Xavier Pennec

List of Publications by Year
in descending order

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Version: 2024-02-01

217 papers	14,321 citations	31902 53 h-index	21474 114 g-index
228 all docs	228 docs citations	228 times ranked	10176 citing authors

#	Article	IF	Citations
1	Numerical Accuracy of Ladder Schemes for Parallel Transport on Manifolds. Foundations of Computational Mathematics, 2022, 22, 757-790.	1.5	3
2	The geometry of mixed-Euclidean metrics on symmetric positive definite matrices. Differential Geometry and Its Applications, 2022, 81, 101867.	0.2	1
3	Parallel transport, a central tool in geometric statistics for computational anatomy: Application to cardiac motion modeling. Handbook of Statistics, 2022, , 285-326.	0.4	1
4	Geodesics and Curvature ofÂtheÂQuotient-Affine Metrics onÂFull-Rank Correlation Matrices. Lecture Notes in Computer Science, 2021, , 93-102.	1.0	5
5	A Reduced Parallel Transport Equation on Lie Groups with a Left-Invariant Metric. Lecture Notes in Computer Science, 2021, , 119-126.	1.0	3
6	Statistical Analysis of Organsâ€™ Shapes and Deformations: The Riemannian and the Affine Settings in Computational Anatomy. Human-computer Interaction Series, 2021, , 159-183.	0.4	0
7	Parallel Transport on Kendall Shape Spaces. Lecture Notes in Computer Science, 2021, , 103-110.	1.0	3
8	Cardiac Motion Modeling With Parallel Transport And Shape Splines. , 2021, , .		3
9	Association of Immunosuppression and Viral Load With Subcortical Brain Volume in an International Sample of People Living With HIV. JAMA Network Open, 2021, 4, e2031190.	2.8	16
10	Left atrial shape is independent predictor of arrhythmia recurrence after catheter ablation for atrial fibrillation: A shape statistics study. Heart Rhythm O2, 2021, 2, 622-632.	0.6	8
11	Introduction to differential and Riemannian geometry. , 2020, , 3-37.		2
12	Beyond Riemannian geometry. , 2020, , 169-229.		16
13	Manifold-valued image processing with SPD matrices. , 2020, , 75-134.		16
14	Bias on estimation in quotient space and correction methods. , 2020, , 343-376.		0
15	Voxel-based assessments of treatment effects on longitudinal brain changes in the Multidomain Alzheimer Preventive Trial cohort. Neurobiology of Aging, 2020, 94, 50-59.	1.5	8
16	Advances in Geometric Statistics for Manifold Dimension Reduction. , 2020, , 339-359.		1
17	A model of brain morphological changes related to aging and Alzheimer's disease from cross-sectional assessments. NeuroImage, 2019, 198, 255-270.	2.1	29
18	Populationâ€based priors in cardiac model personalisation for consistent parameter estimation in heterogeneous databases. International Journal for Numerical Methods in Biomedical Engineering, 2019, 35, e3158.	1.0	10

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19	Symmetric Algorithmic Components for Shape Analysis with Diffeomorphisms. Lecture Notes in Computer Science, 2019, , 759-768.	1.0	3
20	Exploration of Balanced Metrics on Symmetric Positive Definite Matrices. Lecture Notes in Computer Science, 2019, , 484-493.	1.0	4
21	Is Affine-Invariance Well Defined on SPD Matrices? A Principled Continuum of Metrics. Lecture Notes in Computer Science, 2019, , 502-510.	1.0	3
22	Multifidelity-CMA: a multifidelity approach for efficient personalisation of 3D cardiac electromechanical models. Biomechanics and Modeling in Mechanobiology, 2018, 17, 285-300.	1.4	16
23	Low-dimensional representation of cardiac motion using Barycentric Subspaces: A new group-wise paradigm for estimation, analysis, and reconstruction. Medical Image Analysis, 2018, 45, 1-12.	7.0	11
24	Cardiac Motion Evolution Model for Analysis of Functional Changes Using Tensor Decomposition and Cross-Sectional Data. IEEE Transactions on Biomedical Engineering, 2018, 65, 2769-2780.	2.5	4
25	Statistical Shape Modeling of the Left Ventricle: Myocardial Infarct Classification Challenge. IEEE Journal of Biomedical and Health Informatics, 2018, 22, 503-515.	3.9	61
26	Barycentric subspace analysis on manifolds. Annals of Statistics, 2018, 46, .	1.4	37
27	Deep Learning Techniques for Automatic MRI Cardiac Multi-Structures Segmentation and Diagnosis: Is the Problem Solved?. IEEE Transactions on Medical Imaging, 2018, 37, 2514-2525.	5.4	926
28	Topologically Constrained Template Estimation via Morse–Smale Complexes Controls Its Statistical Consistency. SIAM Journal on Applied Algebra and Geometry, 2018, 2, 348-375.	0.9	1
29	Parallel Transport of Surface Deformations from Pole Ladder to Symmetrical Extension. Lecture Notes in Computer Science, 2018, , 116-124.	1.0	3
30	Detecting Clinically Meaningful Shape Clusters in Medical Image Data: Metrics Analysis for Hierarchical Clustering Applied to Healthy and Pathological Aortic Arches. IEEE Transactions on Biomedical Engineering, 2017, 64, 2373-2383.	2.5	62
31	Template Shape Estimation: Correcting an Asymptotic Bias. SIAM Journal on Imaging Sciences, 2017, 10, 808-844.	1.3	9
32	Template Estimation in Computational Anatomy: FrÃ©chet Means Top and Quotient Spaces Are Not Consistent. SIAM Journal on Imaging Sciences, 2017, 10, 1139-1169.	1.3	5
33	Statistical shape modelling to aid surgical planning: associations between surgical parameters and head shapes following spring-assisted cranioplasty. International Journal of Computer Assisted Radiology and Surgery, 2017, 12, 1739-1749.	1.7	19
34	Looks Do Matter! Aortic Arch Shape After Hypoplastic Left Heart Syndrome Palliation Correlates With Cavopulmonary Outcomes. Annals of Thoracic Surgery, 2017, 103, 645-654.	0.7	26
35	How successful is successful? Aortic arch shape after successful aortic coarctation repair correlates with left ventricular function. Journal of Thoracic and Cardiovascular Surgery, 2017, 153, 418-427.	0.4	61
36	Inconsistency of Template Estimation by Minimizing of the Variance/Pre-Variance in the Quotient Space. Entropy, 2017, 19, 288.	1.1	5

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37	Simulating Longitudinal Brain MRIs with Known Volume Changes and Realistic Variations in Image Intensity. Frontiers in Neuroscience, 2017, 11, 132.	1.4	10
38	SVF-Net: Learning Deformable Image Registration Using Shape Matching. Lecture Notes in Computer Science, 2017, , 266-274.	1.0	153
39	Sample-Limited $$L_p$$ Barycentric Subspace Analysis on Constant Curvature Spaces. Lecture Notes in Computer Science, 2017, , 20-28.	1.0	2
40	Longitudinal Parameter Estimation in 3D Electromechanical Models: Application to Cardiovascular Changes in Digestion. Lecture Notes in Computer Science, 2017, , 432-440.	1.0	0
41	Inconsistency of Template Estimation with the FrÃ©chet Mean in Quotient Space. Lecture Notes in Computer Science, 2017, , 16-27.	1.0	0
42	Improving Understanding of Long-Term Cardiac Functional Remodelling via Cross-Sectional Analysis of Polyaffine Motion Parameters. Lecture Notes in Computer Science, 2017, , 51-59.	1.0	1
43	Longitudinal Analysis of Image Time Series with Diffeomorphic Deformations: A Computational Framework Based on Stationary Velocity Fields. Frontiers in Neuroscience, 2016, 10, 236.	1.4	15
44	Highly reduced model of the cardiac function for fast simulation. , 2016, , .		1
45	A biophysical model of brain deformation to simulate and analyze longitudinal MRIs of patients with Alzheimer's disease. NeuroImage, 2016, 134, 35-52.	2.1	20
46	A Survey of Mathematical Structures for Extending 2D Neurogeometry to 3D Image Processing. Lecture Notes in Computer Science, 2016, , 155-167.	1.0	2
47	A statistical shape modelling framework to extract 3D shape biomarkers from medical imaging data: assessing arch morphology of repaired coarctation of the aorta. BMC Medical Imaging, 2016, 16, 40.	1.4	65
48	A Framework for Creating Population Specific Multimodal Brain Atlas Using Clinical T1 and Diffusion Tensor Images. Mathematics and Visualization, 2016, , 99-108.	0.4	3
49	Combination of Polyaffine Transformations and Supervised Learning for the Automatic Diagnosis of LV Infarct. Lecture Notes in Computer Science, 2016, , 190-198.	1.0	7
50	A Non-parametric Statistical Shape Model for Assessment of the Surgically Repaired Aortic Arch in Coarctation of the Aorta: How Normal is Abnormal?. Lecture Notes in Computer Science, 2016, , 21-29.	1.0	9
51	Simulating Patient Specific Multiple Time-Point MRIs from a Biophysical Model of Brain Deformation in Alzheimerâ€™s Disease. , 2016, , 167-176.		0
52	Barycentric Subspace Analysis: A New Symmetric Group-Wise Paradigm for Cardiac Motion Tracking. Lecture Notes in Computer Science, 2016, , 300-307.	1.0	2
53	Statistics on Lie groups: A need to go beyond the pseudo-Riemannian framework. , 2015, , .		0
54	Disentangling normal aging from Alzheimer's disease in structural magnetic resonance images. Neurobiology of Aging, 2015, 36, S42-S52.	1.5	54

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55	Spatio-Temporal Tensor Decomposition of a Polyaffine Motion Model for a Better Analysis of Pathological Left Ventricular Dynamics. IEEE Transactions on Medical Imaging, 2015, 34, 1562-1575.	5.4	31
56	Computing Bi-Invariant Pseudo-Metrics on Lie Groups for Consistent Statistics. Entropy, 2015, 17, 1850-1881.	1.1	4
57	Regional flux analysis for discovering and quantifying anatomical changes: An application to the brain morphometry in Alzheimer's disease. NeuroImage, 2015, 115, 224-234.	2.1	12
58	Assessing atrophy measurement techniques in dementia: Results from the MIRIAD atrophy challenge. NeuroImage, 2015, 123, 149-164.	2.1	63
59	Propagation of Myocardial Fibre Architecture Uncertainty on Electromechanical Model Parameter Estimation: A Case Study. Lecture Notes in Computer Science, 2015, , 448-456.	1.0	5
60	Descriptive and Intuitive Population-Based Cardiac Motion Analysis via Sparsity Constrained Tensor Decomposition. Lecture Notes in Computer Science, 2015, , 419-426.	1.0	3
61	Barycentric Subspaces and Affine Spans in Manifolds. Lecture Notes in Computer Science, 2015, , 12-21.	1.0	9
62	Statistical Computing on Non-Linear Spaces for Computational Anatomy. , 2015, , 147-168.		1
63	Biased Estimators on Quotient Spaces. Lecture Notes in Computer Science, 2015, , 130-139.	1.0	3
64	Spectral Log-Demons: Diffeomorphic Image Registration with Very Large Deformations. International Journal of Computer Vision, 2014, 107, 254-271.	10.9	87
65	Efficient Parallel Transport of Deformations in Time Series of Images: From Schildâ€™s to Pole Ladder. Journal of Mathematical Imaging and Vision, 2014, 50, 5-17.	0.8	34
66	Group-wise construction of reduced models for understanding and characterization of pulmonary blood flows from medical images. Medical Image Analysis, 2014, 18, 63-82.	7.0	27
67	O3-03-06: REGIONAL FLUX ANALYSIS OF LONGITUDINAL ATROPHY IN ALZHEIMER'S DISEASE. , 2014, 10, P214-P214.		0
68	A Biophysical Model of Shape Changes due to Atrophy in the Brain with Alzheimerâ€™s Disease. Lecture Notes in Computer Science, 2014, 17, 41-48.	1.0	2
69	Discrete Ladders for Parallel Transport in Transformation Groups with an Affine Connection Structure. Signals and Communication Technology, 2014, , 243-271.	0.4	0
70	Sparse Multi-Scale Diffeomorphic Registration: The Kernel Bundle Framework. Journal of Mathematical Imaging and Vision, 2013, 46, 292-308.	0.8	36
71	Geodesics, Parallel Transport & One-Parameter Subgroups for Diffeomorphic Image Registration. International Journal of Computer Vision, 2013, 105, 111-127.	10.9	49
72	Toward a Comprehensive Framework for the Spatiotemporal Statistical Analysis of Longitudinal Shape Data. International Journal of Computer Vision, 2013, 103, 22-59.	10.9	106

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73	Parallel Transport with Pole Ladder: Application to Deformations of Time Series of Images. Lecture Notes in Computer Science, 2013, , 68-75.	1.0	1
74	Random Spatial Structure of Geometric Deformations and Bayesian Nonparametrics. Lecture Notes in Computer Science, 2013, , 120-127.	1.0	1
75	Mathematical Methods for Medical Imaging. International Journal of Computer Vision, 2013, 105, 109-110.	10.9	1
76	LCC-Demons: A robust and accurate symmetric diffeomorphic registration algorithm. NeuroImage, 2013, 81, 470-483.	2.1	123
77	Benchmarking framework for myocardial tracking and deformation algorithms: An open access database. Medical Image Analysis, 2013, 17, 632-648.	7.0	140
78	Computational modelling of the right ventricle in repaired tetralogy of Fallot: can it provide insight into patient treatment?. European Heart Journal Cardiovascular Imaging, 2013, 14, 381-386.	0.5	30
79	Bi-invariant Means on Lie Groups with Cartan-Schouten Connections. Lecture Notes in Computer Science, 2013, , 59-67.	1.0	5
80	Higher-Order Momentum Distributions and Locally Affine LDDMM Registration. SIAM Journal on Imaging Sciences, 2013, 6, 341-367.	1.3	19
81	Exponential Barycenters of the Canonical Cartan Connection and Invariant Means on Lie Groups. , 2013, , 123-166.		16
82	Statistical Shape Analysis of Surfaces in Medical Images Applied to the Tetralogy of Fallot Heart. , 2013, , 165-191.		3
83	Groupwise Spectral Log-Demons Framework for Atlas Construction. Lecture Notes in Computer Science, 2013, , 11-19.	1.0	5
84	Regional Analysis of Left Ventricle Function Using a Cardiac-Specific Polyaffine Motion Model. Lecture Notes in Computer Science, 2013, , 483-490.	1.0	8
85	Improving DTI Resolution from a Single Clinical Acquisition: A Statistical Approach Using Spatial Prior. Lecture Notes in Computer Science, 2013, 16, 477-484.	1.0	6
86	Sparse Scale-Space Decomposition of Volume Changes in Deformations Fields. Lecture Notes in Computer Science, 2013, 16, 328-335.	1.0	3
87	Spatio-temporal Dimension Reduction of Cardiac Motion for Group-Wise Analysis and Statistical Testing. Lecture Notes in Computer Science, 2013, 16, 501-508.	1.0	5
88	A Near-Incompressible Poly-affine Motion Model for Cardiac Function Analysis. Lecture Notes in Computer Science, 2013, , 288-297.	1.0	3
89	Multinomial Probabilistic Fiber Representation for Connectivity Driven Clustering. Lecture Notes in Computer Science, 2013, 23, 730-741.	1.0	9
90	Capturing the multiscale anatomical shape variability with polyaffine transformation trees. Medical Image Analysis, 2012, 16, 1371-1384.	7.0	33

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91	Sparsity and scale: Compact representations of deformation for diffeomorphic registration. , 2012, , .		0
92	Comparison of the endocranial ontogenies between chimpanzees and bonobos via temporal regression and spatiotemporal registration. Journal of Human Evolution, 2012, 62, 74-88.	1.3	76
93	Kernel Bundle EPDiff: Evolution Equations for Multi-scale Diffeomorphic Image Registration. Lecture Notes in Computer Science, 2012, , 677-688.	1.0	7
94	An Incompressible Log-Domain Demons Algorithm for Tracking Heart Tissue. Lecture Notes in Computer Science, 2012, , 55-67.	1.0	13
95	Which Reorientation Framework for the Atlas-Based Comparison of Motion from Cardiac Image Sequences?. Lecture Notes in Computer Science, 2012, , 25-37.	1.0	7
96	Spectral Demons â€“ Image Registration via Global Spectral Correspondence. Lecture Notes in Computer Science, 2012, , 30-44.	1.0	15
97	Regional Flux Analysis of Longitudinal Atrophy in Alzheimerâ€™s Disease. Lecture Notes in Computer Science, 2012, 15, 739-746.	1.0	8
98	Simultaneous Multiscale Polyaffine Registration by Incorporating Deformation Statistics. Lecture Notes in Computer Science, 2012, 15, 130-137.	1.0	2
99	Registration, atlas estimation and variability analysis of white matter fiber bundles modeled as currents. NeuroImage, 2011, 55, 1073-1090.	2.1	84
100	A Nonconservative Lagrangian Framework for Statistical Fluid Registrationâ€”SAFIRA. IEEE Transactions on Medical Imaging, 2011, 30, 184-202.	5.4	17
101	A Statistical Model for Quantification and Prediction of Cardiac Remodelling: Application to Tetralogy of Fallot. IEEE Transactions on Medical Imaging, 2011, 30, 1605-1616.	5.4	70
102	iLogDemons: A Demons-Based Registration Algorithm forÂTracking Incompressible Elastic Biological Tissues. International Journal of Computer Vision, 2011, 92, 92-111.	10.9	147
103	Femur specific polyaffine model to regularize the log-domain demons registration. , 2011, , .		9
104	Schildâ€™s Ladder for the Parallel Transport of Deformations in Time Series of Images. Lecture Notes in Computer Science, 2011, 22, 463-474.	1.0	37
105	A Multi-scale Kernel Bundle for LDDMM: Towards Sparse Deformation Description across Space and Scales. Lecture Notes in Computer Science, 2011, 22, 624-635.	1.0	22
106	Geometry-Aware Multiscale Image Registration via OBBTree-Based Polyaffine Log-Demons. Lecture Notes in Computer Science, 2011, 14, 631-638.	1.0	14
107	Mapping the Effects of AÎ² 1â€‰â€“â€‰42 Levels on the Longitudinal Changes in Healthy Aging: Hierarchical Modeling Based on Stationary Velocity Fields. Lecture Notes in Computer Science, 2011, 14, 663-670.	1.0	17
108	Joint T1 and Brain Fiber Diffeomorphic Registration Using the Demons. Lecture Notes in Computer Science, 2011, , 10-18.	1.0	3

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109	Coupled level set segmentation using a point-based statistical shape model relying on correspondence probabilities. Proceedings of SPIE, 2010, , .	0.8	3
110	A new combined surface and volume registration. , 2010, , .		4
111	Lung CT registration combining intensity, curves and surfaces. , 2010, , .		9
112	Statistically assisted fluid image registration algorithm - SAFIRA. , 2010, 2010, 364-367.		0
113	Parametric regression of 3D medical images through the exploration of non-parametric regression models. , 2010, , .		1
114	Atlas-Based Reduced Models of Blood Flows for Fast Patient-Specific Simulations. Lecture Notes in Computer Science, 2010, , 95-104.	1.0	13
115	Grid-wide neuroimaging data federation in the context of the NeuroLOG project. Studies in Health Technology and Informatics, 2010, 159, 112-23.	0.2	7
116	Atlas to Image-with-Tumor Registration Based on Demons and Deformation Inpainting. , 2010, , .		5
117	Computation of a Probabilistic Statistical Shape Model in a Maximum-a-posteriori Framework. Methods of Information in Medicine, 2009, 48, 314-319.	0.7	20
118	Tumor Growth Modeling in Oncological Image Analysis. , 2009, , 305-315.		0
119	A Lagrangian formulation for statistical fluid registration. , 2009, 2009, 975-978.		4
120	3D reconstruction of the human spine from radiograph(s) using a multi-body statistical model. Proceedings of SPIE, 2009, , .	0.8	1
121	DT-REFinD: Diffusion Tensor Registration With Exact Finite-Strain Differential. IEEE Transactions on Medical Imaging, 2009, 28, 1914-1928.	5.4	84
122	Statistical models of sets of curves and surfaces based on currents. Medical Image Analysis, 2009, 13, 793-808.	7.0	133
123	A Fast and Log-Euclidean Polyaffine Framework for Locally Linear Registration. Journal of Mathematical Imaging and Vision, 2009, 33, 222-238.	0.8	93
124	An augmented reality system for liver thermal ablation: Design and evaluation on clinical cases. Medical Image Analysis, 2009, 13, 494-506.	7.0	93
125	Spatiotemporal Atlas Estimation for Developmental Delay Detection in Longitudinal Datasets. Lecture Notes in Computer Science, 2009, 12, 297-304.	1.0	81
126	Diffeomorphic demons: Efficient non-parametric image registration. NeuroImage, 2009, 45, S61-S72.	2.1	1,244

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127	Mapping the regional influence of genetics on brain structure variability â€" A Tensor-Based Morphometry study. NeuroImage, 2009, 48, 37-49.	2.1	76
128	Statistical Computing on Manifolds: From Riemannian Geometry to Computational Anatomy. Lecture Notes in Computer Science, 2009, , 347-386.	1.0	40
129	A Statistical Model of Right Ventricle in Tetralogy of Fallot for Prediction of Remodelling and Therapy Planning. Lecture Notes in Computer Science, 2009, 12, 214-221.	1.0	19
130	Landmark-Based Registration Using Features Identified through Differential Geometry. , 2009, , 577-590.		2
131	A Statistical Model of White Matter Fiber Bundles Based on Currents. Lecture Notes in Computer Science, 2009, 21, 114-125.	1.0	6
132	Workflow-Based Data Parallel Applications on the EGEE Production Grid Infrastructure. Journal of Grid Computing, 2008, 6, 369-383.	2.5	8
133	Generation of a statistical shape model with probabilistic point correspondences and the expectation maximization- iterative closest point algorithm. International Journal of Computer Assisted Radiology and Surgery, 2008, 2, 265-273.	1.7	44
134	Inferring brain variability from diffeomorphic deformations of currents: An integrative approach. Medical Image Analysis, 2008, 12, 626-637.	7.0	72
135	Articulated Spine Models for 3-D Reconstruction From Partial Radiographic Data. IEEE Transactions on Biomedical Engineering, 2008, 55, 2565-2574.	2.5	41
136	Geometric Variability of the Scoliotic Spine Using Statistics on Articulated Shape Models. IEEE Transactions on Medical Imaging, 2008, 27, 557-568.	5.4	71
137	DTI registration with exact finite-strain differential. , 2008, , .		19
138	A framework for evaluating the impact of compression on registration algorithms without gold standard. , 2008, , .		0
139	Best individual template selection from deformation tensor minimization. , 2008, 2008, 460-463.		14
140	Flexible and Efficient Workflow Deployment of Data-Intensive Applications On Grids With MOTEUR. International Journal of High Performance Computing Applications, 2008, 22, 347-360.	2.4	130
141	A Probabilistic Model to Analyse Workflow Performance on Production Grids. , 2008, , .		15
142	A new registration method based on Log-Euclidean Tensor metrics and its application to genetic studies. , 2008, 2008, 1115-1118.		9
143	Comparison of statistical shape models built on correspondence probabilities and one-to-one correspondences. , 2008, , .		1
144	Symmetric Log-Domain Diffeomorphic Registration: A Demons-Based Approach. Lecture Notes in Computer Science, 2008, 11, 754-761.	1.0	239

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145	Registration of 4D Time-Series of Cardiac Images with Multichannel Diffeomorphic Demons. Lecture Notes in Computer Science, 2008, 11, 972-979.	1.0	28
146	Sparse Approximation of Currents for Statistics on Curves and Surfaces. Lecture Notes in Computer Science, 2008, 11, 390-398.	1.0	21
147	A Tensor-Based Morphometry Study of Genetic Influences on Brain Structure Using a New Fluid Registration Method. Lecture Notes in Computer Science, 2008, 11, 914-921.	1.0	21
148	Diffeomorphic Demons Using ITK's Finite Difference Solver Hierarchy. The Insight Journal, 2008, , .	0.2	22
149	Measuring brain variability by extrapolating sparse tensor fields measured on sulcal lines. NeuroImage, 2007, 34, 639-650.	2.1	59
150	A Computational Framework for the Statistical Analysis of Cardiac Diffusion Tensors: Application to a Small Database of Canine Hearts. IEEE Transactions on Medical Imaging, 2007, 26, 1500-1514.	5.4	117
151	Optimizing jobs timeouts on clusters and production grids. , 2007, , .		16
152	Clinical DT-MRI Estimation, Smoothing, and Fiber Tracking With Log-Euclidean Metrics. IEEE Transactions on Medical Imaging, 2007, 26, 1472-1482.	5.4	206
153	Geometric Means in a Novel Vector Space Structure on Symmetric Positiveâ€Definite Matrices. SIAM Journal on Matrix Analysis and Applications, 2007, 29, 328-347.	0.7	573
154	Statistical Comparison of Cardiac Fibre Architectures. , 2007, , 413-423.		6
155	Insight into Efficient Image Registration Techniques and the Demons Algorithm. Lecture Notes in Computer Science, 2007, 20, 495-506.	1.0	40
156	Shape Analysis Using a Point-Based Statistical Shape Model Built on Correspondence Probabilities. , 2007, 10, 959-967.		15
157	Measuring Brain Variability Via Sulcal Lines Registration: A Diffeomorphic Approach. , 2007, 10, 675-682.		29
158	Mean Template for Tensor-Based Morphometry Using Deformation Tensors. Lecture Notes in Computer Science, 2007, 10, 826-833.	1.0	49
159	Non-parametric Diffeomorphic Image Registration with the Demons Algorithm. Lecture Notes in Computer Science, 2007, 10, 319-326.	1.0	247
160	Probabilistic and dynamic optimization of job partitioning on a grid infrastructure. , 2006, , .		10
161	Computational Models for Image-Guided Robot-Assisted and Simulated Medical Interventions. Proceedings of the IEEE, 2006, 94, 1678-1688.	16.4	31
162	Robust mosaicing with correction of motion distortions and tissue deformations for in vivo fibered microscopy. Medical Image Analysis, 2006, 10, 673-692.	7.0	145

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163	A Riemannian Framework for Tensor Computing. International Journal of Computer Vision, 2006, 66, 41-66.	10.9	1,125
164	Intrinsic Statistics on Riemannian Manifolds: Basic Tools for Geometric Measurements. Journal of Mathematical Imaging and Vision, 2006, 25, 127-154.	0.8	508
165	Log-Euclidean metrics for fast and simple calculus on diffusion tensors. Magnetic Resonance in Medicine, 2006, 56, 411-421.	1.9	913
166	Principal Spine Shape Deformation Modes Using Riemannian Geometry and Articulated Models. Lecture Notes in Computer Science, 2006, , 346-355.	1.0	13
167	A Log-Euclidean Framework for Statistics on Diffeomorphisms. Lecture Notes in Computer Science, 2006, 9, 924-931.	1.0	255
168	Performance Evaluation of Grid-Enabled Registration Algorithms Using Bronze-Standards. Lecture Notes in Computer Science, 2006, 9, 152-160.	1.0	16
169	Towards a Statistical Atlas of Cardiac Fiber Structure. Lecture Notes in Computer Science, 2006, 9, 297-304.	1.0	11
170	Health-e-child: an integrated biomedical platform for grid-based paediatric applications. Studies in Health Technology and Informatics, 2006, 120, 259-70.	0.2	11
171	A novel framework for the 3D analysis of spine deformation modes. Studies in Health Technology and Informatics, 2006, 123, 176-81.	0.2	0
172	Assessment of brace local action on vertebrae relative poses. Studies in Health Technology and Informatics, 2006, 123, 372-7.	0.2	0
173	Non-linear 2D and 3D Registration Using Block-Matching and B-Splines. , 2005, , 325-329.		4
174	Polyrigid and polyaffine transformations: A novel geometrical tool to deal with non-rigid deformations â€“ Application to the registration of histological slices. Medical Image Analysis, 2005, 9, 507-523.	7.0	104
175	An augmented reality system to guide radio-frequency tumour ablation. Computer Animation and Virtual Worlds, 2005, 16, 1-10.	0.7	59
176	Grid-enabling medical image analysis. Journal of Clinical Monitoring and Computing, 2005, 19, 339-349.	0.7	27
177	Extrapolation of Sparse Tensor Fields: Application to the Modeling of Brain Variability. Lecture Notes in Computer Science, 2005, 19, 27-38.	1.0	17
178	Riemannian Elasticity: A Statistical Regularization Framework for Non-linear Registration. Lecture Notes in Computer Science, 2005, 8, 943-950.	1.0	55
179	Fast and Simple Calculus on Tensors in the Log-Euclidean Framework. Lecture Notes in Computer Science, 2005, 8, 115-122.	1.0	180
180	A Complete Augmented Reality Guidance System for Liver Punctures: First Clinical Evaluation. Lecture Notes in Computer Science, 2005, 8, 539-547.	1.0	25

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181	Mosaicing of Confocal Microscopic In Vivo Soft Tissue Video Sequences. Lecture Notes in Computer Science, 2005, 8, 753-760.	1.0	24
182	Incorporating Statistical Measures of Anatomical Variability in Atlas-to-Subject Registration for Conformal Brain Radiotherapy. Lecture Notes in Computer Science, 2005, 8, 927-934.	1.0	29
183	A Riemannian Framework for the Processing of Tensor-Valued Images. Lecture Notes in Computer Science, 2005, , 112-123.	1.0	24
184	GRID-ENABLED NON-RIGID REGISTRATION OF MEDICAL IMAGES. Parallel Processing Letters, 2004, 14, 197-216.	0.4	7
185	Grid powered nonlinear image registration with locally adaptive regularization. Medical Image Analysis, 2004, 8, 325-342.	7.0	66
186	Generalized image models and their application as statistical models of images. Medical Image Analysis, 2004, 8, 361-369.	7.0	8
187	An Accuracy Certified Augmented Reality System for Therapy Guidance. Lecture Notes in Computer Science, 2004, , 79-91.	1.0	8
188	Non-rigid Atlas to Subject Registration with Pathologies for Conformal Brain Radiotherapy. Lecture Notes in Computer Science, 2004, , 704-711.	1.0	34
189	VIRTUAL REALITY, AUGMENTED REALITY AND ROBOTICS IN SURGICAL PROCEDURES OF THE LIVER. , 2004, , .		4
190	Tracking brain deformations in time sequences of 3D US images. Pattern Recognition Letters, 2003, 24, 801-813.	2.6	47
191	Iconic feature based nonrigid registration: the PASHA algorithm. Computer Vision and Image Understanding, 2003, 89, 272-298.	3.0	200
192	Deformable biomechanical models: Application to 4D cardiac image analysis. Medical Image Analysis, 2003, 7, 475-488.	7.0	103
193	Polyrigid and Polyaffine Transformations: A New Class of Diffeomorphisms for Locally Rigid or Affine Registration. Lecture Notes in Computer Science, 2003, , 829-837.	1.0	20
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