Gemma Piella

List of Publications by Year
in descending order

93 papers	2,619 citations	331538 21 h-index	206029 48 g-index
100 all docs	100 docs citations	100 times ranked	2597 citing authors

#	ARTICLE	IF	CITATIONS
1	A general framework for multiresolution image fusion: from pixels to regions. Information Fusion, 2003, 4, 259-280.	11.7	692
2	Machine learning‐based phenogrouping in heart failure to identify responders to cardiac resynchronization therapy. European Journal of Heart Failure, 2019, 21, 74-85.	2.9	175
3	Image Fusion for Enhanced Visualization: AÂVariationalÂApproach. International Journal of Computer Vision, 2009, 83, 1-11.	10.9	129
4	Temporal diffeomorphic free-form deformation: Application to motion and strain estimation from 3D echocardiography. Medical Image Analysis, 2012, 16, 427-450.	7.0	123
5	Machine Learning Analysis of Left Ventricular Function to Characterize Heart Failure With Preserved Ejection Fraction. Circulation: Cardiovascular Imaging, 2018, 11, e007138.	1.3	95
6	Adaptive lifting schemes with perfect reconstruction. IEEE Transactions on Signal Processing, 2002, 50, 1620-1630.	3.2	90
7	Towards content-oriented patent document processing. World Patent Information, 2008, 30, 21-33.	0.7	73
8	A spatiotemporal statistical atlas of motion for the quantification of abnormal myocardial tissue velocities. Medical Image Analysis, 2011, 15, 316-328.	7.0	68
9	Segmentation and classification in MRI and US fetal imaging: Recent trends and future prospects. Medical Image Analysis, 2019, 51, 61-88.	7.0	66
10	A region-based multiresolution image fusion algorithm. , 0, , .		63
11	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.	2.6	55
12	3D Strain Assessment in Ultrasound (Straus): A Synthetic Comparison of Five Tracking Methodologies. IEEE Transactions on Medical Imaging, 2013, 32, 1632-1646.	5.4	54
13	Characterization of myocardial motion patterns by unsupervised multiple kernel learning. Medical Image Analysis, 2017, 35, 70-82.	7.0	49
14	Adaptive update lifting with a decision rule based on derivative filters. IEEE Signal Processing Letters, 2002, 9, 329-332.	2.1	47
15	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.	2.6	44
16	Building nonredundant adaptive wavelets by update lifting. Applied and Computational Harmonic Analysis, 2005, 18, 252-281.	1.1	35
17	Constrained manifold learning for the characterization of pathological deviations from normality. Medical Image Analysis, 2012, 16, 1532-1549.	7.0	33
18	Survey on 3D face reconstruction from uncalibrated images. Computer Science Review, 2021, 40, 100400.	10.2	32

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19	Fetal cortical surface atlas parcellation based on growth patterns. Human Brain Mapping, 2019, 40, 3881-3899.	1.9	31
20	Fully automatic 3D reconstruction of the placenta and its peripheral vasculature in intrauterine fetal MRI. Medical Image Analysis, 2019, 54, 263-279.	7.0	31
21	Toward the automatic quantification of in utero brain development in 3D structural MRI: A review. Human Brain Mapping, 2017, 38, 2772-2787.	1.9	30
22	Multimodal image registration using Laplacian commutators. Information Fusion, 2019, 49, 130-145.	11.7	26
23	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.	1.3	23
24	Analysis of Uncertainty and Variability in Finite Element Computational Models for Biomedical Engineering: Characterization and Propagation. Frontiers in Bioengineering and Biotechnology, 2016, 4, 85.	2.0	22
25	Learning non-linear patch embeddings with neural networks for label fusion. Medical Image Analysis, 2018, 44, 143-155.	7.0	21
26	Medical-based Deep Curriculum Learning for Improved Fracture Classification. Lecture Notes in Computer Science, 2019, , 694-702.	1.0	21
27	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.	2.6	20
28	Re-Identification and growth detection of pulmonary nodules without image registration using 3D siamese neural networks. Medical Image Analysis, 2021, 67, 101823.	7.0	20
29	Patient-specific estimation of detailed cochlear shape from clinical CT images. International Journal of Computer Assisted Radiology and Surgery, 2018, 13, 389-396.	1.7	19
30	Cortical folding alterations in fetuses with isolated non-severe ventriculomegaly. NeuroImage: Clinical, 2018, 18, 103-114.	1.4	18
31	Multiview diffeomorphic registration: Application to motion and strain estimation from 3D echocardiography. Medical Image Analysis, 2013, 17, 348-364.	7.0	17
32	Diffusion Maps for Multimodal Registration. Sensors, 2014, 14, 10562-10577.	2.1	17
33	Learning to combine complementary segmentation methods for fetal and 6-month infant brain MRI segmentation. Computerized Medical Imaging and Graphics, 2018, 69, 52-59.	3.5	17
34	Combining Seminorms in Adaptive Lifting Schemes and Applications to Image Analysis and Compression. Journal of Mathematical Imaging and Vision, 2006, 25, 203-226.	0.8	16
35	Generating anatomical models of the heart and the aorta from medical images for personalized physiological simulations. Medical and Biological Engineering and Computing, 2013, 51, 1209-1219.	1.6	16
36	Temporal Diffeomorphic Free-Form Deformation for Strain Quantification in 3D-US Images. Lecture Notes in Computer Science, 2010, 13, 1-8.	1.0	16

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37	Gradient-driven update lifting for adaptive wavelets. Signal Processing: Image Communication, 2005, 20, 813-831.	1.8	15
38	A framework for optimal kernel-based manifold embedding of medical image data. Computerized Medical Imaging and Graphics, 2015, 41, 93-107.	3.5	14
39	Caracterización de la deformación miocárdica en pacientes con hipertrofia ventricular izquierda de diferente etiología mediante el uso de distribuciones de strain obtenidas de imágenes de resonancia magnética. Revista Espanola De Cardiologia, 2010, 63, 1281-1291.	0.6	12
40	Temporal Diffeomorphic Free Form Deformation (TDFFD) Applied to Motion and Deformation Quantification of Tagged MRI Sequences. Lecture Notes in Computer Science, 2012, , 68-77.	1.0	12
41	Automatic Model Generation Framework for Computational Simulation of Cochlear Implantation. Annals of Biomedical Engineering, 2016, 44, 2453-2463.	1.3	12
42	Nonlinear interaction between <scp>APOE</scp>**μ**4 allele load and age in the hippocampal surface of cognitively intact individuals. Human Brain Mapping, 2021, 42, 47-64.	1.9	12
43	Adaptive lifting schemes combining seminorms for lossless image compression. , 2005, , .		11
44	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
45	SPM to the heart: Mapping of 4D continuous velocities for motion abnormality quantification. , 2012, , .		11
46	Building an Ensemble of Complementary Segmentation Methods by Exploiting Probabilistic Estimates. Lecture Notes in Computer Science, 2016, , 27-35.	1.0	11
47	Machine-learning–based exploration to identify remodeling patterns associated with death or heart-transplant in pediatric-dilated cardiomyopathy. Journal of Heart and Lung Transplantation, 2022, 41, 516-526.	0.3	11
48	Revealing heterogeneity of brain imaging phenotypes in Alzheimer's disease based on unsupervised clustering of blood marker profiles. PLoS ONE, 2019, 14, e0211121.	1.1	10
49	Modified M-band synthesis filter bank for fractional scalability of images. IEEE Signal Processing Letters, 2006, 13, 345-348.	2.1	9
50	Learning and combining image neighborhoods using random forests for neonatal brain disease classification. Medical Image Analysis, 2017, 42, 189-199.	7.0	9
51	Identifying causative mechanisms linking early-life stress to psycho-cardio-metabolic multi-morbidity: The EarlyCause project. PLoS ONE, 2021, 16, e0245475.	1.1	9
52	Atlas-Based Quantification of Myocardial Motion Abnormalities: Added-Value for Understanding the Effect of Cardiac Resynchronization Therapy. Ultrasound in Medicine and Biology, 2012, 38, 2186-2197.	0.7	8
53	Interventional Endocardial Motion Estimation from Electroanatomical Mapping Data: Application to Scar Characterization. IEEE Transactions on Biomedical Engineering, 2013, 60, 1217-1224.	2.5	8
54	Discriminative confidence estimation for probabilistic multi-atlas label fusion. Medical Image Analysis, 2017, 42, 274-287.	7.0	8

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55	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.	1.2	8
56	Towards a Complete In Silico Assessment of the Outcome of Cochlear Implantation Surgery. Molecular Neurobiology, 2018, 55, 173-186.	1.9	7
57	Computational Evaluation of Cochlear Implant Surgery Outcomes Accounting for Uncertainty and Parameter Variability. Frontiers in Physiology, 2018, 9, 498.	1.3	7
58	Image-Based 3D Characterization of Abdominal Aortic Aneurysm Deformation After Endovascular Aneurysm Repair. Frontiers in Bioengineering and Biotechnology, 2019, 7, 267.	2.0	7
59	A novel approach to multiple anatomical shape analysis: Application to fetal ventriculomegaly. Medical Image Analysis, 2020, 64, 101750.	7.0	7
60	Analysis of nonstandardized stress echocardiography sequences using multiview dimensionality reduction. Medical Image Analysis, 2020, 60, 101594.	7.0	6
61	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.	1.0	6
62	Improved Myocardial Motion Estimation Combining Tissue Doppler and B-Mode Echocardiographic Images. IEEE Transactions on Medical Imaging, 2014, 33, 2098-2106.	5.4	5
63	Random walks with statistical shape prior for cochlea and inner ear segmentation in micro-CT images. Machine Vision and Applications, 2018, 29, 405-414.	1.7	5
64	TTTS-STgan: Stacked Generative Adversarial Networks for TTTS Fetal Surgery Planning Based on 3D Ultrasound. IEEE Transactions on Medical Imaging, 2020, 39, 3595-3606.	5.4	5
65	Deep Q-CapsNet Reinforcement Learning Framework for Intrauterine Cavity Segmentation in TTTS Fetal Surgery Planning. IEEE Transactions on Medical Imaging, 2020, 39, 3113-3124.	5.4	5
66	Iterated random walks with shape prior. Image and Vision Computing, 2016, 54, 12-21.	2.7	4
67	Random walks with shape prior for cochlea segmentation in ex vivo $$\mu \hbox {CT}$$ µ CT. International Journal of Computer Assisted Radiology and Surgery, 2016, 11, 1647-1659.	1.7	4
68	Global Planar Convolutions for Improved Context Aggregation in Brain Tumor Segmentation. Lecture Notes in Computer Science, 2019, , 393-405.	1.0	4
69	Characterizing Pathological Deviations from Normality Using Constrained Manifold-Learning. Lecture Notes in Computer Science, 2011, 14, 256-263.	1.0	4
70	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.	1.0	4
71	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.	5.4	3
72	Multiview Diffeomorphic Registration for Motion and Strain Estimation from 3D Ultrasound Sequences. Lecture Notes in Computer Science, 2011, , 375-383.	1.0	3

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73	Endocardial motion estimation from electro-anatomical data. , 2012, , .		2
74	Pre to Intraoperative Data Fusion Framework for Multimodal Characterization of Myocardial Scar Tissue. IEEE Journal of Translational Engineering in Health and Medicine, 2014, 2, 1-11.	2.2	2
75	Fetal MRI Synthesis via Balanced Auto-Encoder Based Generative Adversarial Networks. , 2018, 2018, 2599-2602.		2
76	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.	1.0	2
77	Fetal cortical parcellation based on growth patterns. , 2018, 2018, 696-699.		2
78	Patch spaces and fusion strategies in patch-based label fusion. Computerized Medical Imaging and Graphics, 2019, 71, 79-89.	3.5	2
79	Myocardial Motion Estimation Combining Tissue Doppler and B-mode Echocardiographic Images. Lecture Notes in Computer Science, 2013, 16, 484-491.	1.0	2
80	Enhanced Probabilistic Label Fusion by Estimating Label Confidences Through Discriminative Learning. Lecture Notes in Computer Science, 2016, , 505-512.	1.0	1
81	Manifold Learning Characterization of Abnormal Myocardial Motion Patterns: Application to CRT-Induced Changes. Lecture Notes in Computer Science, 2013, , 450-457.	1.0	1
82	Patient-Specific Manifold Embedding of Multispectral Images Using Kernel Combinations. Lecture Notes in Computer Science, 2013, , 82-89.	1.0	1
83	Image-Based Estimation of Myocardial Acceleration Using TDFFD: A Phantom Study. Lecture Notes in Computer Science, 2014, , 262-270.	1.0	1
84	Electrophysiology Model for a Human Heart with Ischemic Scar and Realistic Purkinje Network. Lecture Notes in Computer Science, 2016, , 90-97.	1.0	1
85	Image based cardiac acceleration map using statistical shape and 3D+t myocardial tracking models; in-vitro study on heart phantom. Proceedings of SPIE, 2013, , .	0.8	0
86	Learning pathological deviations from a normal pattern of myocardial motion. , 2016, , 365-382.		0
87	Quantification of oxygen changes in the placenta from BOLD MR image sequences. , 2017, , .		0
88	On the Role of Patch Spaces in Patch-Based Label Fusion. Lecture Notes in Computer Science, 2017, , 37-44.	1.0	0
89	A Quantitative Comparison of Methods for 3D Face Reconstruction from 2D Images. , 2018, , .		0
90	Atlas Construction and Image Analysis Using Statistical Cardiac Models. Lecture Notes in Computer Science, 2010, , 1-13.	1.0	0

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91	Atlas-Based Quantification of Myocardial Motion Abnormalities: Added-value for the Understanding of CRT Outcome?. Lecture Notes in Computer Science, 2010, , 65-74.	1.0	0
92	An Adaptive Multiscale Similarity Measure for Non-rigid Registration. Lecture Notes in Computer Science, 2014, , 203-212.	1.0	0
93	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.	1.0	0