Gemma Piella

List of Publications by Citations

93 papers	1,767 citations	18 h-index	40 g-index
100 ext. papers	2,251 ext. citations	5.5 avg, IF	5.21 L-index

#	Paper	IF	Citations
93	A general framework for multiresolution image fusion: from pixels to regions. *Information Fusion*, **2003**, 4, 259-280	16.7	501
92	Temporal diffeomorphic free-form deformation: application to motion and strain estimation from 3D echocardiography. *Medical Image Analysis*, **2012**, 16, 427-50	15.4	104
91	Image Fusion for Enhanced Visualization: A Variational Approach. *International Journal of Computer Vision*, **2009**, 83, 1-11	10.6	95
90	Machine learning-based phenogrouping in heart failure to identify responders to cardiac resynchronization therapy. *European Journal of Heart Failure*, **2019**, 21, 74-85	12.3	90
89	Towards content-oriented patent document processing. *World Patent Information*, **2008**, 30, 21-33	1.4	63
88	A spatiotemporal statistical atlas of motion for the quantification of abnormal myocardial tissue velocities. *Medical Image Analysis*, **2011**, 15, 316-28	15.4	62
87	Adaptive lifting schemes with perfect reconstruction. *IEEE Transactions on Signal Processing*, **2002**, 50, 1620-1630	4.8	61
86	Machine Learning Analysis of Left Ventricular Function to Characterize Heart Failure With Preserved Ejection Fraction. *Circulation: Cardiovascular Imaging*, **2018**, 11, e007138	3.9	57
85	3D strain assessment in ultrasound (Straus): a synthetic comparison of five tracking methodologies. *IEEE Transactions on Medical Imaging*, **2013**, 32, 1632-46	11.7	43
84	Segmentation and classification in MRI and US fetal imaging: Recent trends and future prospects. *Medical Image Analysis*, **2019**, 51, 61-88	15.4	40
83	Adaptive update lifting with a decision rule based on derivative filters. *IEEE Signal Processing Letters*, **2002**, 9, 329-332	3.2	37
82	Characterization of myocardial motion patterns by unsupervised multiple kernel learning. *Medical Image Analysis*, **2017**, 35, 70-82	15.4	32
81	A region-based multiresolution image fusion algorithm		32
80	Constrained manifold learning for the characterization of pathological deviations from normality. *Medical Image Analysis*, **2012**, 16, 1532-49	15.4	30
79	Toward the automatic quantification of in utero brain development in 3D structural MRI: A review. *Human Brain Mapping*, **2017**, 38, 2772-2787	5.9	26
78	Integration of convolutional neural networks for pulmonary nodule malignancy assessment in a lung cancer classification pipeline. *Computer Methods and Programs in Biomedicine*, **2020**, 185, 105172	6.9	23
77	Building nonredundant adaptive wavelets by update lifting. *Applied and Computational Harmonic Analysis*, **2005**, 18, 252-281	3.1	22

76	Fully automatic 3D reconstruction of the placenta and its peripheral vasculature in intrauterine fetal MRI. *Medical Image Analysis*, **2019**, 54, 263-279	15.4	20
75	Diffusion maps for multimodal registration. *Sensors*, **2014**, 14, 10562-77	3.8	17
74	Multimodal image registration using Laplacian commutators. *Information Fusion*, **2019**, 49, 130-145	16.7	17
73	A survey on machine and statistical learning for longitudinal analysis of neuroimaging data in Alzheimer's disease. *Computer Methods and Programs in Biomedicine*, **2020**, 189, 105348	6.9	15
72	Multiview diffeomorphic registration: application to motion and strain estimation from 3D echocardiography. *Medical Image Analysis*, **2013**, 17, 348-64	15.4	15
71	Temporal diffeomorphic free-form deformation for strain quantification in 3D-US images. *Lecture Notes in Computer Science*, **2010**, 13, 1-8	0.9	14
70	Analysis of Uncertainty and Variability in Finite Element Computational Models for Biomedical Engineering: Characterization and Propagation. *Frontiers in Bioengineering and Biotechnology*, **2016**, 4, 85	5.8	14
69	Patient-specific estimation of detailed cochlear shape from clinical CT images. *International Journal of Computer Assisted Radiology and Surgery*, **2018**, 13, 389-396	3.9	13
68	Gradient-driven update lifting for adaptive wavelets. *Signal Processing: Image Communication*, **2005**, 20, 813-831	2.8	13
67	Learning non-linear patch embeddings with neural networks for label fusion. *Medical Image Analysis* , **2018**, 44, 143-155	15.4	12
66	Generating anatomical models of the heart and the aorta from medical images for personalized physiological simulations. *Medical and Biological Engineering and Computing*, **2013**, 51, 1209-19	3.1	12
65	Caracterizaci□ de la deformaci□ miocˆdica en pacientes con hipertrofia ventricular izquierda de diferente etiolog□ mediante el uso de distribuciones de strain obtenidas de im□genes de resonancia magn□ica. *Revista Espanola De Cardiologia*, **2010**, 63, 1281-1291	1.5	12
64	Combining Seminorms in Adaptive Lifting Schemes and Applications to Image Analysis and Compression. *Journal of Mathematical Imaging and Vision*, **2006**, 25, 203-226	1.6	12
63	Fetal cortical surface atlas parcellation based on growth patterns. *Human Brain Mapping*, **2019**, 40, 3881-3899	5.9	11
62	Building an Ensemble of Complementary Segmentation Methods by Exploiting Probabilistic Estimates. *Lecture Notes in Computer Science*, **2016**, 27-35	0.9	11
61	Automatic Model Generation Framework for Computational Simulation of Cochlear Implantation. *Annals of Biomedical Engineering*, **2016**, 44, 2453-2463	4.7	11
60	SPM to the heart: Mapping of 4D continuous velocities for motion abnormality quantification **2012**,		11
59	ADAPTIVE WAVELETS FOR IMAGE COMPRESSION USING UPDATE LIFTING: QUANTIZATION AND ERROR ANALYSIS. *International Journal of Wavelets, Multiresolution and Information Processing*, **2006**, 04, 41-63	0.9	11

58	Medical-based Deep Curriculum Learning for Improved Fracture Classification. *Lecture Notes in Computer Science*, **2019**, 694-702	0.9	11
57	A framework for optimal kernel-based manifold embedding of medical image data. *Computerized Medical Imaging and Graphics*, **2015**, 41, 93-107	7.6	10
56	Cortical folding alterations in fetuses with isolated non-severe ventriculomegaly. *NeuroImage: Clinical*, **2018**, 18, 103-114	5.3	10
55	TTTS-GPS: Patient-specific preoperative planning and simulation platform for twin-to-twin transfusion syndrome fetal surgery. *Computer Methods and Programs in Biomedicine*, **2019**, 179, 104993	6.9	10
54	Temporal Diffeomorphic Free Form Deformation (TDFFD) Applied to Motion and Deformation Quantification of Tagged MRI Sequences. *Lecture Notes in Computer Science*, **2012**, 68-77	0.9	9
53	Learning and combining image neighborhoods using random forests for neonatal brain disease classification. *Medical Image Analysis*, **2017**, 42, 189-199	15.4	8
52	Survey on 3D face reconstruction from uncalibrated images. *Computer Science Review*, **2021**, 40, 100400	8.3	8
51	Assessment of Radiomics and Deep Learning for the Segmentation of Fetal and Maternal Anatomy in Magnetic Resonance Imaging and Ultrasound. *Academic Radiology*, **2021**, 28, 173-188	4.3	8
50	Discriminative confidence estimation for probabilistic multi-atlas label fusion. *Medical Image Analysis*, **2017**, 42, 274-287	15.4	7
49	Atlas-based quantification of myocardial motion abnormalities: added-value for understanding the effect of cardiac resynchronization therapy. *Ultrasound in Medicine and Biology*, **2012**, 38, 2186-97	3.5	7
48	Interventional endocardial motion estimation from electroanatomical mapping data: application to scar characterization. *IEEE Transactions on Biomedical Engineering*, **2013**, 60, 1217-24	5	7
47	Revealing heterogeneity of brain imaging phenotypes in Alzheimer's disease based on unsupervised clustering of blood marker profiles. *PLoS ONE*, **2019**, 14, e0211121	3.7	6
46	Towards a Complete In Silico Assessment of the Outcome of Cochlear Implantation Surgery. *Molecular Neurobiology*, **2018**, 55, 173-186	6.2	6
45	Adaptive lifting schemes combining seminorms for lossless image compression **2005**,		6
44	Multi-sequence Registration of Cine, Tagged and Delay-Enhancement MRI with Shift Correction and Steerable Pyramid-Based Detagging. *Lecture Notes in Computer Science*, **2009**, 330-338	0.9	6
43	Computational Evaluation of Cochlear Implant Surgery Outcomes Accounting for Uncertainty and Parameter Variability. *Frontiers in Physiology*, **2018**, 9, 498	4.6	5
42	Improved myocardial motion estimation combining tissue Doppler and B-mode echocardiographic images. *IEEE Transactions on Medical Imaging*, **2014**, 33, 2098-106	11.7	5
41	Modified M-band synthesis filter bank for fractional scalability of images. *IEEE Signal Processing Letters*, **2006**, 13, 345-348	3.2	5

40	Discriminative Dimensionality Reduction for Patch-Based Label Fusion. *Lecture Notes in Computer Science*, **2015**, 94-103	0.9	5
39	A novel approach to multiple anatomical shape analysis: Application to fetal ventriculomegaly. *Medical Image Analysis*, **2020**, 64, 101750	15.4	4
38	Random walks with statistical shape prior for cochlea and inner ear segmentation in micro-CT images. *Machine Vision and Applications*, **2018**, 29, 405-414	2.8	4
37	Analysis of nonstandardized stress echocardiography sequences using multiview dimensionality reduction. *Medical Image Analysis*, **2020**, 60, 101594	15.4	4
36	Nonlinear interaction between APOE ε4 allele load and age in the hippocampal surface of cognitively intact individuals. *Human Brain Mapping*, **2021**, 42, 47-64	5.9	4
35	Re-Identification and growth detection of pulmonary nodules without image registration using 3D siamese neural networks. *Medical Image Analysis*, **2021**, 67, 101823	15.4	4
34	Learning to combine complementary segmentation methods for fetal and 6-month infant brain MRI segmentation. *Computerized Medical Imaging and Graphics*, **2018**, 69, 52-59	7.6	4
33	Iterated random walks with shape prior. *Image and Vision Computing*, **2016**, 54, 12-21	3.7	3
32	Random walks with shape prior for cochlea segmentation in ex vivo CT. *International Journal of Computer Assisted Radiology and Surgery*, **2016**, 11, 1647-59	3.9	3
31	Global and Regional Changes in Cortical Development Assessed by MRI in Fetuses with Isolated Nonsevere Ventriculomegaly Correlate with Neonatal Neurobehavior. *American Journal of Neuroradiology*, **2019**, 40, 1567-1574	4.4	3
30	Multiview Diffeomorphic Registration for Motion and Strain Estimation from 3D Ultrasound Sequences. *Lecture Notes in Computer Science*, **2011**, 375-383	0.9	3
29	Characterizing pathological deviations from normality using constrained manifold-learning. *Lecture Notes in Computer Science*, **2011**, 14, 256-63	0.9	3
28	Temporal Diffeomorphic Free Form Deformation to Quantify Changes Induced by Left and Right Bundle Branch Block and Pacing. *Lecture Notes in Computer Science*, **2013**, 134-141	0.9	3
27	Image-Based 3D Characterization of Abdominal Aortic Aneurysm Deformation After Endovascular Aneurysm Repair. *Frontiers in Bioengineering and Biotechnology*, **2019**, 7, 267	5.8	3
26	Integration of Multi-Plane Tissue Doppler and B-Mode Echocardiographic Images for Left Ventricular Motion Estimation. *IEEE Transactions on Medical Imaging*, **2016**, 35, 89-97	11.7	2
25	Pre to Intraoperative Data Fusion Framework for Multimodal Characterization of Myocardial Scar Tissue. *IEEE Journal of Translational Engineering in Health and Medicine*, **2014**, 2, 1900211	3	2
24	Endocardial motion estimation from electro-anatomical data **2012**,		2
23	Cardiac Deformation from Electro-Anatomical Mapping Data: Application to Scar Characterization. *Lecture Notes in Computer Science*, **2011**, 47-54	0.9	2

22	Myocardial motion estimation combining tissue doppler and B-mode echocardiographic images. *Lecture Notes in Computer Science*, **2013**, 16, 484-91	0.9	2
21	Patch spaces and fusion strategies in patch-based label fusion. *Computerized Medical Imaging and Graphics*, **2019**, 71, 79-89	7.6	2
20	Revealing Regional Associations of Cortical Folding Alterations with In Utero Ventricular Dilation Using Joint Spectral Embedding. *Lecture Notes in Computer Science*, **2018**, 11072, 620-627	0.9	2
19	FETAL CORTICAL PARCELLATION BASED ON GROWTH PATTERNS **2018**, 2018, 696-699	1.5	2
18	Global Planar Convolutions for Improved Context Aggregation in Brain Tumor Segmentation. *Lecture Notes in Computer Science*, **2019**, 393-405	0.9	1
17	Enhanced Probabilistic Label Fusion by Estimating Label Confidences Through Discriminative Learning. *Lecture Notes in Computer Science*, **2016**, 505-512	0.9	1
16	Characterization of Myocardial Velocities by Multiple Kernel Learning: Application to Heart Failure with Preserved Ejection Fraction. *Lecture Notes in Computer Science*, **2015**, 65-73	0.9	1
15	Characterizing Patterns of Response During Mild Stress-Testing in Continuous Echocardiography Recordings Using a Multiview Dimensionality Reduction Technique. *Lecture Notes in Computer Science*, **2017**, 502-513	0.9	1
14	Manifold Learning Characterization of Abnormal Myocardial Motion Patterns: Application to CRT-Induced Changes. *Lecture Notes in Computer Science*, **2013**, 450-457	0.9	1
13	Identifying causative mechanisms linking early-life stress to psycho-cardio-metabolic multi-morbidity: The EarlyCause project. *PLoS ONE*, **2021**, 16, e0245475	3.7	1
12	Fetal MRI Synthesis via Balanced Auto-Encoder Based Generative Adversarial Networks. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2018**, 2018, 2599-2602	0.9	1
11	Patient-Specific Manifold Embedding of Multispectral Images Using Kernel Combinations. *Lecture Notes in Computer Science*, **2013**, 82-89	0.9	0
10	TTTS-STgan: Stacked Generative Adversarial Networks for TTTS Fetal Surgery Planning Based on 3D Ultrasound. *IEEE Transactions on Medical Imaging*, **2020**, 39, 3595-3606	11.7	0
9	Deep Q-CapsNet Reinforcement Learning Framework for Intrauterine Cavity Segmentation in TTTS Fetal Surgery Planning. *IEEE Transactions on Medical Imaging*, **2020**, 39, 3113-3124	11.7	0
8	On the Role of Patch Spaces in Patch-Based Label Fusion. *Lecture Notes in Computer Science*, **2017**, 37-44	0.9	
7	Electrophysiology Model for a Human Heart with Ischemic Scar and Realistic Purkinje Network. *Lecture Notes in Computer Science*, **2016**, 90-97	0.9	
6	Quasi-Conformal Technique for Integrating and Validating Myocardial Tissue Characterization in MRI with Ex-Vivo Human Histological Data. *Lecture Notes in Computer Science*, **2017**, 172-181	0.9	
5	Atlas Construction and Image Analysis Using Statistical Cardiac Models. *Lecture Notes in Computer Science*, **2010**, 1-13	0.9	

List of Publications

4	Atlas-Based Quantification of Myocardial Motion Abnormalities: Added-value for the Understanding of CRT Outcome?. *Lecture Notes in Computer Science*, **2010**, 65-74	0.9
3	Image-Based Estimation of Myocardial Acceleration Using TDFFD: A Phantom Study. *Lecture Notes in Computer Science*, **2014**, 262-270	0.9
2	An Adaptive Multiscale Similarity Measure for Non-rigid Registration. *Lecture Notes in Computer Science*, **2014**, 203-212	0.9
1	Learning pathological deviations from a normal pattern of myocardial motion: Added value for CRT studies? **2016**, 365-382	