Tiago H Falk

List of Publications by Year in descending order

Source: https://exaly.com/author-pdf/5142964/publications.pdf

Version: 2024-02-01

186265 175258 161 3,858 28 52 citations h-index g-index papers 164 164 164 3089 docs citations times ranked citing authors all docs

#	Article	IF	CITATIONS
1	Automatic speech emotion recognition using modulation spectral features. Speech Communication, 2011, 53, 768-785.	2.8	309
2	A Non-Intrusive Quality and Intelligibility Measure of Reverberant and Dereverberated Speech. IEEE Transactions on Audio Speech and Language Processing, 2010, 18, 1766-1774.	3.2	262
3	Systematic Review on Resting-State EEG for Alzheimer's Disease Diagnosis and Progression Assessment. Disease Markers, 2018, 2018, 1-26.	1.3	195
4	Classification of prefrontal activity due to mental arithmetic and music imagery using hidden Markov models and frequency domain near-infrared spectroscopy. Journal of Neural Engineering, 2010, 7, 026002.	3.5	134
5	A comprehensive survey on multimodal medical signals fusion for smart healthcare systems. Information Fusion, 2021, 76, 355-375.	19.1	119
6	Speech Quality Estimation: Models and Trends. IEEE Signal Processing Magazine, 2011, 28, 18-28.	5.6	108
7	Objective Quality and Intelligibility Prediction for Users of Assistive Listening Devices: Advantages and limitations of existing tools. IEEE Signal Processing Magazine, 2015, 32, 114-124.	5.6	96
8	Context awareness in WBANs: a survey on medical and non-medical applications. IEEE Wireless Communications, 2013, 20, 30-37.	9.0	94
9	Relevance vector classifier decision fusion and EEG graph-theoretic features for automatic affective state characterization. Neurocomputing, 2016, 174, 875-884.	5.9	83
10	Modulation Spectral Features for Robust Far-Field Speaker Identification. IEEE Transactions on Audio Speech and Language Processing, 2010, 18, 90-100.	3.2	75
11	Performance measurement for brain–computer or brain–machine interfaces: a tutorial. Journal of Neural Engineering, 2014, 11, 035001.	3.5	71
12	Characterizing Alzheimer's Disease Severity via Resting-Awake EEG Amplitude Modulation Analysis. PLoS ONE, 2013, 8, e72240.	2.5	70
13	Characterization of atypical vocal source excitation, temporal dynamics and prosody for objective measurement of dysarthric word intelligibility. Speech Communication, 2012, 54, 622-631.	2.8	69
14	Taking NIRS-BCIs Outside the Lab: Towards Achieving Robustness Against Environment Noise. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2011, 19, 136-146.	4.9	66
15	Audio-Visual Multimedia Quality Assessment: A Comprehensive Survey. IEEE Access, 2017, 5, 21090-21117.	4.2	61
16	On the development of a computer-based handwriting assessment tool to objectively quantify handwriting proficiency in children. Computer Methods and Programs in Biomedicine, 2011, 104, e102-e111.	4.7	60
17	The effects of automated artifact removal algorithms on electroencephalography-based Alzheimer's disease diagnosis. Frontiers in Aging Neuroscience, 2014, 6, 55.	3.4	55
18	Temporal Dynamics for Blind Measurement of Room Acoustical Parameters. IEEE Transactions on Instrumentation and Measurement, 2010, 59, 978-989.	4.7	54

#	Article	IF	CITATION
19	MS-QI: A Modulation Spectrum-Based ECG Quality Index for Telehealth Applications. IEEE Transactions on Biomedical Engineering, 2016, 63, 1613-1622.	4.2	52
20	Towards automated electroencephalography-based Alzheimer's disease diagnosis using portable low-density devices. Biomedical Signal Processing and Control, 2017, 33, 261-271.	5.7	51
21	Early diagnosis of mild cognitive impairment and Alzheimer's with event-related potentials and event-related desynchronization in N-back working memory tasks. Computer Methods and Programs in Biomedicine, 2018, 164, 1-13.	4.7	49
22	EEG amplitude modulation analysis for semi-automated diagnosis of Alzheimer's disease. Eurasip Journal on Advances in Signal Processing, 2012, 2012, .	1.7	48
23	An improved non-intrusive intelligibility metric for noisy and reverberant speech. , 2014, , .		48
24	Robust GMM Based Gender Classification using Pitch and RASTA-PLP Parameters of Speech., 2006,,.		45
25	Model Fusion for Multimodal Depression Classification and Level Detection. , 2014, , .		43
26	Approaches to Understanding the Impact of Technologies for Aging in Place: A Mini-Review. Gerontology, 2014, 60, 282-288.	2.8	43
27	Generalized end-to-end detection of spoofing attacks to automatic speaker recognizers. Computer Speech and Language, 2020, 63, 101096.	4.3	37
28	Feature Pooling of Modulation Spectrum Features for Improved Speech Emotion Recognition in the Wild. IEEE Transactions on Affective Computing, 2021, 12, 177-188.	8.3	37
29	TILES-2018, a longitudinal physiologic and behavioral data set of hospital workers. Scientific Data, 2020, 7, 354.	5.3	36
30	Grip Force Variability and Its Effects on Children's Handwriting Legibility, Form, and Strokes. Journal of Biomechanical Engineering, 2010, 132, 114504.	1.3	34
31	Augmentative Communication Based on Realtime Vocal Cord Vibration Detection. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2010, 18, 159-163.	4.9	31
32	Objective speech intelligibility measurement for cochlear implant users in complex listening environments. Speech Communication, 2013, 55, 815-824.	2.8	30
33	Automatic recognition of speech emotion using long-term spectro-temporal features. , 2009, , .		29
34	EEG spectro-temporal modulation energy: A new feature for automated diagnosis of Alzheimer's disease., 2011, 2011, 3828-31.		28
35	WAUC: A Multi-Modal Database for Mental Workload Assessment Under Physical Activity. Frontiers in Neuroscience, 2020, 14, 549524.	2.8	27
36	Modulation filtering for heart and lung sound separation from breath sound recordings. , 2008, 2008, 1859-62.		26

#	Article	IF	CITATIONS
37	Development and evaluation of a dual-output vocal cord vibration switch for persons with multiple disabilities. Disability and Rehabilitation: Assistive Technology, 2012, 7, 82-88.	2.2	26
38	Multimodal Human and Environmental Sensing for Longitudinal Behavioral Studies in Naturalistic Settings: Framework for Sensor Selection, Deployment, and Management. Journal of Medical Internet Research, 2019, 21, e12832.	4.3	25
39	Non-Intrusive Speech Quality Prediction Using Modulation Energies and LSTM-Network. IEEE/ACM Transactions on Audio Speech and Language Processing, 2019, 27, 1151-1163.	5.8	24
40	Towards Signal-Based Instrumental Quality Diagnosis for Text-to-Speech Systems. IEEE Signal Processing Letters, 2008, 15, 781-784.	3.6	23
41	Very early detection of Autism Spectrum Disorders based on acoustic analysis of pre-verbal vocalizations of 18-month old toddlers. , 2013, , .		23
42	Electroencephalography Amplitude Modulation Analysis for Automated Affective Tagging of Music Video Clips. Frontiers in Computational Neuroscience, 2017, 11, 115.	2.1	23
43	Fusion of auditory inspired amplitude modulation spectrum and cepstral features for whispered and normal speech speaker verification. Computer Speech and Language, 2017, 45, 437-456.	4.3	22
44	Mental Task Evaluation for Hybrid NIRS-EEG Brain-Computer Interfaces. Computational Intelligence and Neuroscience, 2017, 2017, 1-24.	1.7	22
45	Adaptive Filtering for Improved EEG-Based Mental Workload Assessment of Ambulant Users. Frontiers in Neuroscience, 2021, 15, 611962.	2.8	22
46	Automated Beehive Acoustics Monitoring: A Comprehensive Review of the Literature and Recommendations for Future Work. Applied Sciences (Switzerland), 2022, 12, 3920.	2.5	22
47	A model that predicts the binaural advantage to speech intelligibility from the mixed target and interferer signals. Journal of the Acoustical Society of America, 2014, 135, 796-807.	1.1	21
48	MuLES., 2015,,.		21
49	Speech Dereverberation With Context-Aware Recurrent Neural Networks. IEEE/ACM Transactions on Audio Speech and Language Processing, 2018, 26, 1236-1246.	5.8	21
50	Lessons Learned: Recommendations For Implementing a Longitudinal Study Using Wearable and Environmental Sensors in a Health Care Organization. JMIR MHealth and UHealth, 2019, 7, e13305.	3.7	21
51	Evaluation of a non-invasive vocal cord vibration switch as an alternative access pathway for an individual with hypotonic cerebral palsy $\hat{a} \in \hat{a}$ a case study. Disability and Rehabilitation: Assistive Technology, 2010, 5, 69-78.	2.2	20
52	Spectro-Temporal Electrocardiogram Analysis for Noise-Robust Heart Rate and Heart Rate Variability Measurement. IEEE Journal of Translational Engineering in Health and Medicine, 2017, 5, 1-11.	3.7	20
53	Functional near-infrared spectroscopy-based affective neurofeedback: feedback effect, illiteracy phenomena, and whole-connectivity profiles. Neurophotonics, 2018, 5, 1.	3.3	20
54	Adaptive Spectro-Temporal Filtering for Electrocardiogram Signal Enhancement. IEEE Journal of Biomedical and Health Informatics, 2018, 22, 421-428.	6.3	19

#	Article	IF	CITATIONS
55	A Comparative Study of Stress and Anxiety Estimation in Ecological Settings Using a Smart-shirt and a Smart-bracelet., 2019, 2019, 2213-2216.		19
56	Neural Interface Instrumented Virtual Reality Headsets: Toward Next-Generation Immersive Applications. IEEE Systems, Man, and Cybernetics Magazine, 2020, 6, 20-28.	1.4	19
57	Performance Study of Objective Speech Quality Measurement for Modern Wireless-VoIP Communications. Eurasip Journal on Audio, Speech, and Music Processing, 2009, 2009, 1-11.	2.1	18
58	Updating the SRMR-CI Metric for Improved Intelligibility Prediction for Cochlear Implant Users. IEEE/ACM Transactions on Audio Speech and Language Processing, 2014, 22, 2197-2206.	5.8	18
59	Mutual information between inter-hemispheric EEG spectro-temporal patterns: A new feature for automated affect recognition. , 2015 , , .		18
60	Using affective brain-computer interfaces to characterize human influential factors for speech quality-of-experience perception modelling. Human-centric Computing and Information Sciences, 2016, 6, .	6.1	18
61	In-ear microphone speech quality enhancement via adaptive filtering and artificial bandwidth extension. Journal of the Acoustical Society of America, 2017, 141, 1321-1331.	1.1	18
62	Fusion of Motif- and Spectrum-Related Features for Improved EEG-Based Emotion Recognition. Computational Intelligence and Neuroscience, 2019, 2019, 1-14.	1.7	18
63	On a reference-free speech quality estimator for hearing aids. Journal of the Acoustical Society of America, 2013, 133, EL412-EL418.	1.1	17
64	Improved motor imagery brain-computer interface performance via adaptive modulation filtering and two-stage classification. Biomedical Signal Processing and Control, 2020, 57, 101812.	5.7	17
65	Hybrid Signal-and-Link-Parametric Speech Quality Measurement for VoIP Communications. IEEE Transactions on Audio Speech and Language Processing, 2008, 16, 1579-1589.	3.2	16
66	Whispered Speech Detection in Noise Using Auditory-Inspired Modulation Spectrum Features. IEEE Signal Processing Letters, 2013, 20, 783-786.	3.6	16
67	A Quality Adaptive Multimodal Affect Recognition System for User-Centric Multimedia Indexing. , 2016,		16
68	Residual convolutional neural network with attentive feature pooling for end-to-end language identification from short-duration speech. Computer Speech and Language, 2019, 58, 364-376.	4.3	16
69	PASS: A Multimodal Database of Physical Activity and Stress for Mobile Passive Body/ Brain-Computer Interface Research. Frontiers in Neuroscience, 2020, 14, 542934.	2.8	16
70	Immersive media experience: a survey of existing methods and tools for human influential factors assessment. Quality and User Experience, 2022, 7, .	3.9	16
71	A novel integrated mechanomyogram-vocalization access solution. Medical Engineering and Physics, 2010, 32, 940-944.	1.7	15
72	Vocalization removal for improved automatic segmentation of dual-axis swallowing accelerometry signals. Medical Engineering and Physics, 2010, 32, 668-672.	1.7	15

#	Article	IF	Citations
73	Towards an EEG-based biomarker for Alzheimer's disease: Improving amplitude modulation analysis features. , 2013, , .		15
74	Breast Cancer Prognosis via Gaussian Mixture Regression. , 2006, , .		14
75	Neurofeedback and the Aging Brain: A Systematic Review of Training Protocols for Dementia and Mild Cognitive Impairment. Frontiers in Aging Neuroscience, 2021, 13, 682683.	3.4	14
76	The effects of whispered speech on state-of-the-art voice based biometrics systems. , 2015, , .		12
77	Alzheimer's Disease Diagnosis and Severity Level Detection Based on Electroencephalography Modulation Spectral "Patch―Features. IEEE Journal of Biomedical and Health Informatics, 2019, 24, 1-1.	6.3	12
78	The effects of text-to-speech system quality on emotional states and frontal alpha band power. , 2013, , .		11
79	PhySyQX: A database for physiological evaluation of synthesised speech quality-of-experience. , 2015, , .		11
80	On the Analysis of EEG Features for Mental Workload Assessment During Physical Activity. , 2018, , .		11
81	Quantifying perturbations in temporal dynamics for automated assessment of spastic dysarthric speech intelligibility. , 2011, , .		10
82	Online ECG quality assessment for context-aware wireless body area networks., 2015,,.		10
83	Fusion of bottleneck, spectral and modulation spectral features for improved speaker verification of neutral and whispered speech. Speech Communication, 2018, 102, 78-86.	2.8	10
84	Context-Aware Speech Stress Detection in Hospital Workers Using Bi-LSTM Classifiers. , 2021, , .		10
85	Subjective quality ratings and physiological correlates of synthesized speech. , 2013, , .		9
86	Feature mapping, score-, and feature-level fusion for improved normal and whispered speech speaker verification. , 2016 , , .		9
87	Speech emotion recognition on mobile devices based on modulation spectral feature pooling and deep neural networks., 2017,,.		9
88	A Neurophysiological Sensor-Equipped Head-Mounted Display for Instrumental QoE Assessment of Immersive Multimedia., 2018,,.		9
89	A Multimodal Approach to Improve the Robustness of Physiological Stress Prediction During Physical Activity., 2019,,.		9
90	Improving Robustness of Image Quality Measurement with Degradation Classification and Machine Learning. Conference Record of the Asilomar Conference on Signals, Systems and Computers, 2007, , .	0.0	8

#	Article	IF	Citations
91	Non-intrusive objective speech quality and intelligibility prediction for hearing instruments in complex listening environments. , 2013 , , .		8
92	Latent factor analysis for synthesized speech quality-of-experience assessment. Quality and User Experience, $2017, 2, 1$.	3.9	8
93	Spectrotemporal Modeling of Biomedical Signals: Theoretical Foundation and Applications. , 2019, , 144-163.		8
94	Single-Ended Quality Measurement of Noise Suppressed Speech Based on Kullback-Leibler Distances. Journal of Multimedia, 2007, 2, .	0.3	8
95	Preliminary findings on image preference characterization based on neurophysiological signal analysis: Towards objective QoE modeling. , 2012, , .		7
96	Objective characterization of human behavioural characteristics for QoE assessment: A pilot study on the use of electroencephalography features. , 2013, , .		7
97	Cognitive, affective, and experience correlates of speech quality perception in complex listening conditions. , 2013, , .		7
98	Cochlear Implant Filterbank Design and Optimization: A Simulation Study. IEEE/ACM Transactions on Audio Speech and Language Processing, 2014, 22, 347-353.	5.8	7
99	Variations in voice level and fundamental frequency with changing background noise level and talker-to-listener distance while wearing hearing protectors: A pilot study. International Journal of Audiology, 2016, 55, S13-S20.	1.7	7
100	Multimodal Physiological Quality-of-Experience Assessment of Text-to-Speech Systems. IEEE Journal on Selected Topics in Signal Processing, 2017, 11, 22-36.	10.8	7
101	Intrusive Quality Measurement of Noisy and Enhanced Speech based on i-Vector Similarity., 2019,,.		7
102	Speech-Based Stress Classification based on Modulation Spectral Features and Convolutional Neural Networks. , $2019, \ldots$		7
103	On the use of the i-vector speech representation for instrumental quality measurement. Quality and User Experience, 2020, 5, 1.	3.9	7
104	Multimodal Prediction of Alzheimer's Disease Severity Level Based on Resting-State EEG and Structural MRI. Frontiers in Human Neuroscience, 2021, 15, 700627.	2.0	7
105	Using fNIRS to Characterize Human Perception of TTS System Quality, Comprehension, and Fluency: Preliminary Findings. , 0, , .		7
106	Improving the performance of NIRS-based brain-computer interfaces in the presence of background auditory distractions. , 2010, , .		6
107	Whispered speaker verification and gender detection using weighted instantaneous frequencies. , 2013, , .		6
108	Affective state characterization based on electroencephalography graph-theoretic features. , 2015, , .		6

#	Article	IF	Citations
109	EEG coupling features: Towards mental workload measurement based on wearables. , 2017, , .		6
110	Multimodal Affect Recognition: Current Approaches and Challenges. , 2017, , .		6
111	Evaluating the Measurement of Driver Heart and Breathing Rates from a Sensor-Equipped Steering Wheel using Spectrotemporal Signal Processing. , 2019, , .		6
112	Breathing Rate Complexity Features for "In-the-Wild―Stress and Anxiety Measurement. , 2019, , .		6
113	Performance comparison of intrusive objective speech intelligibility and quality metrics for cochlear implant users. , 0, , .		6
114	Multi-level self-attentive TDNN: A general and efficient approach to summarize speech into discriminative utterance-level representations. Speech Communication, 2022, 140, 42-49.	2.8	6
115	Towards objective measures of speech intelligibility for Cochlear Implant users in reverberant environments., 2012,,.		5
116	Towards automated EEG-Based Alzheimer's disease diagnosis using relevance vector machines. , 2014, , .		5
117	On the potential for artificial bandwidth extension of bone and tissue conducted speech: a mutual information study. , 2015, , .		5
118	Performance comparison of intrusive and non-intrusive instrumental quality measures for enhanced speech. , $2016, , .$		5
119	Stress and Anxiety Measurement "In-the-Wild" Using Quality-aware Multi-scale HRV Features. , 2019, 2019, 7056-7059.		5
120	EEG spectro-temporal amplitude modulation as a measurement of cortical hemodynamics: an EEG-fNIRS study., 2020, 2020, 3481-3484.		5
121	Affective Neurofeedback Under Naturalistic Conditions: A Mini-Review of Current Achievements and Open Challenges. Frontiers in Neuroergonomics, 2021, 2, .	1.1	5
122	Assessing the Viability of a Vocal Cord Vibration Switch for Four Children with Multiple Disabilities~!2009-10-06~!2010-02-19~!2010-04-02~!. The Open Rehabilitation Journal, 2010, 3, 55-61.	0.8	5
123	Movement Artifact-Robust Mental Workload Assessment During Physical Activity Using Multi-Sensor Fusion. , 2020, , .		5
124	Saccadic Eye Movement Classification Using ExG Sensors Embedded into a Virtual Reality Headset., 2020,,.		5
125	Integration of a distance sensitive wireless communication protocol to hearing protectors equipped with in-ear microphones Proceedings of Meetings on Acoustics, 2013, , .	0.3	4
126	Towards the development of a non-intrusive objective quality measure for DNN-enhanced speech. , 2019, , .		4

#	Article	IF	CITATIONS
127	Initial Investigation into Neurophysiological Correlates of Argentine Tango Flow States: a Case Study. , 2020, , .		4
128	Fusion of Modulation Spectral and Spectral Features with Symptom Metadata for Improved Speech-Based Covid-19 Detection., 2022,,.		4
129	On the use of peripheral autonomic signals for binary control of body–machine interfaces. Physiological Measurement, 2010, 31, 1411-1422.	2.1	3
130	A model distance maximizing framework for speech recognizer-based speech enhancement. AEU - International Journal of Electronics and Communications, 2011, 65, 99-106.	2.9	3
131	Classification of vibratory patterns of the upper airway during sleep., 2013, 2013, 2080-3.		3
132	Characterization of human emotions and preferences for text-to-speech systems using multimodal neuroimaging methods. , 2014, , .		3
133	Modeling Speech Level as a Function of Background Noise Level and Talker-to-Listener Distance for Talkers Wearing Hearing Protection Devices. Journal of Speech, Language, and Hearing Research, 2017, 60, 3393-3403.	1.6	3
134	Speech temporal dynamics fusion approaches for noise-robust reverberation time estimation., 2017,,.		3
135	Toward Mental Workload Measurement Using Multimodal EEG–fNIRS Monitoring. , 2018, , 245-246.		3
136	Hybrid brain–computer interfaces for wheelchair control: a review of existing solutions, their advantages and open challenges. , 2018, , 229-256.		3
137	3. Acoustic and prosodic analysis of vocalizations of 18-month-old toddlers with autism spectrum disorder., 2020,, 93-126.		3
138	Head-Mounted Display-Based Virtual Reality and Physiological Computing for Stroke Rehabilitation: A Systematic Review. Frontiers in Virtual Reality, 2022, 3, .	3.7	3
139	Classification of Speech Degradations at Network Endpoints Using Psychoacoustic Features., 2007,,.		2
140	Reference-free automatic quality assessment of tracheoesophageal speech., 2009, 2009, 6210-3.		2
141	Using deep neural networks for natural saccade classification from electroencephalograms., 2016,,.		2
142	Improved heart rate variability measurement based on modulation spectral processing of noisy electrocardiogram signals. , 2017, , .		2
143	AMA: An Open-source Amplitude Modulation Analysis Toolkit for Signal Processing Applications. , 2019, , .		2
144	1. State-of-the-art speaker recognition methods applied to speakers with dysarthria., 2020,, 7-34.		2

#	Article	IF	Citations
145	Improved Gait Speed Calculation via Modulation Spectral Analysis of Noisy Accelerometer Data. IEEE Sensors Journal, 2021, 21, 520-528.	4.7	2
146	Long-term spectro-temporal information for improved automatic speech emotion classification. , 0, , .		2
147	Modulation Spectral Signal Representation for Quality Measurement and Enhancement of Wearable Device Data: A Technical Note. Sensors, 2022, 22, 4579.	3.8	2
148	A Hybrid Signal-and-Link-Parametric Approach to Single-Ended Quality Measurement of Packetized Speech. , 2007, , .		1
149	Evaluation of an ambient noise insensitive hum-based powered wheelchair controller. Disability and Rehabilitation: Assistive Technology, 2012, 7, 242-248.	2.2	1
150	Physiological quality-of-experience assessment of text-to-speech systems. , 2016, , .		1
151	Laughter detection based on the fusion of local binary patterns, spectral and prosodic features. , 2016, , .		1
152	Mental Workload Assessment During Physical Activity Using Non-linear Movement Artefact Robust Electroencephalography Features. , 2019, , .		1
153	Automated Alzheimer's Disease Diagnosis using a Low-Density EEG Layout and New Features based on the Power of Modulation Spectral "Patches― , 2019, , .		1
154	An improved GMM-based voice quality predictor., 0,,.		1
155	Objective Speech Quality Estimation of In-Ear Microphone Speech. , 0, , .		1
156	Predicting Driver Stress Levels with a Sensor-Equipped Steering Wheel and a Quality-Aware Heart Rate Measurement Algorithm., 2021, 2021, 6822-6825.		1
157	Welcome message from the QoMEX 2013 chairs. , 2013, , .		O
158	Towards blind reverberation time estimation for non-speech signals. Proceedings of Meetings on Acoustics, 2013, , .	0.3	0
159	Investigating the use of modulation spectral features within an i-vector framework for far-field automatic speaker verification. , $2014, , .$		0
160	Multimodal Assessment of Human Innovation Perception Based on Eye Tracking, Electroencephalography and Electrocardiography. , 2018, , .		0
161	Non-intrusive speech quality prediction based on the blind estimation of clean speech and the i-vector framework. Quality and User Experience, 2020, 5, 1.	3.9	0