

# Marc Niethammer

## List of Publications by Year in descending order

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114  
papers

3,452  
citations

257450

24  
h-index

182427

51  
g-index

115  
all docs

115  
docs citations

115  
times ranked

4007  
citing authors

#	ARTICLE	IF	CITATIONS
1	Quicksilver: Fast predictive image registration – A deep learning approach. <i>NeuroImage</i> , 2017, 158, 378-396.	4.2	444
2	Time-frequency representations of Lamb waves. <i>Journal of the Acoustical Society of America</i> , 2001, 109, 1841-1847.	1.1	236
3	Image analysis with deep learning to predict breast cancer grade, ER status, histologic subtype, and intrinsic subtype. <i>Npj Breast Cancer</i> , 2018, 4, 30.	5.2	193
4	Laplace–Beltrami eigenvalues and topological features of eigenfunctions for statistical shape analysis. <i>CAD Computer Aided Design</i> , 2009, 41, 739-755.	2.7	167
5	The power of correlative microscopy: multi-modal, multi-scale, multi-dimensional. <i>Current Opinion in Structural Biology</i> , 2011, 21, 686-693.	5.7	139
6	Restoration of DWI Data Using a Rician LMMSE Estimator. <i>IEEE Transactions on Medical Imaging</i> , 2008, 27, 1389-1403.	8.9	132
7	Geodesic Regression for Image Time-Series. <i>Lecture Notes in Computer Science</i> , 2011, 14, 655-662.	1.3	98
8	Scene Parsing with Object Instances and Occlusion Ordering. , 2014, , .		89
9	Time-frequency representation of Lamb waves using the reassigned spectrogram. <i>Journal of the Acoustical Society of America</i> , 2000, 107, L19-L24.	1.1	76
10	Crack characterization using guided circumferential waves. <i>Journal of the Acoustical Society of America</i> , 2001, 110, 1282-1290.	1.1	74
11	Automatic atlas-based three-label cartilage segmentation from MR knee images. <i>Medical Image Analysis</i> , 2014, 18, 1233-1246.	11.6	71
12	DeepAtlas: Joint Semi-supervised Learning of Image Registration and Segmentation. <i>Lecture Notes in Computer Science</i> , 2019, , 420-429.	1.3	67
13	Networks for Joint Affine and Non-Parametric Image Registration. , 2019, 2019, 4219-4228.		64
14	A Locally Adaptive Regularization Based on Anisotropic Diffusion for Deformable Image Registration of Sliding Organs. <i>IEEE Transactions on Medical Imaging</i> , 2013, 32, 2114-2126.	8.9	61
15	Global Medical Shape Analysis Using the Laplace-Beltrami Spectrum. , 2007, 10, 850-857.		60
16	LQG-obstacles: Feedback control with collision avoidance for mobile robots with motion and sensing uncertainty. , 2012, , .		59
17	Model-based analysis of dispersion curves using chirplets. <i>Journal of the Acoustical Society of America</i> , 2006, 119, 2122-2130.	1.1	54
18	Metric Learning for Image Registration. , 2019, 2019, 8455-8464.		50

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19	Appearance Normalization of Histology Slides. Lecture Notes in Computer Science, 2010, 6357, 58-66.	1.3	50
20	Shape alterations in the striatum in chorea-acanthocytosis. Psychiatry Research - Neuroimaging, 2011, 192, 29-36.	1.8	49
21	Diffusion Tensor Imaging-Based Characterization of Brain Neurodevelopment in Primates. Cerebral Cortex, 2013, 23, 36-48.	2.9	49
22	The UNC-Wisconsin Rhesus Macaque Neurodevelopment Database: A Structural MRI and DTI Database of Early Postnatal Development. Frontiers in Neuroscience, 2017, 11, 29.	2.8	45
23	VoteNet: A Deep Learning Label Fusion Method for Multi-atlas Segmentation. Lecture Notes in Computer Science, 2019, , 202-210.	1.3	43
24	Localization of notches with Lamb waves. Journal of the Acoustical Society of America, 2003, 114, 677-685.	1.1	41
25	Low-Rank Atlas Image Analyses in the Presence of Pathologies. IEEE Transactions on Medical Imaging, 2015, 34, 2583-2591.	8.9	40
26	Dynamic Active Contours for Visual Tracking. IEEE Transactions on Automatic Control, 2006, 51, 562-579.	5.7	38
27	Multi-modal registration for correlative microscopy using image analogies. Medical Image Analysis, 2014, 18, 914-926.	11.6	36
28	Geometric Metamorphosis. Lecture Notes in Computer Science, 2011, 14, 639-646.	1.3	34
29	Shape abnormalities of caudate nucleus in schizotypal personality disorder. Schizophrenia Research, 2009, 110, 127-139.	2.0	32
30	An optimal control approach for deformable registration. , 2009, , .		31
31	Appearance normalization of histology slides. Computerized Medical Imaging and Graphics, 2015, 43, 89-98.	5.8	25
32	Quantitative assessment of the upper airway in infants and children with subglottic stenosis. Laryngoscope, 2016, 126, 1225-1231.	2.0	25
33	Automated methodology to locate notches with Lamb waves. Acoustics Research Letters Online: ARLO, 2001, 2, 97-102.	0.7	24
34	Low-Rank to the Rescue - Atlas-Based Analyses in the Presence of Pathologies. Lecture Notes in Computer Science, 2014, 17, 97-104.	1.3	24
35	Compressing Networks with Super Nodes. Scientific Reports, 2018, 8, 10892.	3.3	22
36	Continuous maximal flows and Wulff shapes: Application to MRFs. , 2009, 2009, 1911-1918.		21

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37	Shape analysis of the neostriatum in subtypes of frontotemporal lobar degeneration: Neuroanatomically significant regional morphologic change. <i>Psychiatry Research - Neuroimaging</i> , 2011, 191, 98-111.	1.8	21
38	Deformable image registration of sliding organs using anisotropic diffusive regularization. , 2011, , 407-413.		20
39	Brain extraction from normal and pathological images: A joint PCA/Image-Reconstruction approach. <i>NeuroImage</i> , 2018, 176, 431-445.	4.2	20
40	Deep learning-based image registration and automatic segmentation of organs at risk in cone-beam CT scans from high-dose radiation treatment of pancreatic cancer. <i>Medical Physics</i> , 2021, 48, 3084-3095.	3.0	20
41	Global Medical Shape Analysis Using the Volumetric Laplace Spectrum. , 2007, , .		19
42	Large deformation diffeomorphic registration of diffusion-weighted imaging data. <i>Medical Image Analysis</i> , 2014, 18, 1290-1298.	11.6	19
43	Metamorphic Geodesic Regression. <i>Lecture Notes in Computer Science</i> , 2012, 15, 197-205.	1.3	19
44	On Diffusion Tensor Estimation. , 2006, 2006, 2622-5.		18
45	Geometric Observers for Dynamically Evolving Curves. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , 2008, 30, 1093-1108.	13.9	18
46	Robust estimation of group-wise cortical correspondence with an application to macaque and human neuroimaging studies. <i>Frontiers in Neuroscience</i> , 2015, 9, 210.	2.8	18
47	Splines for diffeomorphisms. <i>Medical Image Analysis</i> , 2015, 25, 56-71.	11.6	18
48	Scene Parsing with Object Instance Inference Using Regions and Per-exemplar Detectors. <i>International Journal of Computer Vision</i> , 2015, 112, 150-171.	15.6	18
49	Globally Optimal Finsler Active Contours. <i>Lecture Notes in Computer Science</i> , 2009, 5748, 552-561.	1.3	18
50	General anaesthesia during infancy reduces white matter micro-organisation in developing rhesus monkeys. <i>British Journal of Anaesthesia</i> , 2021, 126, 845-853.	3.4	17
51	Automatic multi-atlas-based cartilage segmentation from knee MR images. , 2012, 2012, 1028-1031.		16
52	Segmentation with area constraints. <i>Medical Image Analysis</i> , 2013, 17, 101-112.	11.6	16
53	Registration of Pathological Images. <i>Lecture Notes in Computer Science</i> , 2016, 9968, 97-107.	1.3	16
54	Lamb wave characterization by differential reassignment and non-linear anisotropic diffusion. <i>NDT and E International</i> , 2006, 39, 96-105.	3.7	15

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55	Image and statistical analysis of melanocytic histology. <i>Histopathology</i> , 2012, 61, 436-444.	2.9	15
56	Longitudinal Image Registration With Temporally-Dependent Image Similarity Measure. <i>IEEE Transactions on Medical Imaging</i> , 2013, 32, 1939-1951.	8.9	14
57	Attenuation Analysis of Lamb Waves Using the Chirplet Transform. <i>Eurasip Journal on Advances in Signal Processing</i> , 2010, 2010, .	1.7	13
58	Votenet +: An Improved Deep Learning Label Fusion Method for Multi-Atlas Segmentation. , 2020, 2020, 363-367.		13
59	Area-Based Medial Axis of Planar Curves. <i>International Journal of Computer Vision</i> , 2004, 60, 203-224.	15.6	12
60	Statistical atlas construction via weighted functional boxplots. <i>Medical Image Analysis</i> , 2014, 18, 684-698.	11.6	12
61	Diseased Region Detection of Longitudinal Knee Magnetic Resonance Imaging Data. <i>IEEE Transactions on Medical Imaging</i> , 2015, 34, 1914-1927.	8.9	12
62	Parametric Regression on the Grassmannian. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , 2016, 38, 2284-2297.	13.9	12
63	Large Deformation Image Classification Using Generalized Locality-Constrained Linear Coding. <i>Lecture Notes in Computer Science</i> , 2013, 16, 292-299.	1.3	12
64	On the detection of simple points in higher dimensions using cubical homology. <i>IEEE Transactions on Image Processing</i> , 2006, 15, 2462-2469.	9.8	11
65	Splines for Diffeomorphic Image Regression. <i>Lecture Notes in Computer Science</i> , 2014, 17, 121-129.	1.3	11
66	Locally-Constrained Region-Based Methods for DW-MRI Segmentation. , 2007, , 1-8.		9
67	Knowledge-Based Segmentation for Tracking Through Deep Turbulence. <i>IEEE Transactions on Control Systems Technology</i> , 2008, 16, 469-474.	5.2	9
68	Efficient registration of pathological images: A joint PCA/image-reconstruction approach. , 2017, 2017, 10-14.		9
69	Robust Multimodal Dictionary Learning. <i>Lecture Notes in Computer Science</i> , 2013, 16, 259-266.	1.3	9
70	Time-Warped Geodesic Regression. <i>Lecture Notes in Computer Science</i> , 2014, 17, 105-112.	1.3	9
71	ICON: Learning Regular Maps Through Inverse Consistency. , 2021, 2021, 3376-3385.		9
72	Near-tubular fiber bundle segmentation for diffusion weighted imaging: Segmentation through frame reorientation. <i>NeuroImage</i> , 2009, 45, S123-S132.	4.2	8

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73	Automatic atlas-based three-label cartilage segmentation from MR knee images. , 2012, , 241-246.		8
74	Automatic three-label bone segmentation from knee MR images. , 2010, , .		7
75	A pediatric airway atlas and its application in subglottic stenosis. , 2013, 2013, 1206-1209.		7
76	Outlier Rejection for Diffusion Weighted Imaging. , 2007, 10, 161-168.		7
77	Sliding Geometries in Deformable Image Registration. Lecture Notes in Computer Science, 2012, , 141-148.	1.3	7
78	Large Deformation Diffeomorphic Registration of Diffusion-Weighted Images with Explicit Orientation Optimization. Lecture Notes in Computer Science, 2013, 16, 27-34.	1.3	7
79	Adversarial Data Augmentation via Deformation Statistics. Lecture Notes in Computer Science, 2020, , 643-659.	1.3	7
80	A Deep Network for Joint Registration and Reconstruction of Images with Pathologies. Lecture Notes in Computer Science, 2020, 12436, 342-352.	1.3	7
81	DADP: Dynamic abnormality detection and progression for longitudinal knee magnetic resonance images from the Osteoarthritis Initiative. Medical Image Analysis, 2022, 77, 102343.	11.6	7
82	An optimal control approach for deformable registration. , 2009, , .		6
83	Patient-Specific Registration of Pre-operative and Post-recurrence Brain Tumor MRI Scans. Lecture Notes in Computer Science, 2019, 11383, 105-114.	1.3	6
84	Application of the short time Fourier transform to interpret ultrasonic signals. AIP Conference Proceedings, 2000, , .	0.4	5
85	Fast predictive simple geodesic regression. Medical Image Analysis, 2019, 56, 193-209.	11.6	5
86	Fiber Bundle Estimation and Parameterization. Lecture Notes in Computer Science, 2006, 9, 252-259.	1.3	5
87	Fast Predictive Simple Geodesic Regression. Lecture Notes in Computer Science, 2017, , 267-275.	1.3	5
88	The <sc>fairness&#x2013;accuracy</sc> Pareto front. Statistical Analysis and Data Mining, 2022, 15, 287-302.	2.8	5
89	On diffusion tensor estimation. , 2006, Suppl, 6707-10.		4
90	Joint and individual analysis of breast cancer histologic images and genomic covariates. Annals of Applied Statistics, 2021, 15, 1697-1722.	1.1	4

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91	Differential Reassignment for Lamb Wave Characterization. AIP Conference Proceedings, 2005, , .	0.4	3
92	An Optimal Control Approach for Texture Metamorphosis. Computer Graphics Forum, 2011, 30, 2341-2353.	3.0	3
93	Active Mean Fields for Probabilistic Image Segmentation: Connections with Chan–Vese and Rudin–Osher–Fatemi Models. SIAM Journal on Imaging Sciences, 2017, 10, 1069-1103.	2.2	3
94	A discretize–optimize approach for LDDMM registration. , 2020, , 479-532.		3
95	Perfusion Imaging: An Advection Diffusion Approach. IEEE Transactions on Medical Imaging, 2021, 40, 3424-3435.	8.9	3
96	Weighted Functional Boxplot with Application to Statistical Atlas Construction. Lecture Notes in Computer Science, 2013, 16, 584-591.	1.3	3
97	Sparse Scale-Space Decomposition of Volume Changes in Deformations Fields. Lecture Notes in Computer Science, 2013, 16, 328-335.	1.3	3
98	Longitudinal Image Registration with Non-uniform Appearance Change. Lecture Notes in Computer Science, 2012, 15, 280-288.	1.3	3
99	On the Evolution of Vector Distance Functions of Closed Curves. International Journal of Computer Vision, 2005, 65, 5-27.	15.6	2
100	Shape analysis based on depth-ordering. Medical Image Analysis, 2015, 25, 2-10.	11.6	2
101	Computational methods for visualizing and measuring verapamil efficacy for cerebral vasospasm. Scientific Reports, 2020, 10, 18780.	3.3	2
102	Votenet++: Registration Refinement For Multi-Atlas Segmentation. , 2021, , .		2
103	Depth-Based Shape-Analysis. Lecture Notes in Computer Science, 2014, 17, 17-24.	1.3	2
104	Temporally-Dependent Image Similarity Measure for Longitudinal Analysis. Lecture Notes in Computer Science, 2012, , 99-109.	1.3	2
105	Discovering Hidden Physics Behind Transport Dynamics. , 2021, , .		2
106	Physically-based deformable image registration with material property and boundary condition estimation. , 2010, , .		1
107	Automatic Multi-Atlas Segmentation for Abdominal Images Using Template Construction and Robust Principal Component Analysis. , 2018, , .		1
108	PIANO: Perfusion Imaging via Advection-Diffusion. Lecture Notes in Computer Science, 2020, , 688-698.	1.3	1

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109	Contextual Additive Networks to Efficiently Boost 3D Image Segmentations. , 2018, 11045, 92-100.		1
110	Dispersive Wave Analysis Using the Chirplet Transform. AIP Conference Proceedings, 2007, , .	0.4	0
111	Longitudinal three-label segmentation of knee cartilage. , 2013, , .		0
112	Multiseg pipeline: automatic tissue segmentation of brain MR images with subject-specific atlases. , 2019, 10953, .		0
113	A feature-based affine registration method for capturing background lung tissue deformation for ground glass nodule tracking. Computer Methods in Biomechanics and Biomedical Engineering: Imaging and Visualization, 0, , 1-19.	1.9	0
114	On Diffusion Tensor Estimation. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , .	0.5	0