Ignacio A Illan

List of Publications by Year
in descending order

108 papers	2,561 citations	159585 30 h-index	206112 48 g-index
111 all docs	111 docs citations	111 times ranked	2063 citing authors

#	Article	IF	Citations
1	Principal component analysis-based techniques and supervised classification schemes for the early detection of Alzheimer's disease. Neurocomputing, 2011, 74, 1260-1271.	5.9	141
2	NMF-SVM Based CAD Tool Applied to Functional Brain Images for the Diagnosis of Alzheimer's Disease. IEEE Transactions on Medical Imaging, 2012, 31, 207-216.	8.9	132
3	SVM-based computer-aided diagnosis of the Alzheimer's disease using t-test NMSE feature selection with feature correlation weighting. Neuroscience Letters, 2009, 461, 293-297.	2.1	123
4	Computer-aided diagnosis of Alzheimerâ€™s type dementia combining support vector machines and discriminant set of features. Information Sciences, 2013, 237, 59-72.	6.9	111
5	Computer aided diagnosis system for the Alzheimer's disease based on partial least squares and random forest SPECT image classification. Neuroscience Letters, 2010, 472, 99-103.	2.1	110
6	SVM-based CAD system for early detection of the Alzheimer's disease using kernel PCA and LDA. Neuroscience Letters, 2009, 464, 233-238.	2.1	107
7	18F-FDG PET imaging analysis for computer aided Alzheimerâ€™s diagnosis. Information Sciences, 2011, 181, 903-916.	6.9	101
8	Automatic assistance to ParkinsonËˆs disease diagnosis in DaTSCAN SPECT imaging. Medical Physics, 2012, 39, 5971-5980.	3.0	92
9	Automatic tool for Alzheimer's disease diagnosis using PCA and Bayesian classification rules. Electronics Letters, 2009, 45, 389.	1.0	82
10	Independent Component Analysis-Support Vector Machine-Based Computer-Aided Diagnosis System for Alzheimerâ€™s with Visual Support. International Journal of Neural Systems, 2017, 27, 1650050.	5.2	74
11	Ensemble of random forests One vs. Rest classifiers for MCI and AD prediction using ANOVA cortical and subcortical feature selection and partial least squares. Journal of Neuroscience Methods, 2018, 302, 47-57.	2.5	69
12	Digital image analysis for automatic enumeration of malaria parasites using morphological operations. Expert Systems With Applications, 2015, 42, 3041-3047.	7.6	65
13	Feature selection using factor analysis for Alzheimer's diagnosis using PET images. Medical Physics, 2010, 37, 6084-6095.	3.0	63
14	Application of Empirical Mode Decomposition (EMD) on DaTSCAN SPECT images to explore Parkinson Disease. Expert Systems With Applications, 2013, 40, 2756-2766.	7.6	63
15	Computer aided diagnosis of Alzheimerâ€™s disease using component based SVM. Applied Soft Computing Journal, 2011, 11, 2376-2382.	7.2	59
16	Alzheimer's diagnosis using eigenbrains and support vector machines. Electronics Letters, 2009, 45, 342.	1.0	56
17	Improved Parkinsonism diagnosis using a partial least squares based approach. Medical Physics, 2012, 39, 4395-4403.	3.0	55
18	A comparative study of feature extraction methods for the diagnosis of Alzheimer's disease using the ADNI database. Neurocomputing, 2012, 75, 64-71.	5.9	55

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19	Exploratory graphical models of functional and structural connectivity patterns for Alzheimer's Disease diagnosis. Frontiers in Computational Neuroscience, 2015, 9, 132.	2.1	51
20	Computer-aided diagnosis of Alzheimer's disease using support vector machines and classification trees. Physics in Medicine and Biology, 2010, 55, 2807-2817.	3.0	50
21	Automatic detection of Parkinsonism using significance measures and component analysis in DaTSCAN imaging. Neurocomputing, 2014, 126, 58-70.	5.9	49
22	Linear intensity normalization of FP-CIT SPECT brain images using the Î±-stable distribution. NeuroImage, 2013, 65, 449-455.	4.2	45
23	Classification of functional brain images using a GMM-based multi-variate approach. Neuroscience Letters, 2010, 474, 58-62.	2.1	40
24	Early diagnosis of Alzheimerâ€™s disease based on Partial Least Squares and Support Vector Machine. Expert Systems With Applications, 2013, 40, 677-683.	7.6	39
25	Projecting independent components of SPECT images for computer aided diagnosis of Alzheimerâ€™s disease. Pattern Recognition Letters, 2010, 31, 1342-1347.	4.2	38
26	Analysis of SPECT brain images for the diagnosis of Alzheimer's disease using moments and support vector machines. Neuroscience Letters, 2009, 461, 60-64.	2.1	35
27	SPECT image classification using random forests. Electronics Letters, 2009, 45, 604.	1.0	35
28	Efficient mining of association rules for the early diagnosis of Alzheimer's disease. Physics in Medicine and Biology, 2011, 56, 6047-6063.	3.0	34
29	Automatic computer aided diagnosis tool using component-based SVM. , 2008, , .		32
30	Building a FP-CIT SPECT Brain Template Using a Posterization Approach. Neuroinformatics, 2015, 13, 391-402.	2.8	31
31	Case-Based Statistical Learning: A Non-Parametric Implementation With a Conditional-Error Rate SVM. IEEE Access, 2017, 5, 11468-11478.	4.2	31
32	A 3D Convolutional Neural Network Approach for the Diagnosis of Parkinsonâ€™s Disease. Lecture Notes in Computer Science, 2017, , 324-333.	1.3	25
33	Distinguishing Parkinson's disease from atypical parkinsonian syndromes using PET data and a computer system based on support vector machines and Bayesian networks. Frontiers in Computational Neuroscience, 2015, 9, 137.	2.1	23
34	Functional activity maps based on significance measures and Independent Component Analysis. Computer Methods and Programs in Biomedicine, 2013, 111, 255-268.	4.7	19
35	Optimized One vs One Approach in Multiclass Classification for Early Alzheimerâ€™s Disease and Mild Cognitive Impairment Diagnosis. IEEE Access, 2020, 8, 96981-96993.	4.2	19
36	Statistical Agnostic Mapping: A framework in neuroimaging based on concentration inequalities. Information Fusion, 2021, 66, 198-212.	19.1	19

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37	Analysis of SPECT brain images for the diagnosis of Alzheimer's disease based on NMF for feature extraction. Neuroscience Letters, 2010, 479, 192-196.	2.1	18
38	Functional brain image classification using association rules defined over discriminant regions. Pattern Recognition Letters, 2012, 33, 1666-1672.	4.2	18
39	On the empirical mode decomposition applied to the analysis of brain SPECT images. Expert Systems With Applications, 2012, 39, 13451-13461.	7.6	17
40	Autosomal dominantly inherited alzheimer disease: Analysis of genetic subgroups by machine learning. Information Fusion, 2020, 58, 153-167.	19.1	17
41	Functional Brain Imaging Synthesis Based on Image Decomposition and Kernel Modeling: Application to Neurodegenerative Diseases. Frontiers in Neuroinformatics, 2017, 11, 65.	2.5	15
42	Spatial component analysis of MRI data for Alzheimer's disease diagnosis: a Bayesian network approach. Frontiers in Computational Neuroscience, 2014, 8, 156.	2.1	14
43	A semi-supervised learning approach for model selection based on class-hypothesis testing. Expert Systems With Applications, 2017, 90, 40-49.	7.6	14
44	Automated Detection and Segmentation of Nonmass-Enhancing Breast Tumors with Dynamic Contrast-Enhanced Magnetic Resonance Imaging. Contrast Media and Molecular Imaging, 2018, 2018, 1-11.	0.8	14
45	Computer aided diagnosis of the Alzheimer's disease combining SPECT-based feature selection and random forest classifiers. , 2009, , .		13
46	Alzheimer's disease detection in functional images using 2D Gabor wavelet analysis. Electronics Letters, 2010, 46, 556.	1.0	13
47	Intensity normalization in the analysis of functional DaTSCAN SPECT images: The Î±-stable distribution-based normalization method vs other approaches. Neurocomputing, 2015, 150, 4-15.	5.9	13
48	Alzheimerâ€™s Diagnosis Using Eigenbrains and Support Vector Machines. Lecture Notes in Computer Science, 2009, , 973-980.	1.3	11
49	FDG and PIB biomarker PET analysis for the Alzheimer's disease detection using Association Rules. , 2012, , .		10
50	Dynamical Graph Theory Networks Methods for the Analysis of Sparse Functional Connectivity Networks and for Determining Pinning Observability in Brain Networks. Frontiers in Computational Neuroscience, 2017, 11, 87.	2.1	10
51	Periodogram Connectivity of EEG Signals for the Detection of Dyslexia. Lecture Notes in Computer Science, 2019, , 350-359.	1.3	9
52	Granger causality-based information fusion applied to electrical measurements from power transformers. Information Fusion, 2020, 57, 59-70.	19.1	9
53	Automatic System for Alzheimerâ€™s Disease Diagnosis Using Eigenbrains and Bayesian Classification Rules. Lecture Notes in Computer Science, 2009, , 949-956.	1.3	9
54	Selecting Regions of Interest in SPECT Images Using Wilcoxon Test for the Diagnosis of Alzheimerâ€™s Disease. Lecture Notes in Computer Science, 2010, , 446-451.	1.3	9

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55	Effective Diagnosis of Alzheimerâ€™s Disease by Means of Association Rules. Lecture Notes in Computer Science, 2010, , 452-459.	1.3	9
56	Multivariate approaches for Alzheimer's disease diagnosis using Bayesian classifiers. , 2009, , .		8
57	Bilateral symmetry aspects in computer-aided Alzheimer's disease diagnosis by single-photon emission-computed tomography imaging. Artificial Intelligence in Medicine, 2012, 56, 191-198.	6.5	8
58	Texture Features Based Detection of Parkinsonâ€™s Disease on DaTSCAN Images. Lecture Notes in Computer Science, 2013, , 266-277.	1.3	8
59	Early Detection of the Alzheimer Disease Combining Feature Selection and Kernel Machines. Lecture Notes in Computer Science, 2009, , 410-417.	1.3	8
60	On the gauge invariance and coordinate transformations of non-abelian D-brane actions. Journal of High Energy Physics, 2005, 2005, 022-022.	4.7	7
61	Neurological image classification for the Alzheimer's Disease diagnosis using Kernel PCA and Support Vector Machines. , 2009, , .		7
62	SPECT image classification based on NMSE feature correlation weighting and SVM. , 2009, , .		7
63	Automatic Classification System for the Diagnosis of Alzheimer Disease Using Component-Based SVM Aggregations. Lecture Notes in Computer Science, 2009, , 402-409.	1.3	7
64	Early Alzheimer's disease diagnosis using partial least squares and random forests. , 2010, , .		6
65	Effective diagnosis of Alzheimerâ€™s disease by means of large margin-based methodology. BMC Medical Informatics and Decision Making, 2012, 12, 79.	3.0	6
66	Independent Component Analysis-Based Classification of Alzheimerâ€™s Disease from Segmented MRI Data. Lecture Notes in Computer Science, 2015, , 78-87.	1.3	6
67	Functional Brain Image Classification Techniques for Early Alzheimer Disease Diagnosis. Lecture Notes in Computer Science, 2009, , 150-157.	1.3	5
68	Machine learning for very early Alzheimer's Disease diagnosis; a ¹⁸F-FDG and PiB PET comparison. , 2010, , .		4
69	Two approaches to selecting set of voxels for the diagnosis of AlzheimerÊ¼s disease using brain SPECT images. , 2011, 21, 746-755.		4
70	Effective Detection of the Alzheimer Disease by Means of Coronal NMSE SVM Feature Classification. Lecture Notes in Computer Science, 2009, , 337-344.	1.3	4
71	Computer Aided Diagnosis of Alzheimer Disease Using Support Vector Machines and Classification Trees. Lecture Notes in Computer Science, 2009, , 418-425.	1.3	4
72	Machine learning for accurate differentiation of benign and malignant breast tumors presenting as non-mass enhancement. , 2018, , .		4

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73	Evaluating Alzheimerâ€™s Disease Diagnosis Using Texture Analysis. Communications in Computer and Information Science, 2017, , 470-481.	0.5	4
74	Skewness as feature for the diagnosis of Alzheimer's disease using SPECT images. , 2009, , .		3
75	Improving the Convergence Rate in Affine Registration of PET and SPECT Brain Images Using Histogram Equalization. Computational and Mathematical Methods in Medicine, 2013, 2013, 1-8.	1.3	3
76	A Volumetric Radial LBP Projection of MRI Brain Images for the Diagnosis of Alzheimerâ€™s Disease. Lecture Notes in Computer Science, 2015, , 19-28.	1.3	3
77	Comparison Between Affine and Non-affine Transformations Applied to I$$^{[123]}$$-FP-CIT SPECT Images Used for Parkinsonâ€™s Disease Diagnosis. Lecture Notes in Computer Science, 2019, , 379-388.	1.3	3
78	Automatic Separation of Parkinsonian Patients and Control Subjects Based on the Striatal Morphology. Lecture Notes in Computer Science, 2017, , 345-352.	1.3	3
79	Effective Diagnosis of Alzheimerâ€™s Disease by Means of Distance Metric Learning and Random Forest. Lecture Notes in Computer Science, 2011, , 59-67.	1.3	3
80	Automatic selection of ROIs using a model-based clustering approach. , 2009, , .		2
81	DIELECTRIC BRANES IN NONTRIVIAL BACKGROUNDS. Modern Physics Letters A, 2009, 24, 1411-1424.	1.2	2
82	Intensity normalization of FP-CIT SPECT in patients with Parkinsonism using the α-stable distribution. , 2012, , .		2
83	MRI brain segmentation using hidden Markov random fields with alpha-stable distributions. , 2016, , .		2
84	Case-based statistical learning applied to SPECT image classification. , 2017, , .		2
85	fMRI data analysis using a novel clustering technique. , 2009, , .		1
86	Empirical Mode Decomposition as a feature extraction method for Alzheimer's Disease Diagnosis. , 2012, , .		1
87	PETRA: A web-based system supporting computer aided diagnosis of alzheimer's disease. , 2016, , .		1
88	A Heavy Tailed Expectation Maximization Hidden Markov Random Field Model with Applications to Segmentation of MRI. Frontiers in Neuroinformatics, 2017, 11, 66.	2.5	1
89	Support Vector Machine Failure in Imbalanced Datasets. Lecture Notes in Computer Science, 2019, , 412-419.	1.3	1
90	On a Heavy-Tailed Intensity Normalization of the Parkinsonâ€™s Progression Markers Initiative Brain Database. Lecture Notes in Computer Science, 2017, , 298-304.	1.3	1

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91	Selecting Regions of Interest for the Diagnosis of Alzheimerâ€™s Disease in Brain SPECT Images Using Welchâ€™s t-Test. Lecture Notes in Computer Science, 2009, , 965-972.	1.3	1
92	Partial Least Squares for Feature Extraction of SPECT Images. Lecture Notes in Computer Science, 2010, , 476-483.	1.3	1
93	NESTED 3D NEURAL NETWORKS FOR KIDNEY AND TUMOR SEGMENTATION. , 0, , .		1
94	Exploring Symmetry to Assist Alzheimerâ€™s Disease Diagnosis. Lecture Notes in Computer Science, 2010, , 516-523.	1.3	1
95	Improving the convergence rate in affine registration of PET brain images using histogram matching. , 2010, , .		0
96	Erratum for â€˜Alzheimer's disease detection in functional images using 2D Gabor wavelet analysisâ€™. Electronics Letters, 2010, 46, 1038.	1.0	0
97	Simulating functional brain images in Alzheimer's disease. , 2016, , .		0
98	Statistical feature selection and classification models for Alzheimer's disease progression assessment. , 2016, , .		0
99	Case-Based Statistical Learning: A Non Parametric Implementation Applied to SPECT Images. Lecture Notes in Computer Science, 2017, , 305-313.	1.3	0
100	Case-Based Support Vector Optimization for Medical-Imaging Imbalanced Datasets. Advances in Intelligent Systems and Computing, 2019, , 221-229.	0.6	0
101	Selecting Regions of Interest for the Diagnosis of Alzheimer Using Brain SPECT Images. Lecture Notes in Computer Science, 2009, , 399-406.	1.3	0
102	Analysis of Brain SPECT Images for the Diagnosis of Alzheimer Disease Using First and Second Order Moments. Lecture Notes in Computer Science, 2009, , 124-133.	1.3	0
103	NMF-Based Analysis of SPECT Brain Images for the Diagnosis of Alzheimerâ€™s Disease. Lecture Notes in Computer Science, 2010, , 468-475.	1.3	0
104	Early Computer Aided Diagnosis of Parkinsonâ€™s Disease Based on Nearest Neighbor Strategy and striatum Activation Threshold. Lecture Notes in Computer Science, 2013, , 258-265.	1.3	0
105	Automatic Orientation of Functional Brain Images for Multiplataform Software. Lecture Notes in Computer Science, 2013, , 406-411.	1.3	0
106	Tree-Based Ensemble Learning Techniques in the Analysis of Parkinsonian Syndromes. Communications in Computer and Information Science, 2017, , 459-469.	0.5	0
107	Reproducible Evaluation of Registration Algorithms for Movement Correction in Dynamic Contrast Enhancing Magnetic Resonance Imaging for Breast Cancer Diagnosis. Lecture Notes in Computer Science, 2018, , 124-131.	1.3	0
108	Estimating the Severity of Alzheimer's Disease Using Convolutional Neural Networks and Magnetic Resonance Imaging Data. , 2020, , .		0