

# Xavier Pennec

## List of Publications by Year in descending order

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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  | Diffeomorphic demons: Efficient non-parametric image registration. <i>NeuroImage</i> , 2009, 45, S61-S72.  | 2.1  | 1,244     |
| 2  | A Riemannian Framework for Tensor Computing. <i>International Journal of Computer Vision</i> , 2006, 66, 41-66.  | 10.9 | 1,125     |
| 3  | Deep Learning Techniques for Automatic MRI Cardiac Multi-Structures Segmentation and Diagnosis: Is the Problem Solved?. <i>IEEE Transactions on Medical Imaging</i> , 2018, 37, 2514-2525. | 5.4  | 926       |
| 4  | Log-Euclidean metrics for fast and simple calculus on diffusion tensors. <i>Magnetic Resonance in Medicine</i> , 2006, 56, 411-421.  | 1.9  | 913       |
| 5  | Comparison and Evaluation of Retrospective Intermodality Brain Image Registration Techniques. <i>Journal of Computer Assisted Tomography</i> , 1997, 21, 554-568.                          | 0.5  | 743       |
| 6  | Geometric Means in a Novel Vector Space Structure on Symmetric Positive-Definite Matrices. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2007, 29, 328-347.                    | 0.7  | 573       |
| 7  | Intrinsic Statistics on Riemannian Manifolds: Basic Tools for Geometric Measurements. <i>Journal of Mathematical Imaging and Vision</i> , 2006, 25, 127-154.                               | 0.8  | 508       |
| 8  | Reconstructing a 3D structure from serial histological sections. <i>Image and Vision Computing</i> , 2001, 19, 25-31.  | 2.7  | 482       |
| 9  | A Log-Euclidean Framework for Statistics on Diffeomorphisms. <i>Lecture Notes in Computer Science</i> , 2006, 9, 924-931.  | 1.0  | 255       |
| 10 | Non-parametric Diffeomorphic Image Registration with the Demons Algorithm. <i>Lecture Notes in Computer Science</i> , 2007, 10, 319-326.   | 1.0  | 247       |
| 11 | Rigid registration of 3-D ultrasound with MR images: a new approach combining intensity and gradient information. <i>IEEE Transactions on Medical Imaging</i> , 2001, 20, 1038-1049.       | 5.4  | 242       |
| 12 | Symmetric Log-Domain Diffeomorphic Registration: A Demons-Based Approach. <i>Lecture Notes in Computer Science</i> , 2008, 11, 754-761.  | 1.0  | 239       |
| 13 | Clinical DT-MRI Estimation, Smoothing, and Fiber Tracking With Log-Euclidean Metrics. <i>IEEE Transactions on Medical Imaging</i> , 2007, 26, 1472-1482.                                   | 5.4  | 206       |
| 14 | Iconic feature based nonrigid registration: the PASHA algorithm. <i>Computer Vision and Image Understanding</i> , 2003, 89, 272-298.   | 3.0  | 200       |
| 15 | Fast and Simple Calculus on Tensors in the Log-Euclidean Framework. <i>Lecture Notes in Computer Science</i> , 2005, 8, 115-122.   | 1.0  | 180       |
| 16 | Validation of medical image processing in image-guided therapy. <i>IEEE Transactions on Medical Imaging</i> , 2002, 21, 1445-1449.   | 5.4  | 153       |
| 17 | SVF-Net: Learning Deformable Image Registration Using Shape Matching. <i>Lecture Notes in Computer Science</i> , 2017, , 266-274.  | 1.0  | 153       |
| 18 | iLogDemons: A Demons-Based Registration Algorithm for Tracking Incompressible Elastic Biological Tissues. <i>International Journal of Computer Vision</i> , 2011, 92, 92-111.              | 10.9 | 147       |

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|----|--|------|-----------|
| 19 | Robust mosaicing with correction of motion distortions and tissue deformations for in vivo fibered microscopy. <i>Medical Image Analysis</i> , 2006, 10, 673-692.  | 7.0  | 145       |
| 20 | Benchmarking framework for myocardial tracking and deformation algorithms: An open access database. <i>Medical Image Analysis</i> , 2013, 17, 632-648.   | 7.0  | 140       |
| 21 | Understanding the "Demon's Algorithm": 3D Non-rigid Registration by Gradient Descent. <i>Lecture Notes in Computer Science</i> , 1999, , 597-605.  | 1.0  | 135       |
| 22 | Statistical models of sets of curves and surfaces based on currents. <i>Medical Image Analysis</i> , 2009, 13, 793-808.  | 7.0  | 133       |
| 23 | A Framework for Uncertainty and Validation of 3-D Registration Methods Based on Points and Frames. <i>International Journal of Computer Vision</i> , 1997, 25, 203-229.  | 10.9 | 130       |
| 24 | Flexible and Efficient Workflow Deployment of Data-Intensive Applications On Grids With MOTEUR. <i>International Journal of High Performance Computing Applications</i> , 2008, 22, 347-360.                       | 2.4  | 130       |
| 25 | LCC-Demons: A robust and accurate symmetric diffeomorphic registration algorithm. <i>NeuroImage</i> , 2013, 81, 470-483.   | 2.1  | 123       |
| 26 | 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> , 2007, 26, 1500-1514.          | 5.4  | 117       |
| 27 | Toward a Comprehensive Framework for the Spatiotemporal Statistical Analysis of Longitudinal Shape Data. <i>International Journal of Computer Vision</i> , 2013, 103, 22-59.                                       | 10.9 | 106       |
| 28 | 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> , 2005, 9, 507-523. | 7.0  | 104       |
| 29 | Deformable biomechanical models: Application to 4D cardiac image analysis. <i>Medical Image Analysis</i> , 2003, 7, 475-488.   | 7.0  | 103       |
| 30 | A Fast and Log-Euclidean Polyaffine Framework for Locally Linear Registration. <i>Journal of Mathematical Imaging and Vision</i> , 2009, 33, 222-238.  | 0.8  | 93        |
| 31 | An augmented reality system for liver thermal ablation: Design and evaluation on clinical cases. <i>Medical Image Analysis</i> , 2009, 13, 494-506.  | 7.0  | 93        |
| 32 | <title>Comparison and evaluation of retrospective intermodality image registration techniques</title>. , 1996, , .   |      | 90        |
| 33 | Spectral Log-Demons: Diffeomorphic Image Registration with Very Large Deformations. <i>International Journal of Computer Vision</i> , 2014, 107, 254-271.  | 10.9 | 87        |
| 34 | DT-REFinD: Diffusion Tensor Registration With Exact Finite-Strain Differential. <i>IEEE Transactions on Medical Imaging</i> , 2009, 28, 1914-1928.   | 5.4  | 84        |
| 35 | Registration, atlas estimation and variability analysis of white matter fiber bundles modeled as currents. <i>NeuroImage</i> , 2011, 55, 1073-1090.  | 2.1  | 84        |
| 36 | Spatiotemporal Atlas Estimation for Developmental Delay Detection in Longitudinal Datasets. <i>Lecture Notes in Computer Science</i> , 2009, 12, 297-304.  | 1.0  | 81        |

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|----|---|-----|-----------|
| 37 | Mapping the regional influence of genetics on brain structure variability – A Tensor-Based Morphometry study. <i>NeuroImage</i> , 2009, 48, 37-49.  | 2.1 | 76        |
| 38 | Comparison of the endocranial ontogenies between chimpanzees and bonobos via temporal regression and spatiotemporal registration. <i>Journal of Human Evolution</i> , 2012, 62, 74-88.  | 1.3 | 76        |
| 39 | A geometric algorithm to find small but highly similar 3D substructures in proteins. <i>Bioinformatics</i> , 1998, 14, 516-522.   | 1.8 | 73        |
| 40 | Inferring brain variability from diffeomorphic deformations of currents: An integrative approach. <i>Medical Image Analysis</i> , 2008, 12, 626-637.  | 7.0 | 72        |
| 41 | Geometric Variability of the Scoliotic Spine Using Statistics on Articulated Shape Models. <i>IEEE Transactions on Medical Imaging</i> , 2008, 27, 557-568.   | 5.4 | 71        |
| 42 | A Statistical Model for Quantification and Prediction of Cardiac Remodelling: Application to Tetralogy of Fallot. <i>IEEE Transactions on Medical Imaging</i> , 2011, 30, 1605-1616.  | 5.4 | 70        |
| 43 | Grid powered nonlinear image registration with locally adaptive regularization. <i>Medical Image Analysis</i> , 2004, 8, 325-342.   | 7.0 | 66        |
| 44 | 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> , 2016, 16, 40.                                    | 1.4 | 65        |
| 45 | Assessing atrophy measurement techniques in dementia: Results from the MIRIAD atrophy challenge. <i>NeuroImage</i> , 2015, 123, 149-164.  | 2.1 | 63        |
| 46 | 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> , 2017, 64, 2373-2383. | 2.5 | 62        |
| 47 | 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> , 2017, 153, 418-427.                               | 0.4 | 61        |
| 48 | Statistical Shape Modeling of the Left Ventricle: Myocardial Infarct Classification Challenge. <i>IEEE Journal of Biomedical and Health Informatics</i> , 2018, 22, 503-515.  | 3.9 | 61        |
| 49 | An augmented reality system to guide radio-frequency tumour ablation. <i>Computer Animation and Virtual Worlds</i> , 2005, 16, 1-10.  | 0.7 | 59        |
| 50 | Measuring brain variability by extrapolating sparse tensor fields measured on sulcal lines. <i>NeuroImage</i> , 2007, 34, 639-650.  | 2.1 | 59        |
| 51 | Medical image registration using geometric hashing. <i>IEEE Computational Science and Engineering</i> , 1997, 4, 29-41.   | 0.6 | 58        |
| 52 | Riemannian Elasticity: A Statistical Regularization Framework for Non-linear Registration. <i>Lecture Notes in Computer Science</i> , 2005, 8, 943-950.   | 1.0 | 55        |
| 53 | Disentangling normal aging from Alzheimer's disease in structural magnetic resonance images. <i>Neurobiology of Aging</i> , 2015, 36, S42-S52.  | 1.5 | 54        |
| 54 | Robust Registration of Multi-modal Images: Towards Real-Time Clinical Applications. <i>Lecture Notes in Computer Science</i> , 2002, , 140-147.   | 1.0 | 53        |

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|----|---|------|-----------|
| 55 | Landmark-Based Registration Using Features Identified Through Differential Geometry. , 2000, , 499-513.   |      | 50        |
| 56 | Geodesics, Parallel Transport & One-Parameter Subgroups for Diffeomorphic Image Registration. International Journal of Computer Vision, 2013, 105, 111-127.   | 10.9 | 49        |
| 57 | Mean Template for Tensor-Based Morphometry Using Deformation Tensors. Lecture Notes in Computer Science, 2007, 10, 826-833.   | 1.0  | 49        |
| 58 | Tracking brain deformations in time sequences of 3D US images. Pattern Recognition Letters, 2003, 24, 801-813.  | 2.6  | 47        |
| 59 | Uniform Distribution, Distance and Expectation Problems for Geometric Features Processing. Journal of Mathematical Imaging and Vision, 1998, 9, 49-67.  | 0.8  | 46        |
| 60 | Multisubject Non-rigid Registration of Brain MRI Using Intensity and Geometric Features. Lecture Notes in Computer Science, 2001, , 734-742.  | 1.0  | 44        |
| 61 | 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        |
| 62 | Articulated Spine Models for 3-D Reconstruction From Partial Radiographic Data. IEEE Transactions on Biomedical Engineering, 2008, 55, 2565-2574.   | 2.5  | 41        |
| 63 | Insight into Efficient Image Registration Techniques and the Demons Algorithm. Lecture Notes in Computer Science, 2007, 20, 495-506.  | 1.0  | 40        |
| 64 | Statistical Computing on Manifolds: From Riemannian Geometry to Computational Anatomy. Lecture Notes in Computer Science, 2009, , 347-386.  | 1.0  | 40        |
| 65 | Barycentric subspace analysis on manifolds. Annals of Statistics, 2018, 46, .   | 1.4  | 37        |
| 66 | Schild'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        |
| 67 | Sparse Multi-Scale Diffeomorphic Registration: The Kernel Bundle Framework. Journal of Mathematical Imaging and Vision, 2013, 46, 292-308.  | 0.8  | 36        |
| 68 | Efficient Parallel Transport of Deformations in Time Series of Images: From Schild's to Pole Ladder. Journal of Mathematical Imaging and Vision, 2014, 50, 5-17.  | 0.8  | 34        |
| 69 | Non-rigid Atlas to Subject Registration with Pathologies for Conformal Brain Radiotherapy. Lecture Notes in Computer Science, 2004, , 704-711.  | 1.0  | 34        |
| 70 | Capturing the multiscale anatomical shape variability with polyaffine transformation trees. Medical Image Analysis, 2012, 16, 1371-1384.  | 7.0  | 33        |
| 71 | Computational Models for Image-Guided Robot-Assisted and Simulated Medical Interventions. Proceedings of the IEEE, 2006, 94, 1678-1688.   | 16.4 | 31        |
| 72 | 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        |

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|----|---|-----|-----------|
| 73 | 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        |
| 74 | Grid-Enabled Workflows for Data Intensive Medical Applications. , 0, , .  |     | 29        |
| 75 | 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        |
| 76 | 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        |
| 77 | Measuring Brain Variability Via Sulcal Lines Registration: A Diffeomorphic Approach. , 2007, 10, 675-682.   |     | 29        |
| 78 | Registration of 4D Time-Series of Cardiac Images with Multichannel Diffeomorphic Demons. Lecture Notes in Computer Science, 2008, 11, 972-979.  | 1.0 | 28        |
| 79 | Grid-enabling medical image analysis. Journal of Clinical Monitoring and Computing, 2005, 19, 339-349.  | 0.7 | 27        |
| 80 | 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        |
| 81 | 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        |
| 82 | A Complete Augmented Reality Guidance System for Liver Punctures: First Clinical Evaluation. Lecture Notes in Computer Science, 2005, 8, 539-547.   | 1.0 | 25        |
| 83 | Rigid Point-Surface Registration Using an EM Variant of ICP for Computer Guided Oral Implantology. Lecture Notes in Computer Science, 2001, , 752-761.  | 1.0 | 25        |
| 84 | Mosaicing of Confocal Microscopic In Vivo Soft Tissue Video Sequences. Lecture Notes in Computer Science, 2005, 8, 753-760.   | 1.0 | 24        |
| 85 | A Riemannian Framework for the Processing of Tensor-Valued Images. Lecture Notes in Computer Science, 2005, , 112-123.  | 1.0 | 24        |
| 86 | Evaluation of a New 3D/2D Registration Criterion for Liver Radio-Frequencies Guided by Augmented Reality. Lecture Notes in Computer Science, 2003, , 270-283.                                     | 1.0 | 22        |
| 87 | 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        |
| 88 | Diffeomorphic Demons Using ITK's Finite Difference Solver Hierarchy. The Insight Journal, 2008, , .   | 0.2 | 22        |
| 89 | Virtual Reality and Augmented Reality in Digestive Surgery. , 0, , .  |     | 21        |
| 90 | Sparse Approximation of Currents for Statistics on Curves and Surfaces. Lecture Notes in Computer Science, 2008, 11, 390-398.   | 1.0 | 21        |

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|-----|---|-----|-----------|
| 91  | 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        |
| 92  | Feature-based registration of medical images: Estimation and validation of the pose accuracy. Lecture Notes in Computer Science, 1998, , 1107-1114.   | 1.0 | 20        |
| 93  | 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        |
| 94  | 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        |
| 95  | 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        |
| 96  | DTI registration with exact finite-strain differential. , 2008, , .   |     | 19        |
| 97  | Higher-Order Momentum Distributions and Locally Affine LDDMM Registration. SIAM Journal on Imaging Sciences, 2013, 6, 341-367.  | 1.3 | 19        |
| 98  | 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        |
| 99  | 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        |
| 100 | Parcellation of brain images with anatomical and functional constraints for fMRI data analysis. , 0, , .  |     | 18        |
| 101 | Extrapolation of Sparse Tensor Fields: Application to the Modeling of Brain Variability. Lecture Notes in Computer Science, 2005, 19, 27-38.  | 1.0 | 17        |
| 102 | A Nonconservative Lagrangian Framework for Statistical Fluid Registrationâ€”SAFIRA. IEEE Transactions on Medical Imaging, 2011, 30, 184-202.  | 5.4 | 17        |
| 103 | Mapping the Effects of $\hat{A}^2$ 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        |
| 104 | Optimizing jobs timeouts on clusters and production grids. , 2007, , .  |     | 16        |
| 105 | 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        |
| 106 | Beyond Riemannian geometry. , 2020, , 169-229.  |     | 16        |
| 107 | Manifold-valued image processing with SPD matrices. , 2020, , 75-134.   |     | 16        |
| 108 | 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        |

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|-----|---|-----|-----------|
| 109 | Performance Evaluation of Grid-Enabled Registration Algorithms Using Bronze-Standards. Lecture Notes in Computer Science, 2006, 9, 152-160.   | 1.0 | 16        |
| 110 | Improved Detection Sensitivity in Functional MRI Data Using a Brain Parcelling Technique. Lecture Notes in Computer Science, 2002, , 467-474.   | 1.0 | 16        |
| 111 | Exponential Barycenters of the Canonical Cartan Connection and Invariant Means on Lie Groups. , 2013, , 123-166.  |     | 16        |
| 112 | A Probabilistic Model to Analyse Workflow Performance on Production Grids. , 2008, , .  |     | 15        |
| 113 | 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        |
| 114 | Shape Analysis Using a Point-Based Statistical Shape Model Built on Correspondence Probabilities. , 2007, 10, 959-967.  |     | 15        |
| 115 | Spectral Demons “ Image Registration via Global Spectral Correspondence. Lecture Notes in Computer Science, 2012, , 30-44.  | 1.0 | 15        |
| 116 | Best individual template selection from deformation tensor minimization. , 2008, 2008, 460-463.   |     | 14        |
| 117 | Geometry-Aware Multiscale Image Registration via OBBTree-Based Polyaffine Log-Demons. Lecture Notes in Computer Science, 2011, 14, 631-638.   | 1.0 | 14        |
| 118 | Principal Spine Shape Deformation Modes Using Riemannian Geometry and Articulated Models. Lecture Notes in Computer Science, 2006, , 346-355.   | 1.0 | 13        |
| 119 | Atlas-Based Reduced Models of Blood Flows for Fast Patient-Specific Simulations. Lecture Notes in Computer Science, 2010, , 95-104.   | 1.0 | 13        |
| 120 | An Incompressible Log-Domain Demons Algorithm for Tracking Heart Tissue. Lecture Notes in Computer Science, 2012, , 55-67.  | 1.0 | 13        |
| 121 | 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        |
| 122 | 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        |
| 123 | Towards a Statistical Atlas of Cardiac Fiber Structure. Lecture Notes in Computer Science, 2006, 9, 297-304.  | 1.0 | 11        |
| 124 | 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        |
| 125 | Probabilistic and dynamic optimization of job partitioning on a grid infrastructure. , 2006, , .  |     | 10        |
| 126 | Simulating Longitudinal Brain MRIs with Known Volume Changes and Realistic Variations in Image Intensity. Frontiers in Neuroscience, 2017, 11, 132.   | 1.4 | 10        |



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|-----|--|-----|-----------|
| 127 | Population-based priors in cardiac model personalisation for consistent parameter estimation in heterogeneous databases. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2019, 35, e3158. | 1.0 | 10        |
| 128 | A new registration method based on Log-Euclidean Tensor metrics and its application to genetic studies. , 2008, 2008, 1115-1118.   |     | 9         |
| 129 | Lung CT registration combining intensity, curves and surfaces. , 2010, , .   |     | 9         |
| 130 | Femur specific polyaffine model to regularize the log-domain demons registration. , 2011, , .  |     | 9         |
| 131 | Template Shape Estimation: Correcting an Asymptotic Bias. <i>SIAM Journal on Imaging Sciences</i> , 2017, 10, 808-844.   | 1.3 | 9         |
| 132 | Barycentric Subspaces and Affine Spans in Manifolds. <i>Lecture Notes in Computer Science</i> , 2015, , 12-21.   | 1.0 | 9         |
| 133 | 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> , 2016, , 21-29.           | 1.0 | 9         |
| 134 | Multinomial Probabilistic Fiber Representation for Connectivity Driven Clustering. <i>Lecture Notes in Computer Science</i> , 2013, 23, 730-741.   | 1.0 | 9         |
| 135 | Generalized image models and their application as statistical models of images. <i>Medical Image Analysis</i> , 2004, 8, 361-369.  | 7.0 | 8         |
| 136 | Workflow-Based Data Parallel Applications on the EGEE Production Grid Infrastructure. <i>Journal of Grid Computing</i> , 2008, 6, 369-383.   | 2.5 | 8         |
| 137 | Voxel-based assessments of treatment effects on longitudinal brain changes in the Multidomain Alzheimer Preventive Trial cohort. <i>Neurobiology of Aging</i> , 2020, 94, 50-59.   | 1.5 | 8         |
| 138 | An Accuracy Certified Augmented Reality System for Therapy Guidance. <i>Lecture Notes in Computer Science</i> , 2004, , 79-91.   | 1.0 | 8         |
| 139 | Regional Analysis of Left Ventricle Function Using a Cardiac-Specific Polyaffine Motion Model. <i>Lecture Notes in Computer Science</i> , 2013, , 483-490.   | 1.0 | 8         |
| 140 | Regional Flux Analysis of Longitudinal Atrophy in Alzheimer's Disease. <i>Lecture Notes in Computer Science</i> , 2012, 15, 739-746.   | 1.0 | 8         |
| 141 | Left atrial shape is independent predictor of arrhythmia recurrence after catheter ablation for atrial fibrillation: A shape statistics study. <i>Heart Rhythm O2</i> , 2021, 2, 622-632.                                | 0.6 | 8         |
| 142 | GRID-ENABLED NON-RIGID REGISTRATION OF MEDICAL IMAGES. <i>Parallel Processing Letters</i> , 2004, 14, 197-216.   | 0.4 | 7         |
| 143 | Combination of Polyaffine Transformations and Supervised Learning for the Automatic Diagnosis of LV Infarct. <i>Lecture Notes in Computer Science</i> , 2016, , 190-198.   | 1.0 | 7         |
| 144 | Kernel Bundle EPDiff: Evolution Equations for Multi-scale Diffeomorphic Image Registration. <i>Lecture Notes in Computer Science</i> , 2012, , 677-688.  | 1.0 | 7         |

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|-----|---|-----|-----------|
| 145 | 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         |
| 146 | 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         |
| 147 | Statistical Comparison of Cardiac Fibre Architectures. , 2007, , 413-423.   |     | 6         |
| 148 | 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         |
| 149 | A Statistical Model of White Matter Fiber Bundles Based on Currents. Lecture Notes in Computer Science, 2009, 21, 114-125.  | 1.0 | 6         |
| 150 | Non-rigid MR/US registration for tracking brain deformations. , 0, , .  |     | 5         |
| 151 | Bi-invariant Means on Lie Groups with Cartan-Schouten Connections. Lecture Notes in Computer Science, 2013, , 59-67.  | 1.0 | 5         |
| 152 | Template Estimation in Computational Anatomy: Fréchet Means Top and Quotient Spaces Are Not Consistent. SIAM Journal on Imaging Sciences, 2017, 10, 1139-1169.              | 1.3 | 5         |
| 153 | Inconsistency of Template Estimation by Minimizing of the Variance/Pre-Variance in the Quotient Space. Entropy, 2017, 19, 288.  | 1.1 | 5         |
| 154 | Geodesics and Curvature of the Quotient-Affine Metrics on Full-Rank Correlation Matrices. Lecture Notes in Computer Science, 2021, , 93-102.                                | 1.0 | 5         |
| 155 | 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         |
| 156 | Groupwise Spectral Log-Demons Framework for Atlas Construction. Lecture Notes in Computer Science, 2013, , 11-19.   | 1.0 | 5         |
| 157 | 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         |
| 158 | Atlas to Image-with-Tumor Registration Based on Demons and Deformation Inpainting. , 2010, , .  |     | 5         |
| 159 | Non-linear 2D and 3D Registration Using Block-Matching and B-Splines. , 2005, , 325-329.  |     | 4         |
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