Pedro GÃ³mez Vilda

List of Publications by Year
in descending order

129 papers	1,864 citations	430874 18 h-index	289244 40 g-index
146 all docs	146 docs citations	146 times ranked	1180 citing authors

#	Article	IF	Citations
1	Dimensionality Reduction of a Pathological Voice Quality Assessment System Based on Gaussian Mixture Models and Short-Term Cepstral Parameters. IEEE Transactions on Biomedical Engineering, 2006, 53, 1943-1953.	4.2	260
2	Automatic Detection of Voice Impairments by Means of Short-Term Cepstral Parameters and Neural Network Based Detectors. IEEE Transactions on Biomedical Engineering, 2004, 51, 380-384.	4.2	213
3	Methodological issues in the development of automatic systems for voice pathology detection. Biomedical Signal Processing and Control, 2006, 1, 120-128.	5.7	141
4	Artificial intelligence within the interplay between natural and artificial computation: Advances in data science, trends and applications. Neurocomputing, 2020, 410, 237-270.	5.9	121
5	Robust and complex approach of pathological speech signal analysis. Neurocomputing, 2015, 167, 94-111.	5.9	101
6	An improved watershed algorithm based on efficient computation of shortest paths. Pattern Recognition, 2007, 40, 1078-1090.	8.1	89
7	Glottal Source biometrical signature for voice pathology detection. Speech Communication, 2009, 51, 759-781.	2.8	86
8	The Effectiveness of the Glottal to Noise Excitation Ratio for the Screening of Voice Disorders. Journal of Voice, 2010, 24, 47-56.	1.5	68
9	A new approach to automatic radiation spectrum analysis. IEEE Transactions on Nuclear Science, 1991, 38, 971-975.	2.0	53
10	Parkinson Disease Detection from Speech Articulation Neuromechanics. Frontiers in Neuroinformatics, 2017, 11, 56.	2.5	43
11	Automatic detection of voice impairments from text-dependent running speech. Biomedical Signal Processing and Control, 2009, 4, 176-182.	5.7	41
12	Application of neural network techniques in gamma spectroscopy. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1992, 312, 167-173.	1.6	39
13	An integrated tool for the diagnosis of voice disorders. Medical Engineering and Physics, 2006, 28, 276-289.	1.7	37
14	Evaluation of Voice Pathology Based on the Estimation of Vocal Fold Biomechanical Parameters. Journal of Voice, 2007, 21, 450-476.	1.5	33
15	Euclidean Distances as measures of speaker similarity including identical twin pairs: A forensic investigation using source and filter voice characteristics. Forensic Science International, 2017, 270, 25-38.	2.2	27
16	Characterizing Neurological Disease from Voice Quality Biomechanical Analysis. Cognitive Computation, 2013, 5, 399-425.	5.2	26
17	Pathological Likelihood Index as a Measurement of the Degree of Voice Normality and Perceived Hoarseness. Journal of Voice, 2010, 24, 667-677.	1.5	24
18	Injection Laryngoplasty Using Autologous Fat Enriched with Adipose-Derived Regenerative Stem Cells: A Safe Therapeutic Option for the Functional Reconstruction of the Glottal Gap after Unilateral Vocal Fold Paralysis. Stem Cells International, 2018, 2018, 1-15.	2.5	18

#	Article	IF	Citations
19	Quantitative Analysis of Relationship Between Hypokinetic Dysarthria and the Freezing of Gait in Parkinsonâ€™s Disease. Cognitive Computation, 2018, 10, 1006-1018.	5.2	18
20	Drift problems in the automatic analysis of gamma-ray spectra using associative memory algorithms. IEEE Transactions on Nuclear Science, 1994, 41, 637-641.	2.0	17
21	Parkinson's disease monitoring by biomechanical instability of phonation. Neurocomputing, 2017, 255, 3-16.	5.9	17
22	Characterization of Parkinsonâ€™s disease dysarthria in terms of speech articulation kinematics. Biomedical Signal Processing and Control, 2019, 52, 312-320.	5.7	17
23	Changes in Phonation and Their Relations with Progress of Parkinsonâ€™s Disease. Applied Sciences (Switzerland), 2018, 8, 2339.	2.5	16
24	A novel pre-processing technique in pathologic voice detection: Application to Parkinsonâ€™s disease phonation. Biomedical Signal Processing and Control, 2021, 68, 102604.	5.7	16
25	Time-frequency representations in speech perception. Neurocomputing, 2009, 72, 820-830.	5.9	15
26	Monitoring amyotrophic lateral sclerosis by biomechanical modeling of speech production. Neurocomputing, 2015, 151, 130-138.	5.9	15
27	MonParLoc: A Speech-Based System for Parkinsonâ€™s Disease Analysis and Monitoring. IEEE Access, 2020, 8, 188243-188255.	4.2	12
28	Improving Speaker Recognition by Biometric Voice Deconstruction. Frontiers in Bioengineering and Biotechnology, 2015, 3, 126.	4.1	11
29	Neuromechanical Modelling of Articulatory Movements from Surface Electromyography and Speech Formants. International Journal of Neural Systems, 2019, 29, 1850039.	5.2	11
30	Neuromorphic detection of speech dynamics. Neurocomputing, 2011, 74, 1191-1202.	5.9	10
31	Towards the search of detection in speechâ€¢relevant features for stress. Expert Systems, 2015, 32, 710-718.	4.5	9
32	Simulating the phonological auditory cortex from vowel representation spaces to categories. Neurocomputing, 2013, 114, 63-75.	5.9	8
33	Phonation biomechanic analysis of Alzheimer׳s Disease cases. Neurocomputing, 2015, 167, 83-93.	5.9	8
34	Kinematic Modelling of Dipthong Articulation. Smart Innovation, Systems and Technologies, 2016, , 53-60.	0.6	8
35	Relating Facial Myoelectric Activity to Speech Formants. Lecture Notes in Computer Science, 2017, , 520-530.	1.3	8
36	ALZUMERIC: A decision support system for diagnosis and monitoring of cognitive impairment. Loquens, 2017, 4, 037.	0.1	8

#	Article	IF	Citations
37	A new superfast bit reversal algorithm. International Journal of Adaptive Control and Signal Processing, 2002, 16, 703-707.	4.1	7
38	Vowel Articulation Dynamic Stability Related to Parkinsonâ€™s Disease Rating Features: Male Dataset. International Journal of Neural Systems, 2019, 29, 1850037.	5.2	7
39	An ICA-based method for stress classification from voice samples. Neural Computing and Applications, 2020, 32, 17887-17897.	5.6	7
40	Acoustic to kinematic projection in Parkinsonâ€™s disease dysarthria. Biomedical Signal Processing and Control, 2021, 66, 102422.	5.7	7
41	Neurological Disease Detection and Monitoring from Voice Production. Lecture Notes in Computer Science, 2011, , 1-8.	1.3	7
42	Computable minimum lattice-like ARMA synthesis. IEEE Transactions on Circuits and Systems, 1988, 35, 577-583.	0.9	6
43	Analysis and Signal Processing of Oesophageal and Pathological Voices. Eurasip Journal on Advances in Signal Processing, 2009, 2009, .	1.7	6
44	Independent component analysis algorithms for microarray data analysis. Intelligent Data Analysis, 2010, 14, 193-206.	0.9	6
45	Biomechanical Description of Phonation in Children Affected by Williams Syndrome. Journal of Voice, 2018, 32, 515.e15-515.e28.	1.5	6
46	A PARCOR characterization of the ear for hearing aids. Proceedings of the IEEE, 1982, 70, 1464-1466.	21.3	5
47	Evidence of Glottal Source Spectral Features found in Vocal Fold Dynamics. , 0, , .		5
48	Mapaci: A Real Time e-Health Application to Assist Throat Complaint Patients. , 2007, , .		5
49	Genomic Microarray Processing on a FPGA for Portable Remote Applications. , 2007, , .		5
50	Voice Characteristics in Smithâ€“Magenis Syndrome: An Acoustic Study of Laryngeal Biomechanics. Languages, 2020, 5, 31.	0.6	5
51	Voice Pathology Detection by Vocal Cord Biomechanical Parameter Estimation. Lecture Notes in Computer Science, 2006, , 242-256.	1.3	5
52	Application of the Lognormal Model to the Vocal Tract Movement to Detect Neurological Diseases in Voice. Smart Innovation, Systems and Technologies, 2016, , 25-35.	0.6	5
53	Speech enhancement and source separation supported by negative beamforming filtering. , 0, , .		4
54	FPGA Implementation of an Adaptive Noise Canceller for Robust Speech Enhancement Interfaces. , 2008, , .		4

#	Article	IF	Citations
55	Monitoring ALS from speech articulation kinematics. Neural Computing and Applications, 2020, 32, 15801-15812.	5.6	4
56	Specificities of phonation biomechanics in Down Syndrome children. Biomedical Signal Processing and Control, 2021, 63, 102219.	5.7	4
57	Robust Preprocessing of Gene Expression Microarrays for Independent Component Analysis. Lecture Notes in Computer Science, 2006, , 714-721.	1.3	4
58	A new algorithm for implementing a recursive neural network. Lecture Notes in Computer Science, 1995, , 252-259.	1.3	4
59	Parkinsonâ€™s Disease Monitoring from Phonation Biomechanics. Lecture Notes in Computer Science, 2015, , 238-248.	1.3	4
60	Study of several parameters for the detection of amyotrophic lateral sclerosis from articulatory movement. Loquens, 2017, 4, 038.	0.1	4
61	PCA of perturbation parameters in voice pathology detection. , 0, , .		4
62	A numerical method based on PadÃ©'s approximation to simulate and design a low-cost auditory filter for speech processing. Simulation Modelling Practice and Theory, 1993, 1, 17-29.	0.3	3
63	Spoken-digit recognition using self-organizing maps with perceptual pre-processing. Lecture Notes in Computer Science, 1997, , 1203-1212.	1.3	3
64	Dynamic adjustment of the forgetting factor in adaptive filters for non-stationary noise cancellation in speech. , 0, , .		3
65	Two way clustering of microarray data using a hybrid approach. , 2011, , .		3
66	Estimating Tremor in Vocal Fold Biomechanics for Neurological Disease Characterization. , 2013, , .		3
67	Phonation and Articulation Analyses in Laryngeal Pathologies, Cleft Lip and Palate, and Parkinsonâ€™s Disease. Lecture Notes in Computer Science, 2017, , 424-434.	1.3	3
68	A Methodology to Differentiate Parkinsonâ€™s Disease and Aging Speech Based on Glottal Flow Acoustic Analysis. International Journal of Neural Systems, 2020, 30, 2050058.	5.2	3
69	Sigma-Lognormal Modeling of Speech. Cognitive Computation, 2021, 13, 488-503.	5.2	3
70	Acoustic Analysis of Phonation in Children With Smithâ€“Magenis Syndrome. Frontiers in Human Neuroscience, 2021, 15, 661392.	2.0	3
71	A Bio-inspired Architecture for Cognitive Audio. Lecture Notes in Computer Science, 2007, , 132-142.	1.3	3
72	KPCA vs. PCA Study for an Age Classification of Speakers. Lecture Notes in Computer Science, 2011, , 190-198.	1.3	3

#	Article	IF	Citations
73	Phonatory and Articulatory Correlates in Kinematic Neuromotor Degeneration. Biosystems and Biorobotics, 2017, , 203-208.	0.3	3
74	Monitoring Parkinson Disease from speech articulation kinematics. Loquens, 2017, 4, 036.	0.1	3
75	A reusable HMM soft-core for isolated word recognition. , 0, , .		2
76	Analysis of emotional stress in voice for deception detection. , 2015, , .		2
77	Performance of Articulation Kinetic Distributions Vs MFCCs in Parkinson's Detection from Vowel Utterances. Smart Innovation, Systems and Technologies, 2020, , 431-441.	0.6	2
78	Evaluating Parkinson's Disease in Voice and Handwriting Using the Same Methodology. Series in Machine Perception and Artificial Intelligence, 2020, , 161-175.	0.1	2
79	A divider-multiplier high level synthesis library element for DSP applications. , 0, , .		1
80	Parallel Root-Finding Method for LPC Analysis of Speech. Lecture Notes in Computer Science, 2004, , 529-536.	1.3	1
81	Spectral perturbation parameters for voice pathology detection. , 0, , .		1
82	Exploring Matrix Factorization Techniques for Classification of Gene Expression Profiles. , 2007, , .		1
83	A methodology for monitoring emotional stress in phonation. , 2014, , .		1
84	Biomechanical characterization of phonation in Alzheimer's Disease. , 2014, , .		1
85	Articulation Characterization in AD Speech Production. Biosystems and Biorobotics, 2017, , 861-866.	0.3	1
86	Evaluating Instability on Phonation in Parkinson's Disease and Aging Speech. Lecture Notes in Computer Science, 2019, , 340-351.	1.3	1
87	Neuroacoustical Stimulation of Parkinson's Disease Patients: A Case Study. Lecture Notes in Computer Science, 2019, , 329-339.	1.3	1
88	A Neuromotor to Acoustical Jaw-Tongue Projection Model With Application in Parkinson's Disease Hypokinetic Dysarthria. Frontiers in Human Neuroscience, 2021, 15, 622825.	2.0	1
89	Monitoring Parkinson's Disease Rehabilitation from Phonation Biomechanics. Biosystems and Biorobotics, 2017, , 93-97.	0.3	1
90	Gender Detection in Running Speech from Glottal and Vocal Tract Correlates. Lecture Notes in Computer Science, 2013, , 25-32.	1.3	1

#	Article	IF	Citations
91	Detection of Speech Dynamics by Neuromorphic Units. Lecture Notes in Computer Science, 2009, , 67-78.	1.3	1
92	Oligonucleotide Microarray Probe Correction by FixedPoint ICA Algorithm. Lecture Notes in Computer Science, 2009, , 988-991.	1.3	1
93	Neuromorphic Detection of Vowel Representation Spaces. Lecture Notes in Computer Science, 2011, , 1-11.	1.3	1
94	An automatic speech recognition system using time‐delays self‐organizing maps with physiological parametric extraction. Journal of the Acoustical Society of America, 1997, 102, 3165-3165.	1.1	1
95	Subject-independent acoustic-to-articulatory mapping of fricative sounds by using vocal tract length normalization. Revista Facultad De Ingenierᴬa, 2015, , .	0.5	1
96	Biomarkers of Neurodegenerative Progression from Spontaneous Speech Recorded in Mobile Devices: An Approach based on Articulation Speed Estimation. , 2018, , .		1
97	A biological front-end processing for speech recognition. Lecture Notes in Computer Science, 1997, , 1058-1067.	1.3	0
98	Non supervised neural net applied to the detection of voice impairment. , 0, , .		0
99	DOA Detection from HOS by FOD Beamforming and Joint-Process Estimation. Lecture Notes in Computer Science, 2004, , 824-831.	1.3	0
100	Low-pass frequency-domain filtering-of oligonucleotide microarray data images. , 0, , .		0
101	Biometrical Speaker Description From Vocal Cord Parameterization. , 0, , .		0
102	Robust cDNA microarray image processing on a hand-held device. , 2006, , .		0
103	An FPGA-based genetic microarray processing device. , 2006, , .		0
104	A hardware experimental platform for neural circuits in the auditory cortex. Proceedings of SPIE, 2011, , .	0.8	0
105	Glottal parameter estimation by wavelet transform for voice biometry. , 2011, , .		0
106	Combined unsupervised biclustering of microarray data. , 2012, , .		0
107	Wavelet description of the Glottal Gap. , 2013, , .		0
108	Combined Clustering Methods for Microarray Data Analysis. Advanced Engineering Forum, 0, 8-9, 508-515.	0.3	0

#	Article	IF	Citations
109	Assessing a set of glottal features from vocal fold biomechanics for detecting vocal pathology. , 2015, , .		0
110	Monitoring Parkinson's Disease from phonation improvement by Log Likelihood Ratios. , 2015, , .		0
111	Monitoring Progress of Parkinson's Disease Based on Changes in Phonation: a Pilot Study. , 2018, , .		0
112	Estimating Facial Neuromotor Activity from sEMG and Accelerometry for Speech Articulation. , 2018, , .		0
113	Assessing an Application of Spontaneous Stressed Speech - Emotions Portal. Lecture Notes in Computer Science, 2019, , 149-160.	1.3	0
114	Editorial: Multimodal Tracking of Functional Data in Parkinson's Disease and Related Disordersâ€"Speech and Language Neuromotor and Cognitive Assessment. Frontiers in Human Neuroscience, 2021, 15, 750075.	2.0	0
115	Robust Processing of Microarray Data by Independent Component Analysis. Lecture Notes in Computer Science, 2005, , 1051-1058.	1.3	0
116	Automatic Detection of Laryngeal Pathology on Sustained Vowels Using Short-Term Cepstral Parameters: Analysis of Performance and Theoretical Justification. Communications in Computer and Information Science, 2008, , 228-241.	0.5	0
117	Modeling Short-Time Parsing of Speech Features in Neocortical Structures. Lecture Notes in Computer Science, 2010, , 159-168.	1.3	0
118	GLOTTAL SOURCE ASYMMETRY ESTIMATION BY ICA. , 2011, , .		0
119	Monitoring Neurological Disease in Phonation. Lecture Notes in Computer Science, 2011, , 136-147.	1.3	0
120	Characterization of Speech from Amyotrophic Lateral Sclerosis by Neuromorphic Processing. Lecture Notes in Computer Science, 2013, , 212-224.	1.3	0
121	Phonation Biomechanics in Quantifying Parkinsonâ€™s Disease Symptom Severity. Smart Innovation, Systems and Technologies, 2016, , 93-102.	0.6	0
122	Assessing a Set of Glottal Features from Vocal Fold Biomechanics. Smart Innovation, Systems and Technologies, 2016, , 209-217.	0.6	0
123	Vowel Articulation Distortion in Parkinsonâ€™s Disease. Lecture Notes in Computer Science, 2017, , 21-31.	1.3	0
124	Biomedical applications of voice and speech processing. Loquens, 2017, 4, 035.	0.1	0
125	What voice tells us about genetic syndromes: The case of Williams syndrome. Loquens, 2017, 4, 039.	0.1	0
126	Distinguishing Aging Clusters and Mobile Devices by Hand-Wrist Articulation: A Case of Study. Lecture Notes in Computer Science, 2019, , 11-21.	1.3	0

#	Article	IF	Citations
127	Neuromorphic Speech Processing. , 0, , 447-473.		0
128	Estimating the Dispersion of the Biometric Glottal Signature in Continuous Speech. , 2007, , 255-262.		0
129	A Matrix Factorization Classifier for Knowledge-Based Microarray Analysis. Advances in Soft Computing, 0, , 137-146.	0.4	0