Fabio A Gonzalez

List of Publications by Year
in descending order

132 papers	4,450 citations	236925 25 h-index	128289 60 g-index
136 all docs	136 docs citations	136 times ranked	4556 citing authors

#	Article	IF	Citations
1	Accurate and reproducible invasive breast cancer detection in whole-slide images: A Deep Learning approach for quantifying tumor extent. Scientific Reports, 2017, 7, 46450.	3.3	360
2	Representation learning for mammography mass lesion classification with convolutional neural networks. Computer Methods and Programs in Biomedicine, 2016, 127, 248-257.	4.7	342
3	Assessment of algorithms for mitosis detection in breast cancer histopathology images. Medical Image Analysis, 2015, 20, 237-248.	11.6	338
4	Mitosis detection in breast cancer pathology images by combining handcrafted and convolutional neural network features. Journal of Medical Imaging, 2014, 1, 034003.	1.5	264
5	An immunity-based technique to characterize intrusions in computer networks. IEEE Transactions on Evolutionary Computation, 2002, 6, 281-291.	10.0	247
6	Anomaly Detection Using Real-Valued Negative Selection. Genetic Programming and Evolvable Machines, 2003, 4, 383-403.	2.2	238
7	Automatic detection of invasive ductal carcinoma in whole slide images with convolutional neural networks. Proceedings of SPIE, 2014, , .	0.8	224
8	A Deep Learning Architecture for Image Representation, Visual Interpretability and Automated Basal-Cell Carcinoma Cancer Detection. Lecture Notes in Computer Science, 2013, 16, 403-410.	1.3	209
9	A semi-automatic method for quantification and classification of erythrocytes infected with malaria parasites in microscopic images. Journal of Biomedical Informatics, 2009, 42, 296-307.	4.3	180
10	Artificial immune system (AIS) research in the last five years. , 0, , .		144
11	Histopathology Image Classification Using Bag of Features and Kernel Functions. Lecture Notes in Computer Science, 2009, , 126-135.	1.3	117
12	A Randomized Real-Valued Negative Selection Algorithm. Lecture Notes in Computer Science, 2003, , 261-272.	1.3	109
13	Visual pattern mining in histology image collections using bag of features. Artificial Intelligence in Medicine, 2011, 52, 91-106.	6.5	104
14	High-throughput adaptive sampling for whole-slide histopathology image analysis (HASHI) via convolutional neural networks: Application to invasive breast cancer detection. PLoS ONE, 2018, 13, e0196828.	2.5	100
15	Combining negative selection and classification techniques for anomaly detection. , 0, , .		98
16	Convolutional neural networks for mammography mass lesion classification. , 2015, 2015, 797-800.		88
17	An unsupervised feature learning framework for basal cell carcinoma image analysis. Artificial Intelligence in Medicine, 2015, 64, 131-145.	6.5	80
18	Multimodal representation, indexing, automated annotation and retrieval of image collections via non-negative matrix factorization. Neurocomputing, 2012, 76, 50-60.	5.9	62

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19	The Effect of Binary Matching Rules in Negative Selection. Lecture Notes in Computer Science, 2003, , 195-206.	1.3	61
20	Variable neighborhood search to solve the vehicle routing problem for hazardous materials transportation. Journal of Hazardous Materials, 2017, 324, 472-480.	12.4	52
21	CIDS: An agent-based intrusion detection system. Computers and Security, 2005, 24, 387-398.	6.0	51
22	Classification of diabetes-related retinal diseases using a deep learning approach in optical coherence tomography. Computer Methods and Programs in Biomedicine, 2019, 178, 181-189.	4.7	51
23	Content-based histopathology image retrieval using a kernel-based semantic annotation framework. Journal of Biomedical Informatics, 2011, 44, 519-528.	4.3	41
24	Use of automated learning techniques for predicting mandibular morphology in skeletal class I, II and III. Forensic Science International, 2017, 281, 187.e1-187.e7.	2.2	37
25	Extracting Salient Brain Patterns for Imaging-Based Classification of Neurodegenerative Diseases. IEEE Transactions on Medical Imaging, 2014, 33, 1262-1274.	8.9	35
26	Mathematical properties of soft cardinality: Enhancing Jaccard, Dice and cosine similarity measures with element-wise distance. Information Sciences, 2016, 367-368, 373-389.	6.9	34
27	Gated multimodal networks. Neural Computing and Applications, 2020, 32, 10209-10228.	5.6	32
28	A comparative analysis of artificial immune network models. , 2005, , .		31
29	Cascaded ensemble of convolutional neural networks and handcrafted features for mitosis detection. Proceedings of SPIE, 2014, , .	0.8	31
30	An automatic method for skeletal patterns classification using craniomaxillary variables on a Colombian population. Forensic Science International, 2016, 261, 159.e1-159.e6.	2.2	28
31	Continuous assessment in a computer programming course supported by a software tool. Computer Applications in Engineering Education, 2019, 27, 80-89.	3.4	28
32	A Scalable Artificial Immune System Model for Dynamic Unsupervised Learning. Lecture Notes in Computer Science, 2003, , 219-230.	1.3	24
33	Automatic annotation of histopathological images using a latent topic model based on non-negative matrix factorization. Journal of Pathology Informatics, 2012, 2, 4.	1.7	24
34	Performance of Recommendation Systems in Dynamic Streaming Environments. , 2007, , .		20
35	Learning regions of interest from low level maps in virtual microscopy. Diagnostic Pathology, 2011, 6, S22.	2.0	20
36	A Semantic Content-Based Retrieval Method for Histopathology Images. , 2008, , 51-60.		19

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37	Multimodal fusion for image retrieval using matrix factorization. , 2012, , .		18
38	Combining visual features and text data for medical image retrieval using latent semantic kernels. , 2010, , .		16
39	Mixed Integer Linear Programming Model for Vehicle Routing Problem for Hazardous Materials Transportation**Universidad Nacional de Colombia. Universite de Technologie de Troyes.. IFAC-PapersOnLine, 2016, 49, 538-543.	0.9	16
40	Text Comparison Using Soft Cardinality. Lecture Notes in Computer Science, 2010, , 297-302.	1.3	16
41	Design of a Medical Image Database with Content-Based Retrieval Capabilities. , 2007, , 919-931.		15
42	Generalized Mongue-Elkan Method for Approximate Text String Comparison. Lecture Notes in Computer Science, 2009, , 559-570.	1.3	15
43	Bag of Features for Automatic Classification of Alzheimer's Disease in Magnetic Resonance Images. Lecture Notes in Computer Science, 2012, , 559-566.	1.3	15
44	A Visual Latent Semantic Approach for Automatic Analysis and Interpretation of Anaplastic Medulloblastoma Virtual Slides. Lecture Notes in Computer Science, 2012, 15, 157-164.	1.3	14
45	Multimodal Image Annotation Using Non-negative Matrix Factorization. , 2010, , .		13
46	Early author profiling on Twitter using profile features with multi-resolution. Expert Systems With Applications, 2020, 140, 112909.	7.6	13
47	NMF-based multimodal image indexing for querying by visual example. , 2010, , .		12
48	Combining Unsupervised Feature Learning and Riesz Wavelets for Histopathology Image Representation: Application to Identifying Anaplastic Medulloblastoma. Lecture Notes in Computer Science, 2015, , 581-588.	1.3	12
49	Monitoring of illicit pill distribution networks using an image collection exploration framework. Forensic Science International, 2012, 223, 298-305.	2.2	11
50	Improving the BoVW via discriminative visual n-grams and MKL strategies. Neurocomputing, 2016, 175, 768-781.	5.9	11
51	Infected Cell Identification in Thin Blood Images Based on Color Pixel Classification: Comparison and Analysis. , 2007, , 812-821.		11
52	Automatic Grading Tool for Jupyter Notebooks in Artificial Intelligence Courses. Sustainability, 2021, 13, 12050.	3.2	11
53	Local and global approaches for unsupervised image annotation. Multimedia Tools and Applications, 2017, 76, 16389-16414.	3.9	10
54	Self-Regulated Learning in a Computer Programming Course. Revista Iberoamericana De Tecnologias Del Aprendizaje, 2018, 13, 75-83.	0.9	10

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55	A Forward Collision Warning System for Smartphones Using Image Processing and V2V Communication. Sensors, 2018, 18, 2672.	3.8	10
56	Classification with Quantum Measurements. Journal of the Physical Society of Japan, 2021, 90, 044002.	1.6	10
57	Histology image search using multimodal fusion. Journal of Biomedical Informatics, 2014, 51, 114-128.	4.3	9
58	A Conditional Generative Adversarial Network-Based Method for Eye Fundus Image Quality Enhancement. Lecture Notes in Computer Science, 2020, , 185-194.	1.3	9
59	Hybrid Deep Learning Gaussian Process for Diabetic Retinopathy Diagnosis and Uncertainty Quantification. Lecture Notes in Computer Science, 2020, , 206-215.	1.3	9
60	Application of Polarimetric Features and Support Vector Machines for Classification of Improvised Explosive Devices. IEEE Antennas and Wireless Propagation Letters, 2019, 18, 2282-2286.	4.0	8
61	A Multi-class Kernel Alignment Method for Image Collection Summarization. Lecture Notes in Computer Science, 2009, , 545-552.	1.3	8
62	Soft Cardinality in Semantic Text Processing: Experience of the SemEval International Competitions. Polibits, 0, 51, 63-72.	0.0	8
63	Grading diabetic retinopathy and prostate cancer diagnostic images with deep quantum ordinal regression. Computers in Biology and Medicine, 2022, 145, 105472.	7.0	8
64	Discriminating and visualizing anomalies using negative selection and self-organizing maps. , 2005, , .		7
65	BIGS: A framework for large-scale image processing and analysis over distributed and heterogeneous computing resources. , 2012, , .		7
66	A kernel-based framework for image collection exploration. Journal of Visual Languages and Computing, 2013, 24, 53-67.	1.8	7
67	Hybrid image representation learning model with invariant features for basal cell carcinoma detection. , 2013, , .		7
68	A comparative evaluation of supervised and unsupervised representation learning approaches for anaplastic medulloblastoma differentiation. , 2015, , .		7
69	Using Adaptive Operators in Genetic Search. Lecture Notes in Computer Science, 2003, , 1580-1581.	1.3	7
70	Content-Based Medical Image Retrieval Using Low-Level Visual Features and Modality Identification. Lecture Notes in Computer Science, 2008, , 615-622.	1.3	7
71	Automatic Clump Splitting for Cell Quantification in Microscopical Images. , 2007, , 763-772.		7
72	Bag-of-visual-ngrams for histopathology image classification. , 2013, , .		6

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73	Scalable multi-label annotation via semi-supervised kernel semantic embedding. Pattern Recognition Letters, 2019, 123, 97-103.	4.2	6
74	UNCODE: INTERACTIVE SYSTEM FOR LEARNING AND AUTOMATIC EVALUATION OF COMPUTER PROGRAMMING SKILLS. EDULEARN Proceedings, 2018, , .	0.0	6
75	A Grid Computing Approach to Subtraction Radiography. , 2006, , .		5
76	Unsupervised feature learning for content-based histopathology image retrieval. , 2014, , .		5
77	Robust kernels for robust location estimation. Neurocomputing, 2021, 429, 174-186.	5.9	5
78	A lightweight deep learning model for mobile eye fundus image quality assessment. , 2020, , .		5
79	Segmentation of retinal fluids and hyperreflective foci using deep learning approach in optical coherence tomography scans. , 2020, , .		5
80	Multimodal image collection summarization using non-negative matrix factorization. , 2011, , .		4
81	Automatic detection of wheezes by evaluation of multiple acoustic feature extraction methods and C-weighted SVM. , 2015, , .		4
82	Phase Diagram Reconstruction of the Bose–Hubbard Model with a Restricted Boltzmann Machine Wavefunction. Journal of the Physical Society of Japan, 2020, 89, 094002.	1.6	4
83	A Strategy Based on Technological Maps for the Identification of the State-of-the-Art Techniques in Software Development Projects: Virtual Judge Projects as a Case Study. Communications in Computer and Information Science, 2018, , 338-354.	0.5	4
84	On the Robustness of Kernel-Based Clustering. Lecture Notes in Computer Science, 2012, , 122-129.	1.3	4
85	Online Matrix Factorization for Multimodal Image Retrieval. Lecture Notes in Computer Science, 2012, , 340-347.	1.3	4
86	From Biomedical Image Analysis to Biomedical Image Understanding Using Machine Learning. Advances in Bioinformatics and Biomedical Engineering Book Series, 0, , 1-26.	0.4	4
87	Many-Qudit Representation for the Travelling Salesman Problem Optimisation. Journal of the Physical Society of Japan, 2021, 90, 114002.	1.6	4
88	Multimodal Latent Semantic Alignment for Automated Prostate Tissue Classification and Retrieval. Lecture Notes in Computer Science, 2020, , 572-581.	1.3	4
89	Page Clustering Using a Distance-Based Algorithm. , 0, , .		3
90	An evaluation of NMF algorithm on human action video retrieval. , 2013, , .		3

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91	Multimodal visualization based on latent topic analysis. , 2014, , .		3
92	A comprehensive assessment of ionospheric gradients observed in Ecuador during 2013 and 2014 for ground based augmentation systems. Advances in Space Research, 2017, 59, 1992-2006.	2.6	3
93	Visual Pattern Analysis in Histopathology Images Using Bag of Features. Lecture Notes in Computer Science, 2009, , 521-528.	1.3	3
94	A Solution Concept for Artificial Immune Networks: A Coevolutionary Perspective. Lecture Notes in Computer Science, 2007, , 35-46.	1.3	3
95	Histology Image Indexing Using a Non-negative Semantic Embedding. Lecture Notes in Computer Science, 2012, , 80-91.	1.3	3
96	Estrategia de enseÃ±anza basada en la colaboraciÃ³n y la evaluaciÃ³n automÃ¡tica de cÃ³digo fuente en un curso de programaciÃ³n CS1. InvestigaciÃ³n E InnovaciÃ³n En IngenierÃas, 2020, 9, 50-60.	0.0	3
97	Quantum measurement classification with qudits. Quantum Information Processing, 2022, 21, 1.	2.2	3
98	A neuro-immune model for discriminating and visualizing anomalies. Natural Computing, 2006, 5, 285-304.	3.0	2
99	Collaborative filtering in dynamic usage environments. , 2006, , .		2
100	A framework for high performance image analysis pipelines. , 2012, , .		2
101	ZETEMA: A web service for automatic short-answer questions grading. , 2015, , .		2
102	Improving the efficiency of branch-and-bound complete-search NMR assignment using the symmetry of molecules and spectra. Journal of Chemical Physics, 2015, 142, 074103.	3.0	2
103	Novel Distributional Visual-Feature Representations for image classification. Multimedia Tools and Applications, 2019, 78, 11313-11336.	3.9	2
104	A Two-Step Neural Network Approach to Passage Retrieval for Open Domain Question Answering. Lecture Notes in Computer Science, 2018, , 566-574.	1.3	2
105	Mining Candlesticks Patterns on Stock Series: A Fuzzy Logic Approach. Lecture Notes in Computer Science, 2009, , 661-670.	1.3	2
106	How to Adapt Deep Learning Models to a New Domain: The Case of Biomedical Relation Extraction. Tecno LÃ³gicas, 0, 22, 49-62.	0.3	2
107	Semi-supervised Dimensionality Reduction via Multimodal Matrix Factorization. Lecture Notes in Computer Science, 2015, , 676-682.	1.3	2
108	Optimisation-free density estimation and classification with quantum circuits. Quantum Machine Intelligence, 2022, 4, .	4.8	2

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109	A kernel-based strategy for exploratory image collection search. , 2010, , .		1
110	MICS: Multimodal image collection summarization by optimal reconstruction subset selection. , 2013, , .		1
111	A comparison of geometric and energy-based point cloud semantic segmentation methods. , 2013, , .		1
112	Online multimodal matrix factorization for human action video indexing. , 2014, , .		1
113	Transductive non-linear semantic embedding for multi-class classification. Pattern Recognition Letters, 2019, 128, 370-377.	4.2	1
114	Exploiting label semantic relatedness for unsupervised image annotation with large free vocabularies. Multimedia Tools and Applications, 2019, 78, 19641-19662.	3.9	1
115	High Throughput Location Proteomics in Confocal Images from the Human Protein Atlas Using a Bag-of-Features Representation. Advances in Intelligent Systems and Computing, 2014, , 77-82.	0.6	1
116	Multimodal Image Collection Visualization Using Non-negative Matrix Factorization. Lecture Notes in Computer Science, 2010, , 429-432.	1.3	1
117	Large Scale Image Indexing Using Online Non-negative Semantic Embedding. Lecture Notes in Computer Science, 2013, , 367-374.	1.3	1
118	Online Matrix Factorization for Space Embedding Multilabel Annotation. Lecture Notes in Computer Science, 2013, , 343-350.	1.3	1
119	Semi-supervised Online Kernel Semantic Embedding for Multi-label Annotation. Lecture Notes in Computer Science, 2018, , 693-701.	1.3	1
120	Supervised online matrix factorization for histopathological multimodal retrieval. , 2018, , .		1
121	Mandibular shape prediction model using machine learning techniques. Clinical Oral Investigations, 2022, 26, 3085-3096.	3.0	1
122	Mining Coronal Loops in Solar Images from the SOHO collection. , 2007, , .		0
123	A framework for semantic analysis of histopathological images using nonnegative matrix factorization. , 2011, , .		0
124	Visualizing multimodal image collections. , 2013, , .		0
125	An adaptive image representation learned from data for cervix cancer tumor detection. Proceedings of SPIE, 2013, , .	0.8	0
126	Image indexing using regularized online non-negative semantic embedding. Intelligent Data Analysis, 2014, 18, S101-S114.	0.9	0

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127	What You Need to Know About Artificial Intelligence: Technical Introduction. Current Practices in Ophthalmology, 2021, , 13-25.	0.1	0
128	INDIE: An Artificial Immune Network for On-Line Density Estimation. Lecture Notes in Computer Science, 2008, , 254-265.	1.3	0
129	From Biomedical Image Analysis to Biomedical Image Understanding Using Machine Learning. , 2012, , 2010-2034.		0
130	Distributed Cache Strategies for Machine Learning Classification Tasks over Cluster Computing Resources. Communications in Computer and Information Science, 2014, , 43-53.	0.5	0
131	Content-Based Access to Medical Image Collections. Advances in Bioinformatics and Biomedical Engineering Book Series, 0, , 260-282.	0.4	0
132	SOPHIA: System for Ophthalmic Image Acquisition, Transmission, and Intelligent Analysis. Revista Facultad De IngenierÃa, 2019, 29, e11769.	0.2	0