

# Xavier Pennec

## List of Publications by Citations

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214  
papers

10,861  
citations

47  
h-index

101  
g-index

227  
ext. papers

12,417  
ext. citations

3.6  
avg, IF

6.29  
L-index

#	Paper	IF	Citations
214	Diffeomorphic demons: efficient non-parametric image registration. <i>NeuroImage</i> , <b>2009</b> , 45, S61-72	7.9	935
213	A Riemannian Framework for Tensor Computing. <i>International Journal of Computer Vision</i> , <b>2006</b> , 66, 41-66	6.6	871
212	Log-Euclidean metrics for fast and simple calculus on diffusion tensors. <i>Magnetic Resonance in Medicine</i> , <b>2006</b> , 56, 411-21	4.4	751
211	Comparison and evaluation of retrospective intermodality brain image registration techniques. <i>Journal of Computer Assisted Tomography</i> , <b>1997</b> , 21, 554-66	2.2	608
210	Deep Learning Techniques for Automatic MRI Cardiac Multi-Structures Segmentation and Diagnosis: Is the Problem Solved?. <i>IEEE Transactions on Medical Imaging</i> , <b>2018</b> , 37, 2514-2525	11.7	457
209	Geometric Means in a Novel Vector Space Structure on Symmetric Positive-Definite Matrices. <i>SIAM Journal on Matrix Analysis and Applications</i> , <b>2007</b> , 29, 328-347	1.5	441
208	Intrinsic Statistics on Riemannian Manifolds: Basic Tools for Geometric Measurements. <i>Journal of Mathematical Imaging and Vision</i> , <b>2006</b> , 25, 127-154	1.6	406
207	Reconstructing a 3D structure from serial histological sections. <i>Image and Vision Computing</i> , <b>2001</b> , 19, 25-31	3.7	405
206	Rigid registration of 3-D ultrasound with MR images: a new approach combining intensity and gradient information. <i>IEEE Transactions on Medical Imaging</i> , <b>2001</b> , 20, 1038-49	11.7	204
205	Symmetric log-domain diffeomorphic Registration: a demons-based approach. <i>Lecture Notes in Computer Science</i> , <b>2008</b> , 11, 754-61	0.9	185
204	The correlation ratio as a new similarity measure for multimodal image registration. <i>Lecture Notes in Computer Science</i> , <b>1998</b> , 1115-1124	0.9	182
203	A log-Euclidean framework for statistics on diffeomorphisms. <i>Lecture Notes in Computer Science</i> , <b>2006</b> , 9, 924-31	0.9	180
202	Non-parametric diffeomorphic image registration with the demons algorithm. <i>Lecture Notes in Computer Science</i> , <b>2007</b> , 10, 319-26	0.9	179
201	Clinical DT-MRI estimation, smoothing, and fiber tracking with log-Euclidean metrics. <i>IEEE Transactions on Medical Imaging</i> , <b>2007</b> , 26, 1472-82	11.7	175
200	Iconic feature based nonrigid registration: the PASHA algorithm. <i>Computer Vision and Image Understanding</i> , <b>2003</b> , 89, 272-298	4.3	168
199	Multi-scale EM-ICP: A Fast and Robust Approach for Surface Registration. <i>Lecture Notes in Computer Science</i> , <b>2002</b> , 418-432	0.9	153
198	Fast and simple calculus on tensors in the log-Euclidean framework. <i>Lecture Notes in Computer Science</i> , <b>2005</b> , 8, 115-22	0.9	138

197	iLogDemons: A Demons-Based Registration Algorithm for Tracking Incompressible Elastic Biological Tissues. <i>International Journal of Computer Vision</i> , <b>2011</b> , 92, 92-111	10.6	127
196	Robust mosaicing with correction of motion distortions and tissue deformations for in vivo fibered microscopy. <i>Medical Image Analysis</i> , <b>2006</b> , 10, 673-92	15.4	119
195	Benchmarking framework for myocardial tracking and deformation algorithms: an open access database. <i>Medical Image Analysis</i> , <b>2013</b> , 17, 632-48	15.4	114
194	Statistical models of sets of curves and surfaces based on currents. <i>Medical Image Analysis</i> , <b>2009</b> , 13, 793-808	15.4	114
193	SVF-Net: Learning Deformable Image Registration Using Shape Matching. <i>Lecture Notes in Computer Science</i> , <b>2017</b> , 266-274	0.9	109
192	Flexible and Efficient Workflow Deployment of Data-Intensive Applications On Grids With MOTEUR. <i>International Journal of High Performance Computing Applications</i> , <b>2008</b> , 22, 347-360	1.8	108
191	LCC-Demons: a robust and accurate symmetric diffeomorphic registration algorithm. <i>NeuroImage</i> , <b>2013</b> , 81, 470-483	7.9	107
190	A Framework for Uncertainty and Validation of 3-D Registration Methods Based on Points and Frames. <i>International Journal of Computer Vision</i> , <b>1997</b> , 25, 203-229	10.6	106
189	A computational framework for the statistical analysis of cardiac diffusion tensors: application to a small database of canine hearts. <i>IEEE Transactions on Medical Imaging</i> , <b>2007</b> , 26, 1500-14	11.7	98
188	Deformable biomechanical models: application to 4D cardiac image analysis. <i>Medical Image Analysis</i> , <b>2003</b> , 7, 475-88	15.4	93
187	Polyrigid and polyaffine transformations: a novel geometrical tool to deal with non-rigid deformations - application to the registration of histological slices. <i>Medical Image Analysis</i> , <b>2005</b> , 9, 507-23	15.4	91
186	Toward a comprehensive framework for the spatiotemporal statistical analysis of longitudinal shape data. <i>International Journal of Computer Vision</i> , <b>2013</b> , 103, 22-59	10.6	85
185	Understanding the Demon Algorithm 3D Non-rigid Registration by Gradient Descent. <i>Lecture Notes in Computer Science</i> , <b>1999</b> , 597-605	0.9	85
184	A Fast and Log-Euclidean Polyaffine Framework for Locally Linear Registration. <i>Journal of Mathematical Imaging and Vision</i> , <b>2009</b> , 33, 222-238	1.6	76
183	An augmented reality system for liver thermal ablation: design and evaluation on clinical cases. <i>Medical Image Analysis</i> , <b>2009</b> , 13, 494-506	15.4	74
182	DT-REFinD: diffusion tensor registration with exact finite-strain differential. <i>IEEE Transactions on Medical Imaging</i> , <b>2009</b> , 28, 1914-28	11.7	73
181	Mapping the regional influence of genetics on brain structure variability--a tensor-based morphometry study. <i>NeuroImage</i> , <b>2009</b> , 48, 37-49	7.9	71
180	Registration, atlas estimation and variability analysis of white matter fiber bundles modeled as currents. <i>NeuroImage</i> , <b>2011</b> , 55, 1073-90	7.9	69

179	Spectral Log-Demons: Diffeomorphic Image Registration with Very Large Deformations. <i>International Journal of Computer Vision</i> , <b>2014</b> , 107, 254-271	10.6	65
178	Geometric variability of the scoliotic spine using statistics on articulated shape models. <i>IEEE Transactions on Medical Imaging</i> , <b>2008</b> , 27, 557-68	11.7	63
177	A geometric algorithm to find small but highly similar 3D substructures in proteins. <i>Bioinformatics</i> , <b>1998</b> , 14, 516-22	7.2	63
176	Spatiotemporal atlas estimation for developmental delay detection in longitudinal datasets. <i>Lecture Notes in Computer Science</i> , <b>2009</b> , 12, 297-304	0.9	61
175	Inferring brain variability from diffeomorphic deformations of currents: an integrative approach. <i>Medical Image Analysis</i> , <b>2008</b> , 12, 626-37	15.4	58
174	Comparison of the endocranial ontogenies between chimpanzees and bonobos via temporal regression and spatiotemporal registration. <i>Journal of Human Evolution</i> , <b>2012</b> , 62, 74-88	3.1	57
173	Grid powered nonlinear image registration with locally adaptive regularization. <i>Medical Image Analysis</i> , <b>2004</b> , 8, 325-42	15.4	57
172	A statistical model for quantification and prediction of cardiac remodelling: application to tetralogy of Fallot. <i>IEEE Transactions on Medical Imaging</i> , <b>2011</b> , 30, 1605-16	11.7	56
171	Measuring brain variability by extrapolating sparse tensor fields measured on sulcal lines. <i>NeuroImage</i> , <b>2007</b> , 34, 639-50	7.9	53
170	Detecting Clinically Meaningful Shape Clusters in Medical Image Data: Metrics Analysis for Hierarchical Clustering Applied to Healthy and Pathological Aortic Arches. <i>IEEE Transactions on Biomedical Engineering</i> , <b>2017</b> , 64, 2373-2383	5	48
169	Assessing atrophy measurement techniques in dementia: Results from the MIRIAD atrophy challenge. <i>NeuroImage</i> , <b>2015</b> , 123, 149-64	7.9	48
168	Medical image registration using geometric hashing. <i>IEEE Computational Science and Engineering</i> , <b>1997</b> , 4, 29-41		46
167	An augmented reality system to guide radio-frequency tumour ablation. <i>Computer Animation and Virtual Worlds</i> , <b>2005</b> , 16, 1-10	0.9	46
166	Riemannian elasticity: a statistical regularization framework for non-linear registration. <i>Lecture Notes in Computer Science</i> , <b>2005</b> , 8, 943-50	0.9	44
165	Disentangling normal aging from Alzheimer's disease in structural magnetic resonance images. <i>Neurobiology of Aging</i> , <b>2015</b> , 36 Suppl 1, S42-52	5.6	43
164	Mean template for tensor-based morphometry using deformation tensors. <i>Lecture Notes in Computer Science</i> , <b>2007</b> , 10, 826-33	0.9	43
163	Tracking brain deformations in time sequences of 3D US images. <i>Pattern Recognition Letters</i> , <b>2003</b> , 24, 801-813	4.7	42
162	A statistical shape modelling framework to extract 3D shape biomarkers from medical imaging data: assessing arch morphology of repaired coarctation of the aorta. <i>BMC Medical Imaging</i> , <b>2016</b> , 16, 40	2.9	41

161	Geodesics, Parallel Transport & One-Parameter Subgroups for Diffeomorphic Image Registration. <i>International Journal of Computer Vision</i> , <b>2013</b> , 105, 111-127	10.6	40
160	How successful is successful? Aortic arch shape after successful aortic coarctation repair correlates with left ventricular function. <i>Journal of Thoracic and Cardiovascular Surgery</i> , <b>2017</b> , 153, 418-427	1.5	38
159	Uniform Distribution, Distance and Expectation Problems for Geometric Features Processing. <i>Journal of Mathematical Imaging and Vision</i> , <b>1998</b> , 9, 49-67	1.6	37
158	Statistical shape modeling of the left ventricle: myocardial infarct classification challenge. <i>IEEE Journal of Biomedical and Health Informatics</i> , <b>2018</b> , 22, 503-515	7.2	35
157	Landmark-Based Registration Using Features Identified Through Differential Geometry <b>2000</b> , 499-513		35
156	Generation of a statistical shape model with probabilistic point correspondences and the expectation maximization- iterative closest point algorithm. <i>International Journal of Computer Assisted Radiology and Surgery</i> , <b>2008</b> , 2, 265-273	3.9	34
155	Articulated spine models for 3-D reconstruction from partial radiographic data. <i>IEEE Transactions on Biomedical Engineering</i> , <b>2008</b> , 55, 2565-74	5	33
154	Statistical Computing on Manifolds: From Riemannian Geometry to Computational Anatomy. <i>Lecture Notes in Computer Science</i> , <b>2009</b> , 347-386	0.9	33
153	Schild's ladder for the parallel transport of deformations in time series of images. <i>Lecture Notes in Computer Science</i> , <b>2011</b> , 22, 463-74	0.9	33
152	Multisubject Non-rigid Registration of Brain MRI Using Intensity and Geometric Features. <i>Lecture Notes in Computer Science</i> , <b>2001</b> , 734-742	0.9	32
151	Robust Registration of Multi-modal Images: Towards Real-Time Clinical Applications. <i>Lecture Notes in Computer Science</i> , <b>2002</b> , 140-147	0.9	32
150	Capturing the multiscale anatomical shape variability with polyaffine transformation trees. <i>Medical Image Analysis</i> , <b>2012</b> , 16, 1371-84	15.4	31
149	Sparse Multi-Scale Diffeomorphic Registration: The Kernel Bundle Framework. <i>Journal of Mathematical Imaging and Vision</i> , <b>2013</b> , 46, 292-308	1.6	29
148	Insight into efficient image registration techniques and the demons algorithm. <i>Lecture Notes in Computer Science</i> , <b>2007</b> , 20, 495-506	0.9	29
147	Spatio-Temporal Tensor Decomposition of a Polyaffine Motion Model for a Better Analysis of Pathological Left Ventricular Dynamics. <i>IEEE Transactions on Medical Imaging</i> , <b>2015</b> , 34, 1562-1575	11.7	28
146	Efficient Parallel Transport of Deformations in Time Series of Images: From Schild's to Pole Ladder. <i>Journal of Mathematical Imaging and Vision</i> , <b>2014</b> , 50, 5-17	1.6	28
145	Comparison and evaluation of retrospective intermodality image registration techniques <b>1996</b> ,		28
144	Non-rigid Atlas to Subject Registration with Pathologies for Conformal Brain Radiotherapy. <i>Lecture Notes in Computer Science</i> , <b>2004</b> , 704-711	0.9	28

143	Computational Models for Image-Guided Robot-Assisted and Simulated Medical Interventions. <i>Proceedings of the IEEE</i> , <b>2006</b> , 94, 1678-1688	14.3	25
142	Computational modelling of the right ventricle in repaired tetralogy of Fallot: can it provide insight into patient treatment?. <i>European Heart Journal Cardiovascular Imaging</i> , <b>2013</b> , 14, 381-6	4.1	24
141	Registration of 4D time-series of cardiac images with multichannel Diffeomorphic Demons. <i>Lecture Notes in Computer Science</i> , <b>2008</b> , 11, 972-9	0.9	24
140	A Log-Euclidean Polyaffine Framework for Locally Rigid or Affine Registration. <i>Lecture Notes in Computer Science</i> , <b>2006</b> , 120-127	0.9	24
139	Barycentric subspace analysis on manifolds. <i>Annals of Statistics</i> , <b>2018</b> , 46,	3.2	23
138	Looks Do Matter! Aortic Arch Shape After Hypoplastic Left Heart Syndrome Palliation Correlates With Cavopulmonary Outcomes. <i>Annals of Thoracic Surgery</i> , <b>2017</b> , 103, 645-654	2.7	22
137	Incorporating statistical measures of anatomical variability in atlas-to-subject registration for conformal brain radiotherapy. <i>Lecture Notes in Computer Science</i> , <b>2005</b> , 8, 927-34	0.9	22
136	A complete augmented reality guidance system for liver punctures: first clinical evaluation. <i>Lecture Notes in Computer Science</i> , <b>2005</b> , 8, 539-47	0.9	21
135	Group-wise construction of reduced models for understanding and characterization of pulmonary blood flows from medical images. <i>Medical Image Analysis</i> , <b>2014</b> , 18, 63-82	15.4	20
134	A tensor-based morphometry study of genetic influences on brain structure using a new fluid registration method. <i>Lecture Notes in Computer Science</i> , <b>2008</b> , 11, 914-21	0.9	20
133	Measuring brain variability via sulcal lines registration: a diffeomorphic approach <b>2007</b> , 10, 675-82		20
132	Grid-enabled workflows for data intensive medical applications		19
131	Grid-enabling medical image analysis. <i>Journal of Clinical Monitoring and Computing</i> , <b>2005</b> , 19, 339-49	2	19
130	Rigid Point-Surface Registration Using an EM Variant of ICP for Computer Guided Oral Implantology. <i>Lecture Notes in Computer Science</i> , <b>2001</b> , 752-761	0.9	19
129	DTI registration with exact finite-strain differential <b>2008</b> ,		18
128	Computation of a probabilistic statistical shape model in a maximum-a-posteriori framework. <i>Methods of Information in Medicine</i> , <b>2009</b> , 48, 314-9	1.5	18
127	A statistical model of right ventricle in tetralogy of Fallot for prediction of remodelling and therapy planning. <i>Lecture Notes in Computer Science</i> , <b>2009</b> , 12, 214-21	0.9	18
126	A multi-scale kernel bundle for LDDMM: towards sparse deformation description across space and scales. <i>Lecture Notes in Computer Science</i> , <b>2011</b> , 22, 624-35	0.9	18

125	Mosaicing of confocal microscopic in vivo soft tissue video sequences. <i>Lecture Notes in Computer Science</i> , <b>2005</b> , 8, 753-60	0.9	18
124	A model of brain morphological changes related to aging and Alzheimer's disease from cross-sectional assessments. <i>NeuroImage</i> , <b>2019</b> , 198, 255-270	7.9	17
123	Extrapolation of sparse tensor fields: application to the modeling of brain variability. <i>Lecture Notes in Computer Science</i> , <b>2005</b> , 19, 27-38	0.9	16
122	Higher-Order Momentum Distributions and Locally Affine LDDMM Registration. <i>SIAM Journal on Imaging Sciences</i> , <b>2013</b> , 6, 341-367	1.9	15
121	A nonconservative Lagrangian framework for statistical fluid registration-SAFIRA. <i>IEEE Transactions on Medical Imaging</i> , <b>2011</b> , 30, 184-202	11.7	15
120	A Probabilistic Model to Analyse Workflow Performance on Production Grids <b>2008</b> ,		15
119	Optimizing jobs timeouts on clusters and production grids <b>2007</b> ,		15
118	A biophysical model of brain deformation to simulate and analyze longitudinal MRIs of patients with Alzheimer's disease. <i>NeuroImage</i> , <b>2016</b> , 134, 35-52	7.9	15
117	A Riemannian Framework for the Processing of Tensor-Valued Images. <i>Lecture Notes in Computer Science</i> , <b>2005</b> , 112-123	0.9	15
116	Evaluation of a New 3D/2D Registration Criterion for Liver Radio-Frequencies Guided by Augmented Reality. <i>Lecture Notes in Computer Science</i> , <b>2003</b> , 270-283	0.9	15
115	Virtual Reality and Augmented Reality in Digestive Surgery		14
114	Mapping the effects of Abeta1-42 levels on the longitudinal changes in healthy aging: hierarchical modeling based on stationary velocity fields. <i>Lecture Notes in Computer Science</i> , <b>2011</b> , 14, 663-70	0.9	14
113	Exponential Barycenters of the Canonical Cartan Connection and Invariant Means on Lie Groups <b>2013</b> , 123-166		14
112	BEST INDIVIDUAL TEMPLATE SELECTION FROM DEFORMATION TENSOR MINIMIZATION <b>2008</b> , 2008, 460-463	1.5	13
111	Polyrigid and Polyaffine Transformations: A New Class of Diffeomorphisms for Locally Rigid or Affine Registration. <i>Lecture Notes in Computer Science</i> , <b>2003</b> , 829-837	0.9	13
110	Feature-based registration of medical images: Estimation and validation of the pose accuracy. <i>Lecture Notes in Computer Science</i> , <b>1998</b> , 1107-1114	0.9	13
109	Sparse approximation of currents for statistics on curves and surfaces. <i>Lecture Notes in Computer Science</i> , <b>2008</b> , 11, 390-8	0.9	13
108	Principal Spine Shape Deformation Modes Using Riemannian Geometry and Articulated Models. <i>Lecture Notes in Computer Science</i> , <b>2006</b> , 346-355	0.9	13

107	Multifidelity-CMA: a multifidelity approach for efficient personalisation of 3D cardiac electromechanical models. <i>Biomechanics and Modeling in Mechanobiology</i> , <b>2018</b> , 17, 285-300	3.8	12
106	Geometry-aware multiscale image registration via OBBTree-based polyaffine log-demons. <i>Lecture Notes in Computer Science</i> , <b>2011</b> , 14, 631-8	0.9	12
105	Improved Detection Sensitivity in Functional MRI Data Using a Brain Parcelling Technique. <i>Lecture Notes in Computer Science</i> , <b>2002</b> , 467-474	0.9	12
104	Regional flux analysis for discovering and quantifying anatomical changes: An application to the brain morphometry in Alzheimer's disease. <i>NeuroImage</i> , <b>2015</b> , 115, 224-34	7.9	11
103	Statistical shape modelling to aid surgical planning: associations between surgical parameters and head shapes following spring-assisted cranioplasty. <i>International Journal of Computer Assisted Radiology and Surgery</i> , <b>2017</b> , 12, 1739-1749	3.9	11
102	An Incompressible Log-Domain Demons Algorithm for Tracking Heart Tissue. <i>Lecture Notes in Computer Science</i> , <b>2012</b> , 55-67	0.9	11
101	Spectral Demons Image Registration via Global Spectral Correspondence. <i>Lecture Notes in Computer Science</i> , <b>2012</b> , 30-44	0.9	11
100	Longitudinal Analysis of Image Time Series with Diffeomorphic Deformations: A Computational Framework Based on Stationary Velocity Fields. <i>Frontiers in Neuroscience</i> , <b>2016</b> , 10, 236	5.1	11
99	Beyond Riemannian geometry: The affine connection setting for transformation groups <b>2020</b> , 169-229		11
98	Low-dimensional representation of cardiac motion using Barycentric Subspaces: A new group-wise paradigm for estimation, analysis, and reconstruction. <i>Medical Image Analysis</i> , <b>2018</b> , 45, 1-12	15.4	10
97	Parcellation of brain images with anatomical and functional constraints for fMRI data analysis		10
96	Atlas-Based Reduced Models of Blood Flows for Fast Patient-Specific Simulations. <i>Lecture Notes in Computer Science</i> , <b>2010</b> , 95-104	0.9	10
95	Health-e-child: an integrated biomedical platform for grid-based paediatric applications. <i>Studies in Health Technology and Informatics</i> , <b>2006</b> , 120, 259-70	0.5	10
94	Femur specific polyaffine model to regularize the log-domain demons registration <b>2011</b> ,		9
93	Diffeomorphic Demons Using ITK's Finite Difference Solver Hierarchy. <i>The Insight Journal</i> , <b>2008</b> ,		9
92	Towards a statistical atlas of cardiac fiber structure. <i>Lecture Notes in Computer Science</i> , <b>2006</b> , 9, 297-304	0.9	9
91	Shape analysis using a point-based statistical shape model built on correspondence probabilities <b>2007</b> , 10, 959-67		9
90	Template Shape Estimation: Correcting an Asymptotic Bias. <i>SIAM Journal on Imaging Sciences</i> , <b>2017</b> , 10, 808-844	1.9	8



89	Probabilistic and dynamic optimization of job partitioning on a grid infrastructure <b>2006</b> ,		8
88	Generalized image models and their application as statistical models of images. <i>Medical Image Analysis</i> , <b>2004</b> , 8, 361-9	15.4	8
87	Simulating Longitudinal Brain MRIs with Known Volume Changes and Realistic Variations in Image Intensity. <i>Frontiers in Neuroscience</i> , <b>2017</b> , 11, 132	5.1	7
86	Workflow-Based Data Parallel Applications on the EGEE Production Grid Infrastructure. <i>Journal of Grid Computing</i> , <b>2008</b> , 6, 369-383	4.2	7
85	Barycentric Subspaces and Affine Spans in Manifolds. <i>Lecture Notes in Computer Science</i> , <b>2015</b> , 12-21	0.9	7
84	A Non-parametric Statistical Shape Model for Assessment of the Surgically Repaired Aortic Arch in Coarctation of the Aorta: How Normal is Abnormal?. <i>Lecture Notes in Computer Science</i> , <b>2016</b> , 21-29	0.9	7
83	An Accuracy Certified Augmented Reality System for Therapy Guidance. <i>Lecture Notes in Computer Science</i> , <b>2004</b> , 79-91	0.9	7
82	Regional Analysis of Left Ventricle Function Using a Cardiac-Specific Polyaffine Motion Model. <i>Lecture Notes in Computer Science</i> , <b>2013</b> , 483-490	0.9	7
81	Multinomial probabilistic fiber representation for connectivity driven clustering. <i>Lecture Notes in Computer Science</i> , <b>2013</b> , 23, 730-41	0.9	7
80	Population-based priors in cardiac model personalisation for consistent parameter estimation in heterogeneous databases. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , <b>2019</b> , 35, e3158	2.6	7
79	Performance evaluation of grid-enabled registration algorithms using bronze-standards. <i>Lecture Notes in Computer Science</i> , <b>2006</b> , 9, 152-60	0.9	7
78	Lung CT registration combining intensity, curves and surfaces <b>2010</b> ,		6
77	A NEW REGISTRATION METHOD BASED ON LOG-EUCLIDEAN TENSOR METRICS AND ITS APPLICATION TO GENETIC STUDIES <b>2008</b> , 2008, 1115-1118	1.5	6
76	Grid-wide neuroimaging data federation in the context of the NeuroLOG project. <i>Studies in Health Technology and Informatics</i> , <b>2010</b> , 159, 112-23	0.5	6
75	Which Reorientation Framework for the Atlas-Based Comparison of Motion from Cardiac Image Sequences?. <i>Lecture Notes in Computer Science</i> , <b>2012</b> , 25-37	0.9	6
74	Bi-invariant Means on Lie Groups with Cartan-Schouten Connections. <i>Lecture Notes in Computer Science</i> , <b>2013</b> , 59-67	0.9	5
73	Propagation of Myocardial Fibre Architecture Uncertainty on Electromechanical Model Parameter Estimation: A Case Study. <i>Lecture Notes in Computer Science</i> , <b>2015</b> , 448-456	0.9	5
72	Kernel Bundle EPDiff: Evolution Equations for Multi-scale Diffeomorphic Image Registration. <i>Lecture Notes in Computer Science</i> , <b>2012</b> , 677-688	0.9	5

71	Spatio-temporal dimension reduction of cardiac motion for group-wise analysis and statistical testing. <i>Lecture Notes in Computer Science</i> , <b>2013</b> , 16, 501-8	0.9	5
70	Computing Bi-Invariant Pseudo-Metrics on Lie Groups for Consistent Statistics. <i>Entropy</i> , <b>2015</b> , 17, 1850-1881		4
69	Template Estimation in Computational Anatomy: Fréchet Means Top and Quotient Spaces Are Not Consistent. <i>SIAM Journal on Imaging Sciences</i> , <b>2017</b> , 10, 1139-1169	1.9	4
68	Inconsistency of Template Estimation by Minimizing of the Variance/Pre-Variance in the Quotient Space. <i>Entropy</i> , <b>2017</b> , 19, 288	2.8	4
67	A LAGRANGIAN FORMULATION FOR STATISTICAL FLUID REGISTRATION <b>2009</b> , 2009, 975-978	1.5	4
66	GRID-ENABLED NON-RIGID REGISTRATION OF MEDICAL IMAGES. <i>Parallel Processing Letters</i> , <b>2004</b> , 14, 197-216	0.3	4
65	Combination of Polyaffine Transformations and Supervised Learning for the Automatic Diagnosis of LV Infarct. <i>Lecture Notes in Computer Science</i> , <b>2016</b> , 190-198	0.9	4
64	Log-Domain Diffeomorphic Registration of Diffusion Tensor Images. <i>Lecture Notes in Computer Science</i> , <b>2010</b> , 198-209	0.9	4
63	Improving DTI resolution from a single clinical acquisition: a statistical approach using spatial prior. <i>Lecture Notes in Computer Science</i> , <b>2013</b> , 16, 477-84	0.9	4
62	A statistical model of white matter fiber bundles based on currents. <i>Lecture Notes in Computer Science</i> , <b>2009</b> , 21, 114-25	0.9	4
61	Regional flux analysis of longitudinal atrophy in Alzheimer's disease. <i>Lecture Notes in Computer Science</i> , <b>2012</b> , 15, 739-46	0.9	4
60	Association of Immunosuppression and Viral Load With Subcortical Brain Volume in an International Sample of People Living With HIV. <i>JAMA Network Open</i> , <b>2021</b> , 4, e2031190	10.4	4
59	Cardiac Motion Evolution Model for Analysis of Functional Changes Using Tensor Decomposition and Cross-Sectional Data. <i>IEEE Transactions on Biomedical Engineering</i> , <b>2018</b> , 65, 2769-2780	5	3
58	Non-rigid MR/US registration for tracking brain deformations		3
57	VIRTUAL REALITY, AUGMENTED REALITY AND ROBOTICS IN SURGICAL PROCEDURES OF THE LIVER <b>2004</b> ,		3
56	Atlas to Image-with-Tumor Registration Based on Demons and Deformation Inpainting <b>2010</b> ,		3
55	Parallel Transport of Surface Deformations from Pole Ladder to Symmetrical Extension. <i>Lecture Notes in Computer Science</i> , <b>2018</b> , 116-124	0.9	3
54	Symmetric Algorithmic Components for Shape Analysis with Diffeomorphisms. <i>Lecture Notes in Computer Science</i> , <b>2019</b> , 759-768	0.9	3

53	Descriptive and Intuitive Population-Based Cardiac Motion Analysis via Sparsity Constrained Tensor Decomposition. <i>Lecture Notes in Computer Science</i> , <b>2015</b> , 419-426	0.9	3
52	Statistical Comparison of Cardiac Fibre Architectures <b>2007</b> , 413-423		3
51	Groupwise Spectral Log-Demons Framework for Atlas Construction. <i>Lecture Notes in Computer Science</i> , <b>2013</b> , 11-19	0.9	3
50	Sparse scale-space decomposition of volume changes in deformations fields. <i>Lecture Notes in Computer Science</i> , <b>2013</b> , 16, 328-35	0.9	3
49	Joint T1 and Brain Fiber Diffeomorphic Registration Using the Demons. <i>Lecture Notes in Computer Science</i> , <b>2011</b> , 10-18	0.9	3
48	A Near-Incompressible Poly-affine Motion Model for Cardiac Function Analysis. <i>Lecture Notes in Computer Science</i> , <b>2013</b> , 288-297	0.9	3
47	A Framework for Creating Population Specific Multimodal Brain Atlas Using Clinical T1 and Diffusion Tensor Images. <i>Mathematics and Visualization</i> , <b>2016</b> , 99-108	0.6	2
46	Coupled level set segmentation using a point-based statistical shape model relying on correspondence probabilities <b>2010</b> ,		2
45	A new combined surface and volume registration <b>2010</b> ,		2
44	Non-linear 2D and 3D Registration Using Block-Matching and B-Splines <b>2005</b> , 325-329		2
43	Exploration of Balanced Metrics on Symmetric Positive Definite Matrices. <i>Lecture Notes in Computer Science</i> , <b>2019</b> , 484-493	0.9	2
42	A biophysical model of shape changes due to atrophy in the brain with Alzheimer's disease. <i>Lecture Notes in Computer Science</i> , <b>2014</b> , 17, 41-8	0.9	2
41	Sample-Limited ( $L_p$ ) Barycentric Subspace Analysis on Constant Curvature Spaces. <i>Lecture Notes in Computer Science</i> , <b>2017</b> , 20-28	0.9	2
40	Statistical Shape Analysis of Surfaces in Medical Images Applied to the Tetralogy of Fallot Heart <b>2013</b> , 165-191		2
39	Simultaneous multiscale polyaffine registration by incorporating deformation statistics. <i>Lecture Notes in Computer Science</i> , <b>2012</b> , 15, 130-7	0.9	2
38	A Survey of Mathematical Structures for Extending 2D Neurogeometry to 3D Image Processing. <i>Lecture Notes in Computer Science</i> , <b>2016</b> , 155-167	0.9	2
37	Manifold-valued image processing with SPD matrices <b>2020</b> , 75-134		2
36	A Reduced Parallel Transport Equation on Lie Groups with a Left-Invariant Metric. <i>Lecture Notes in Computer Science</i> , <b>2021</b> , 119-126	0.9	2

35	Topologically Constrained Template Estimation via Morse--Smale Complexes Controls Its Statistical Consistency. <i>SIAM Journal on Applied Algebra and Geometry</i> , <b>2018</b> , 2, 348-375	1.5	1
34	Parallel Transport with Pole Ladder: Application to Deformations of Time Series of Images. <i>Lecture Notes in Computer Science</i> , <b>2013</b> , 68-75	0.9	1
33	Random Spatial Structure of Geometric Deformations and Bayesian Nonparametrics. <i>Lecture Notes in Computer Science</i> , <b>2013</b> , 120-127	0.9	1
32	Mathematical Methods for Medical Imaging. <i>International Journal of Computer Vision</i> , <b>2013</b> , 105, 109-110	0.6	1
31	3D reconstruction of the human spine from radiograph(s) using a multi-body statistical model <b>2009</b> ,		1
30	Asclepios: a research project team at INRIA for the analysis and simulation of biomedical images	415-436	1
29	Generalized Image Models and Their Application as Statistical Models of Images. <i>Lecture Notes in Computer Science</i> , <b>2003</b> , 150-157	0.9	1
28	Grid Enabled Non-rigid Registration with a Dense Transformation and a priori Information. <i>Lecture Notes in Computer Science</i> , <b>2003</b> , 804-811	0.9	1
27	Is Affine-Invariance Well Defined on SPD Matrices? A Principled Continuum of Metrics. <i>Lecture Notes in Computer Science</i> , <b>2019</b> , 502-510	0.9	1
26	Advances in Geometric Statistics for Manifold Dimension Reduction <b>2020</b> , 339-359		1
25	Statistical Computing on Non-Linear Spaces for Computational Anatomy <b>2015</b> , 147-168		1
24	Barycentric Subspace Analysis: A New Symmetric Group-Wise Paradigm for Cardiac Motion Tracking. <i>Lecture Notes in Computer Science</i> , <b>2016</b> , 300-307	0.9	1
23	Improving Understanding of Long-Term Cardiac Functional Remodelling via Cross-Sectional Analysis of Polyaffine Motion Parameters. <i>Lecture Notes in Computer Science</i> , <b>2017</b> , 51-59	0.9	1
22	Evaluation of iLogDemons Algorithm for Cardiac Motion Tracking in Synthetic Ultrasound Sequence. <i>Lecture Notes in Computer Science</i> , <b>2013</b> , 178-187	0.9	1
21	Voxel-based assessments of treatment effects on longitudinal brain changes in the Multidomain Alzheimer Preventive Trial cohort. <i>Neurobiology of Aging</i> , <b>2020</b> , 94, 50-59	5.6	1
20	Cardiac Motion Modeling With Parallel Transport And Shape Splines <b>2021</b> ,		1
19	Numerical Accuracy of Ladder Schemes for Parallel Transport on Manifolds. <i>Foundations of Computational Mathematics</i> , 1	2.7	1
18	Highly reduced model of the cardiac function for fast simulation <b>2016</b> ,		1

17	Parallel Transport on Kendall Shape Spaces. <i>Lecture Notes in Computer Science</i> , <b>2021</b> , 103-110	0.9	1
16	Left atrial shape is independent predictor of arrhythmia recurrence after catheter ablation for atrial fibrillation: A shape statistics study.. <i>Heart Rhythm O2</i> , <b>2021</b> , 2, 622-632	1.5	0
15	Geodesics and Curvature of the Quotient-Affine Metrics on Full-Rank Correlation Matrices. <i>Lecture Notes in Computer Science</i> , <b>2021</b> , 93-102	0.9	0
14	O3-03-06: REGIONAL FLUX ANALYSIS OF LONGITUDINAL ATROPHY IN ALZHEIMER'S DISEASE <b>2014</b> , 10, P214-P214		
13	STATISTICALLY ASSISTED FLUID IMAGE REGISTRATION ALGORITHM - SAFIRA <b>2010</b> , 2010, 364-367	1.5	
12	Biased Estimators on Quotient Spaces. <i>Lecture Notes in Computer Science</i> , <b>2015</b> , 130-139	0.9	
11	Simulating Patient Specific Multiple Time-Point MRIs from a Biophysical Model of Brain Deformation in Alzheimer's Disease <b>2016</b> , 167-176		
10	Longitudinal Parameter Estimation in 3D Electromechanical Models: Application to Cardiovascular Changes in Digestion. <i>Lecture Notes in Computer Science</i> , <b>2017</b> , 432-440	0.9	
9	Inconsistency of Template Estimation with the Fréchet Mean in Quotient Space. <i>Lecture Notes in Computer Science</i> , <b>2017</b> , 16-27	0.9	
8	Longitudinal Analysis Using Personalised 3D Cardiac Models with Population-Based Priors: Application to Paediatric Cardiomyopathies. <i>Lecture Notes in Computer Science</i> , <b>2017</b> , 350-358	0.9	
7	Discrete Ladders for Parallel Transport in Transformation Groups with an Affine Connection Structure. <i>Signals and Communication Technology</i> , <b>2014</b> , 243-271	0.5	
6	Introduction to differential and Riemannian geometry <b>2020</b> , 3-37		
5	Bias on estimation in quotient space and correction methods <b>2020</b> , 343-376		
4	Statistical Analysis of Organs Shapes and Deformations: The Riemannian and the Affine Settings in Computational Anatomy. <i>Human-computer Interaction Series</i> , <b>2021</b> , 159-183	0.6	
3	A novel framework for the 3D analysis of spine deformation modes. <i>Studies in Health Technology and Informatics</i> , <b>2006</b> , 123, 176-81	0.5	
2	Assessment of brace local action on vertebrae relative poses. <i>Studies in Health Technology and Informatics</i> , <b>2006</b> , 123, 372-7	0.5	
1	The geometry of mixed-Euclidean metrics on symmetric positive definite matrices. <i>Differential Geometry and Its Applications</i> , <b>2022</b> , 81, 101867	0.5	