volume alterations on longitudinal MRI in adolescence. *Journal of Neurology*, **2008**, 255, 1226-30	5.5	17
50	A modality-adaptive method for segmenting brain tumors and organs-at-risk in radiation therapy planning. *Medical Image Analysis*, **2019**, 54, 220-237	15.4	16
49	A contrast-adaptive method for simultaneous whole-brain and lesion segmentation in multiple sclerosis. *NeuroImage*, **2021**, 225, 117471	7.9	16
48	The Relevance Voxel Machine (RVoxM): a Bayesian method for image-based prediction. *Lecture Notes in Computer Science*, **2011**, 14, 99-106	0.9	15
47	Quantification of Cerebral Grey and White Matter Asymmetry from MRI. *Lecture Notes in Computer Science*, **1999**, 348-357	0.9	15
46	A machine learning method for fast and accurate characterization of depth-of-interaction gamma cameras. *Physics in Medicine and Biology*, **2017**, 62, 8376-8401	3.8	14
45	Accurate and robust whole-head segmentation from magnetic resonance images for individualized head modeling. *NeuroImage*, **2020**, 219, 117044	7.9	14
44	Association of intramyocellular, intraperitoneal and liver fat with glucose tolerance in severely obese adolescents. *European Journal of Endocrinology*, **2010**, 163, 413-9	6.5	14
43	Computed tomography synthesis from magnetic resonance images in the pelvis using multiple random forests and auto-context features **2016**,		14
42	Characterization of highly multiplexed monolithic PET / gamma camera detector modules. *Physics in Medicine and Biology*, **2018**, 63, 075017	3.8	13
41	A dosimetric study on the use of bolus materials for treatment of superficial tumors with BNCT. *Applied Radiation and Isotopes*, **2004**, 61, 787-91	1.7	13

40	Probabilistic brain atlas encoding using Bayesian inference. *Lecture Notes in Computer Science*, **2006**, 9, 704-11	0.9	13
39	An algorithm for optimal fusion of atlases with different labeling protocols. *NeuroImage*, **2015**, 106, 451-63	7.9	12
38	A Generative Model for Probabilistic Label Fusion of Multimodal Data. *Lecture Notes in Computer Science*, **2012**, 7509, 115-133	0.9	11
37	Automated Segmentation of MS Lesions from Multi-channel MR Images. *Lecture Notes in Computer Science*, **1999**, 11-21	0.9	11
36	Automatic segmentation of brain tissues and MR bias field correction using a digital brain atlas. *Lecture Notes in Computer Science*, **1998**, 1222-1229	0.9	8
35	Fast, sequence adaptive parcellation of brain MR using parametric models. *Lecture Notes in Computer Science*, **2013**, 16, 727-34	0.9	8
34	Subjects with intellectual disability and familial need for full-time special education show regional brain alterations: a voxel-based morphometry study. *Pediatric Research*, **2009**, 66, 306-11	3.2	7
33	A cautionary analysis of STAPLE using direct inference of segmentation truth. *Lecture Notes in Computer Science*, **2014**, 17, 398-406	0.9	6
32	Supervised nonparametric image parcellation. *Lecture Notes in Computer Science*, **2009**, 12, 1075-83	0.9	6
31	Incorporating parameter uncertainty in Bayesian segmentation models: application to hippocampal subfield volumetry. *Lecture Notes in Computer Science*, **2012**, 15, 50-7	0.9	6
30	A Statistical Framework for Partial Volume Segmentation. *Lecture Notes in Computer Science*, **2001**, 204-212	2.9	5
29	MR-based CT metal artifact reduction for head-and-neck photon, electron, and proton radiotherapy. *Medical Physics*, **2019**, 46, 4314-4323	4.4	4
28	Nonparametric Mixture Models for Supervised Image Parcellation **2009**, 12, 301-313		3
27	Cerebral measurements and their correlation with the onset age and the duration of opioid abuse. *Journal of Opioid Management*, **2010**, 6, 423-9	0.8	3
26	Joint inference on structural and diffusion MRI for sequence-adaptive Bayesian segmentation of thalamic nuclei with probabilistic atlases. *Lecture Notes in Computer Science*, **2019**, 11492, 767-779	0.9	3
25	A Cross-Platform Software Framework for Medical Image Processing. *Lecture Notes in Computer Science*, **2004**, 1091-1092	0.9	3
24	Reliability and sensitivity of two whole-brain segmentation approaches included in FreeSurfer - ASEG and SAMSEG. *NeuroImage*, **2021**, 237, 118113	7.9	3
23	CT metal artifact reduction using MR image patches **2018**,		2

22	A Longitudinal Method for Simultaneous Whole-Brain and Lesion Segmentation in Multiple Sclerosis. *Lecture Notes in Computer Science*, **2020**, 119-128	0.9	2
21	An Inference Language for Imaging. *Lecture Notes in Computer Science*, **2014**, 61-72	0.9	2
20	Simultaneous Whole-Brain Segmentation and White Matter Lesion Detection Using Contrast-Adaptive Probabilistic Models. *Lecture Notes in Computer Science*, **2016**, 9-20	0.9	2
19	Joint segmentation of image ensembles via latent atlases. *Lecture Notes in Computer Science*, **2009**, 12, 272-80	0.9	2
18	Cone beam computed tomography based image guidance and quality assessment of prostate cancer for magnetic resonance imaging-only radiotherapy in the pelvis. *Physics and Imaging in Radiation Oncology*, **2021**, 18, 55-60	3.1	2
17	A generative model for segmentation of tumor and organs-at-risk for radiation therapy planning of glioblastoma patients **2016**,		2
16	Skull segmentation from MR scans using a higher-order shape model based on convolutional restricted Boltzmann machines **2018**,		1
15	Fast Nonparametric Mutual-Information-based Registration and Uncertainty Estimation. *Lecture Notes in Computer Science*, **2019**, 42-51	0.9	1
14	3D Reconstruction and Segmentation of Dissection Photographs for MRI-Free Neuropathology. *Lecture Notes in Computer Science*, **2020**, 204-214	0.9	1
13	4-D PET-MR with Volumetric Navigators and Compressed Sensing. *Lecture Notes in Computational Vision and Biomechanics*, **2015**, 93-101	0.3	1
12	Bayesian Tomographic Reconstruction Using Riemannian MCMC. *Lecture Notes in Computer Science*, **2015**, 619-626	0.9	1
11	A probabilistic, non-parametric framework for inter-modality label fusion. *Lecture Notes in Computer Science*, **2013**, 16, 576-83	0.9	1
10	On Feature Relevance in Image-Based Prediction Models: An Empirical Study. *Lecture Notes in Computer Science*, **2013**, 171-178	0.9	1
9	Magnetic resonance-based computed tomography metal artifact reduction using Bayesian modelling. *Physics in Medicine and Biology*, **2019**, 64, 245012	3.8	1
8	A Contrast Augmentation Approach to Improve Multi-Scanner Generalization in MRI. *Frontiers in Neuroscience*, **2021**, 15, 708196	5.1	1
7	Relevance Vector Machines for Harmonization of MRI Brain Volumes Using Image Descriptors. *Lecture Notes in Computer Science*, **2019**, 77-85	0.9	0
6	JOINT SEGMENTATION OF MULTIPLE SCLEROSIS LESIONS AND BRAIN ANATOMY IN MRI SCANS OF ANY CONTRAST AND RESOLUTION WITH CNNs **2021**, 2021, 1971-1974	1.5	0
5	Prediction of MGMT Methylation Status of Glioblastoma Using Radiomics and Latent Space Shape Features. *Lecture Notes in Computer Science*, **2022**, 222-231	0.9	0

List of Publications

4	Model-Based Brain Tissue Classification **2005**, 1-55	
3	Validation of Nonlinear Spatial Filtering to Improve Tissue Segmentation of MR Brain Images. *Lecture Notes in Computer Science*, **2001**, 507-515	0.9
2	Semi-supervised Variational Autoencoder for Survival Prediction. *Lecture Notes in Computer Science*, **2020**, 124-134	0.9
1	An Improved Optimization Method for the Relevance Voxel Machine. *Lecture Notes in Computer Science*, **2013**, 147-154	0.9