

Ignacio A Illan

List of Publications by Year in descending order

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Version: 2024-02-01

108
papers

2,561
citations

159358

30
h-index

205818

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. <i>Neurocomputing</i> , 2011, 74, 1260-1271.	3.5	141
2	NMF-SVM Based CAD Tool Applied to Functional Brain Images for the Diagnosis of Alzheimer's Disease. <i>IEEE Transactions on Medical Imaging</i> , 2012, 31, 207-216.	5.4	132
3	SVM-based computer-aided diagnosis of the Alzheimer's disease using t-test NMSE feature selection with feature correlation weighting. <i>Neuroscience Letters</i> , 2009, 461, 293-297.	1.0	123
4	Computer-aided diagnosis of Alzheimer's type dementia combining support vector machines and discriminant set of features. <i>Information Sciences</i> , 2013, 237, 59-72.	4.0	111
5	Computer aided diagnosis system for the Alzheimer's disease based on partial least squares and random forest SPECT image classification. <i>Neuroscience Letters</i> , 2010, 472, 99-103.	1.0	110
6	SVM-based CAD system for early detection of the Alzheimer's disease using kernel PCA and LDA. <i>Neuroscience Letters</i> , 2009, 464, 233-238.	1.0	107
7	18F-FDG PET imaging analysis for computer aided Alzheimer's diagnosis. <i>Information Sciences</i> , 2011, 181, 903-916.	4.0	101
8	Automatic assistance to Parkinson's disease diagnosis in DaTSCAN SPECT imaging. <i>Medical Physics</i> , 2012, 39, 5971-5980.	1.6	92
9	Automatic tool for Alzheimer's disease diagnosis using PCA and Bayesian classification rules. <i>Electronics Letters</i> , 2009, 45, 389.	0.5	82
10	Independent Component Analysis-Support Vector Machine-Based Computer-Aided Diagnosis System for Alzheimer's with Visual Support. <i>International Journal of Neural Systems</i> , 2017, 27, 1650050.	3.2	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. <i>Journal of Neuroscience Methods</i> , 2018, 302, 47-57.	1.3	69
12	Digital image analysis for automatic enumeration of malaria parasites using morphological operations. <i>Expert Systems With Applications</i> , 2015, 42, 3041-3047.	4.4	65
13	Feature selection using factor analysis for Alzheimer's diagnosis using PET images. <i>Medical Physics</i> , 2010, 37, 6084-6095.	1.6	63
14	Application of Empirical Mode Decomposition (EMD) on DaTSCAN SPECT images to explore Parkinson Disease. <i>Expert Systems With Applications</i> , 2013, 40, 2756-2766.	4.4	63
15	Computer aided diagnosis of Alzheimer's disease using component based SVM. <i>Applied Soft Computing Journal</i> , 2011, 11, 2376-2382.	4.1	59
16	Alzheimer's diagnosis using eigenbrains and support vector machines. <i>Electronics Letters</i> , 2009, 45, 342.	0.5	56
17	Improved Parkinsonism diagnosis using a partial least squares based approach. <i>Medical Physics</i> , 2012, 39, 4395-4403.	1.6	55
18	A comparative study of feature extraction methods for the diagnosis of Alzheimer's disease using the ADNI database. <i>Neurocomputing</i> , 2012, 75, 64-71.	3.5	55

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19	Exploratory graphical models of functional and structural connectivity patterns for Alzheimer's Disease diagnosis. <i>Frontiers in Computational Neuroscience</i> , 2015, 9, 132.	1.2	51
20	Computer-aided diagnosis of Alzheimer's disease using support vector machines and classification trees. <i>Physics in Medicine and Biology</i> , 2010, 55, 2807-2817.	1.6	50
21	Automatic detection of Parkinsonism using significance measures and component analysis in DaTSCAN imaging. <i>Neurocomputing</i> , 2014, 126, 58-70.	3.5	49
22	Linear intensity normalization of FP-CIT SPECT brain images using the $\hat{\mu}$ -stable distribution. <i>NeuroImage</i> , 2013, 65, 449-455.	2.1	45
23	Classification of functional brain images using a GMM-based multi-variate approach. <i>Neuroscience Letters</i> , 2010, 474, 58-62.	1.0	40
24	Early diagnosis of Alzheimer's disease based on Partial Least Squares and Support Vector Machine. <i>Expert Systems With Applications</i> , 2013, 40, 677-683.	4.4	39
25	Projecting independent components of SPECT images for computer aided diagnosis of Alzheimer's disease. <i>Pattern Recognition Letters</i> , 2010, 31, 1342-1347.	2.6	38
26	Analysis of SPECT brain images for the diagnosis of Alzheimer's disease using moments and support vector machines. <i>Neuroscience Letters</i> , 2009, 461, 60-64.	1.0	35
27	SPECT image classification using random forests. <i>Electronics Letters</i> , 2009, 45, 604.	0.5	35
28	Efficient mining of association rules for the early diagnosis of Alzheimer's disease. <i>Physics in Medicine and Biology</i> , 2011, 56, 6047-6063.	1.6	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. <i>Neuroinformatics</i> , 2015, 13, 391-402.	1.5	31
31	Case-Based Statistical Learning: A Non-Parametric Implementation With a Conditional-Error Rate SVM. <i>IEEE Access</i> , 2017, 5, 11468-11478.	2.6	31
32	A 3D Convolutional Neural Network Approach for the Diagnosis of Parkinson's Disease. <i>Lecture Notes in Computer Science</i> , 2017, , 324-333.	1.0	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. <i>Frontiers in Computational Neuroscience</i> , 2015, 9, 137.	1.2	23
34	Functional activity maps based on significance measures and Independent Component Analysis. <i>Computer Methods and Programs in Biomedicine</i> , 2013, 111, 255-268.	2.6	19
35	Optimized One vs One Approach in Multiclass Classification for Early Alzheimer's Disease and Mild Cognitive Impairment Diagnosis. <i>IEEE Access</i> , 2020, 8, 96981-96993.	2.6	19
36	Statistical Agnostic Mapping: A framework in neuroimaging based on concentration inequalities. <i>Information Fusion</i> , 2021, 66, 198-212.	11.7	19

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37	Analysis of SPECT brain images for the diagnosis of Alzheimer's disease based on NMF for feature extraction. <i>Neuroscience Letters</i> , 2010, 479, 192-196.	1.0	18
38	Functional brain image classification using association rules defined over discriminant regions. <i>Pattern Recognition Letters</i> , 2012, 33, 1666-1672.	2.6	18
39	On the empirical mode decomposition applied to the analysis of brain SPECT images. <i>Expert Systems With Applications</i> , 2012, 39, 13451-13461.	4.4	17
40	Autosomal dominantly inherited alzheimer disease: Analysis of genetic subgroups by machine learning. <i>Information Fusion</i> , 2020, 58, 153-167.	11.7	17
41	Functional Brain Imaging Synthesis Based on Image Decomposition and Kernel Modeling: Application to Neurodegenerative Diseases. <i>Frontiers in Neuroinformatics</i> , 2017, 11, 65.	1.3	15
42	Spatial component analysis of MRI data for Alzheimer's disease diagnosis: a Bayesian network approach. <i>Frontiers in Computational Neuroscience</i> , 2014, 8, 156.	1.2	14
43	A semi-supervised learning approach for model selection based on class-hypothesis testing. <i>Expert Systems With Applications</i> , 2017, 90, 40-49.	4.4	14
44	Automated Detection and Segmentation of Nonmass-Enhancing Breast Tumors with Dynamic Contrast-Enhanced Magnetic Resonance Imaging. <i>Contrast Media and Molecular Imaging</i> , 2018, 2018, 1-11.	0.4	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. <i>Electronics Letters</i> , 2010, 46, 556.	0.5	13
47	Intensity normalization in the analysis of functional DaTSCAN SPECT images: The $\hat{\mu}$ -stable distribution-based normalization method vs other approaches. <i>Neurocomputing</i> , 2015, 150, 4-15.	3.5	13
48	Alzheimer's Diagnosis Using Eigenbrains and Support Vector Machines. <i>Lecture Notes in Computer Science</i> , 2009, , 973-980.	1.0	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. <i>Frontiers in Computational Neuroscience</i> , 2017, 11, 87.	1.2	10
51	Periodogram Connectivity of EEG Signals for the Detection of Dyslexia. <i>Lecture Notes in Computer Science</i> , 2019, , 350-359.	1.0	9
52	Granger causality-based information fusion applied to electrical measurements from power transformers. <i>Information Fusion</i> , 2020, 57, 59-70.	11.7	9
53	Automatic System for Alzheimer's Disease Diagnosis Using Eigenbrains and Bayesian Classification Rules. <i>Lecture Notes in Computer Science</i> , 2009, , 949-956.	1.0	9
54	Selecting Regions of Interest in SPECT Images Using Wilcoxon Test for the Diagnosis of Alzheimer's Disease. <i>Lecture Notes in Computer Science</i> , 2010, , 446-451.	1.0	9

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55	Effective Diagnosis of Alzheimer's Disease by Means of Association Rules. Lecture Notes in Computer Science, 2010, , 452-459.	1.0	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.	3.8	8
58	Texture Features Based Detection of Parkinson's Disease on DaTSCAN Images. Lecture Notes in Computer Science, 2013, , 266-277.	1.0	8
59	Early Detection of the Alzheimer Disease Combining Feature Selection and Kernel Machines. Lecture Notes in Computer Science, 2009, , 410-417.	1.0	8
60	On the gauge invariance and coordinate transformations of non-abelian D-brane actions. Journal of High Energy Physics, 2005, 2005, 022-022.	1.6	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.	1.0	7
64	Early Alzheimer's disease diagnosis using partial least squares and random forests. , 2010, , .		6
65	Effective diagnosis of Alzheimer's disease by means of large margin-based methodology. BMC Medical Informatics and Decision Making, 2012, 12, 79.	1.5	6
66	Independent Component Analysis-Based Classification of Alzheimer's Disease from Segmented MRI Data. Lecture Notes in Computer Science, 2015, , 78-87.	1.0	6
67	Functional Brain Image Classification Techniques for Early Alzheimer Disease Diagnosis. Lecture Notes in Computer Science, 2009, , 150-157.	1.0	5
68	Machine learning for very early Alzheimer's Disease diagnosis; a ¹⁸ F-FDG and PiB PET comparison. , 2010, , .		4
69	Two approaches to selecting set of voxels for the diagnosis of Alzheimer's 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.	1.0	4
71	Computer Aided Diagnosis of Alzheimer Disease Using Support Vector Machines and Classification Trees. Lecture Notes in Computer Science, 2009, , 418-425.	1.0	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 Alzheimer's Disease Diagnosis Using Texture Analysis. Communications in Computer and Information Science, 2017, , 470-481.	0.4	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.	0.7	3
76	A Volumetric Radial LBP Projection of MRI Brain Images for the Diagnosis of Alzheimer's Disease. Lecture Notes in Computer Science, 2015, , 19-28.	1.0	3
77	Comparison Between Affine and Non-affine Transformations Applied to ^{123}I -FP-CIT SPECT Images Used for Parkinson's Disease Diagnosis. Lecture Notes in Computer Science, 2019, , 379-388.	1.0	3
78	Automatic Separation of Parkinsonian Patients and Control Subjects Based on the Striatal Morphology. Lecture Notes in Computer Science, 2017, , 345-352.	1.0	3
79	Effective Diagnosis of Alzheimer's Disease by Means of Distance Metric Learning and Random Forest. Lecture Notes in Computer Science, 2011, , 59-67.	1.0	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.	0.5	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.	1.3	1
89	Support Vector Machine Failure in Imbalanced Datasets. Lecture Notes in Computer Science, 2019, , 412-419.	1.0	1
90	On a Heavy-Tailed Intensity Normalization of the Parkinson's Progression Markers Initiative Brain Database. Lecture Notes in Computer Science, 2017, , 298-304.	1.0	1

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91	Selecting Regions of Interest for the Diagnosis of Alzheimer's Disease in Brain SPECT Images Using Welch's t-Test. Lecture Notes in Computer Science, 2009, , 965-972.	1.0	1
92	Partial Least Squares for Feature Extraction of SPECT Images. Lecture Notes in Computer Science, 2010, , 476-483.	1.0	1
93	NESTED 3D NEURAL NETWORKS FOR KIDNEY AND TUMOR SEGMENTATION. , 0, , .		1
94	Exploring Symmetry to Assist Alzheimer's Disease Diagnosis. Lecture Notes in Computer Science, 2010, , 516-523.	1.0	1
95	Improving the convergence rate in affine registration of PET brain images using histogram matching. , 2010, , .		0
96	Erratum for "Alzheimer's disease detection in functional images using 2D Gabor wavelet analysis". Electronics Letters, 2010, 46, 1038.	0.5	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.	1.0	0
100	Case-Based Support Vector Optimization for Medical-Imaging Imbalanced Datasets. Advances in Intelligent Systems and Computing, 2019, , 221-229.	0.5	0
101	Selecting Regions of Interest for the Diagnosis of Alzheimer Using Brain SPECT Images. Lecture Notes in Computer Science, 2009, , 399-406.	1.0	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.	1.0	0
103	NMF-Based Analysis of SPECT Brain Images for the Diagnosis of Alzheimer's Disease. Lecture Notes in Computer Science, 2010, , 468-475.	1.0	0
104	Early Computer Aided Diagnosis of Parkinson's Disease Based on Nearest Neighbor Strategy and striatum Activation Threshold. Lecture Notes in Computer Science, 2013, , 258-265.	1.0	0
105	Automatic Orientation of Functional Brain Images for Multiplatform Software. Lecture Notes in Computer Science, 2013, , 406-411.	1.0	0
106	Tree-Based Ensemble Learning Techniques in the Analysis of Parkinsonian Syndromes. Communications in Computer and Information Science, 2017, , 459-469.	0.4	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.	1.0	0
108	Estimating the Severity of Alzheimer's Disease Using Convolutional Neural Networks and Magnetic Resonance Imaging Data. , 2020, , .		0