

Stefano Squartini

List of Publications by Year in descending order

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Version: 2024-02-01

173
papers

3,598
citations

318942

23
h-index

232693

48
g-index

184
all docs

184
docs citations

184
times ranked

3890
citing authors

#	ARTICLE	IF	CITATIONS
1	Overlapped Speech Detection and speaker counting using distant microphone arrays. <i>Computer Speech and Language</i> , 2022, 72, 101306.	2.9	4
2	Deep Optimization of Parametric IIR Filters for Audio Equalization. <i>IEEE/ACM Transactions on Audio Speech and Language Processing</i> , 2022, 30, 1136-1149.	4.0	5
3	Few-Shot Emergency Siren Detection. <i>Sensors</i> , 2022, 22, 4338.	2.1	7
4	Real-World Anomaly Detection by Using Digital Twin Systems and Weakly Supervised Learning. <i>IEEE Transactions on Industrial Informatics</i> , 2021, 17, 4733-4742.	7.2	64
5	Audio Metric Learning by Using Siamese Autoencoders for One-Shot Human Fall Detection. <i>IEEE Transactions on Emerging Topics in Computational Intelligence</i> , 2021, 5, 108-118.	3.4	14
6	Gravitational Search Algorithm for IIR Filter-Based Audio Equalization. , 2021, , .		2
7	Acoustic Features for Deep Learning-Based Models for Emergency Siren Detection: An Evaluation Study. , 2021, , .		7
8	Road Type Classification Using Acoustic Signals: Deep Learning Models and Real-Time Implementation. <i>Smart Innovation, Systems and Technologies</i> , 2021, , 33-43.	0.5	0
9	Multi-Household Energy Management in a Smart Neighborhood in the Presence of Uncertainties and Electric Vehicles. <i>Electronics (Switzerland)</i> , 2021, 10, 3186.	1.8	2
10	Transfer Learning for Non-Intrusive Load Monitoring. <i>IEEE Transactions on Smart Grid</i> , 2020, 11, 1419-1429.	6.2	168
11	Machine Learning Approaches to Non-Intrusive Load Monitoring. <i>SpringerBriefs in Energy</i> , 2020, , .	0.2	8
12	The Rhodes electric piano: Analysis and simulation of the inharmonic overtones. <i>Journal of the Acoustical Society of America</i> , 2020, 148, 3052-3064.	0.5	3
13	Who Cried When: Infant Cry Diarization with Dilated Fully-Convolutional Neural Networks. , 2020, , .		0
14	A Novel Adversarial Training Scheme for Deep Neural Network based Speech Enhancement. , 2020, , .		1
15	Sound quality evaluation of kitchen hoods. <i>Applied Acoustics</i> , 2020, 168, 107415.	1.7	11
16	Evolutionary tuning of filters coefficients for binaural audio equalization. <i>Applied Acoustics</i> , 2020, 163, 107204.	1.7	7
17	Designing Audio Equalization Filters by Deep Neural Networks. <i>Applied Sciences (Switzerland)</i> , 2020, 10, 2483.	1.3	12
18	Convolutional Recurrent Neural Networks and Acoustic Data Augmentation for Snore Detection. <i>Smart Innovation, Systems and Technologies</i> , 2020, , 35-46.	0.5	3

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19	Timbre Equalization of Wind Instruments Physical Models Using a Random Iterative Search Algorithm. AES: Journal of the Audio Engineering Society, 2020, 68, 364-376.	0.8	1
20	Deep Learning for Individual Listening Zone. , 2020, , .		4
21	Emergency Siren Recognition in Urban Scenarios: Synthetic Dataset and Deep Learning Models. Lecture Notes in Computer Science, 2020, , 207-220.	1.0	2
22	Processing Acoustic Data with Siamese Neural Networks for Enhanced Road Roughness Classification. , 2019, , .		4
23	Energy scheduling of community microgrid with battery cost using particle swarm optimisation. Applied Energy, 2019, 254, 113723.	5.1	110
24	Collaborative energy management in a micro-grid by multi-objective mathematical programming. Energy and Buildings, 2019, 203, 109432.	3.1	7
25	Detection of activity and position of speakers by using deep neural networks and acoustic data augmentation. Expert Systems With Applications, 2019, 134, 53-65.	4.4	8
26	Automatic Detection of Cry Sounds in Neonatal Intensive Care Units by Using Deep Learning and Acoustic Scene Simulation. IEEE Access, 2019, 7, 51982-51993.	2.6	13
27	A Multi-Stage Algorithm for Acoustic Physical Model Parameters Estimation. IEEE/ACM Transactions on Audio Speech and Language Processing, 2019, 27, 1229-1240.	4.0	3
28	A Non-Intrusive Load Monitoring Algorithm Based on Non-Uniform Sampling of Power Data and Deep Neural Networks. Energies, 2019, 12, 1371.	1.6	25
29	End-to-end Binaural Sound Localisation from the Raw Waveform. , 2019, , .		40
30	Unsupervised electric motor fault detection by using deep autoencoders. IEEE/CAA Journal of Automatica Sinica, 2019, 6, 441-451.	8.5	133
31	Polyphonic Sound Event Detection by Using Capsule Neural Networks. IEEE Journal on Selected Topics in Signal Processing, 2019, 13, 310-322.	7.3	39
32	Energy management of community microgrids considering degradation cost of battery. Journal of Energy Storage, 2019, 22, 257-269.	3.9	90
33	Depth-Based Fall Detection: Outcomes from a Real Life Pilot. Lecture Notes in Electrical Engineering, 2019, , 287-299.	0.3	3
34	Modified PSO algorithm for real-time energy management in grid-connected microgrids. Renewable Energy, 2019, 136, 746-757.	4.3	213
35	Computational Intelligence-Based Demand Response Management in a Microgrid. IEEE Transactions on Industry Applications, 2019, 55, 732-740.	3.3	27
36	An End-To-End Unsupervised Approach Employing Convolutional Neural Network Autoencoders for Human Fall Detection. Smart Innovation, Systems and Technologies, 2019, , 185-196.	0.5	9

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37	Neural Beamforming for Speech Enhancement: Preliminary Results. Smart Innovation, Systems and Technologies, 2019, , 37-47.	0.5	1
38	Digital Signal Processing for Audio Applications: Then, Now and the Future. , 2019, , 37-51.		0
39	Power plant condition monitoring by means of coal powder granulometry classification. Measurement: Journal of the International Measurement Confederation, 2018, 123, 39-47.	2.5	4
40	rEMpy: a comprehensive software framework for residential energy management. Energy and Buildings, 2018, 171, 131-143.	3.1	7
41	Special Issue on Deep Reinforcement Learning and Adaptive Dynamic Programming. IEEE Transactions on Neural Networks and Learning Systems, 2018, 29, 2038-2041.	7.2	18
42	Human Fall Detection by Using an Innovative Floor Acoustic Sensor. Smart Innovation, Systems and Technologies, 2018, , 97-107.	0.5	8
43	Denoising autoencoders for Non-Intrusive Load Monitoring: Improvements and comparative evaluation. Energy and Buildings, 2018, 158, 1461-1474.	3.1	124
44	Localizing speakers in multiple rooms by using Deep Neural Networks. Computer Speech and Language, 2018, 49, 83-106.	2.9	27
45	Deep Neural Networks for Joint Voice Activity Detection and Speaker Localization. , 2018, , .		2
46	Exploiting the Reactive Power in Deep Neural Models for Non-Intrusive Load Monitoring. , 2018, , .		19
47	Infant Cry Detection in Adverse Acoustic Environments by Using Deep Neural Networks. , 2018, , .		15
48	Hierarchic Conv Nets Framework for Rare Sound Event Detection. , 2018, , .		4
49	Snore Sounds Excitation Localization by Using Scattering Transform and Deep Neural Networks. , 2018, , .		7
50	Few-Shot Siamese Neural Networks Employing Audio Features for Human-Fall Detection. , 2018, , .		23
51	Collaborative Energy Management in Micro-Grid environments through multi-objective optimization. , 2018, , .		1
52	An IoT Solution for Energy Management at Building and District Level. , 2018, , .		2
53	Convolutional Neural Networks with 3-D Kernels for Voice Activity Detection in a Multiroom Environment. Smart Innovation, Systems and Technologies, 2018, , 161-170.	0.5	8
54	Non-intrusive load monitoring by using active and reactive power in additive Factorial Hidden Markov Models. Applied Energy, 2017, 208, 1590-1607.	5.1	162

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55	A convolutional neural network approach for acoustic scene classification. , 2017, , .		52
56	A new open-source Energy Management framework: Functional description and preliminary results. , 2017, , .		3
57	Acoustic novelty detection with adversarial autoencoders. , 2017, , .		30
58	A neural network approach for sound event detection in real life audio. , 2017, , .		7
59	Energy Management with Support of PV Partial Shading Modelling in Micro Grid Environments. Energies, 2017, 10, 453.	1.6	8
60	Deep Recurrent Neural Network-Based Autoencoders for Acoustic Novelty Detection. Computational Intelligence and Neuroscience, 2017, 2017, 1-14.	1.1	51
61	A Combined One-Class SVM and Template-Matching Approach for User-Aided Human Fall Detection by Means of Floor Acoustic Features. Computational Intelligence and Neuroscience, 2017, 2017, 1-13.	1.1	28
62	A Statistical Framework for Automatic Leakage Detection in Smart Water and Gas Grids. Energies, 2016, 9, 665.	1.6	12
63	User-aided footprint extraction for appliance modelling in Non-Intrusive Load Monitoring. , 2016, , .		4
64	Exploiting temporal features and pressure data for automatic leakage detection in smart water grids. , 2016, , .		0
65	Smart AMI based demand-response management in a micro-grid environment. , 2016, , .		7
66	Acoustic cues from the floor: A new approach for fall classification. Expert Systems With Applications, 2016, 60, 51-61.	4.4	40
67	Combining evolution strategies and neural network procedures for compression driver design. , 2016, , .		0
68	Improving the performance of the AFAMAP algorithm for Non-Intrusive Load Monitoring. , 2016, , .		8
69	An experimental study on new features for activity of daily living recognition. , 2016, , .		2
70	A neural network based algorithm for speaker localization in a multi-room environment. , 2016, , .		47
71	Deep neural networks for Multi-Room Voice Activity Detection: Advancements and comparative evaluation. , 2016, , .		10
72	SW framework for simulation and evaluation of partial shading effects in configurable PV systems. , 2016, , .		2

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73	Machine Learning Techniques for the Estimation of Particle Size Distribution in Industrial Plants. Smart Innovation, Systems and Technologies, 2016, , 335-343.	0.5	3
74	Wireless Networked Music Performance. Springer Briefs in Electrical and Computer Engineering, 2016, , 53-92.	0.3	6
75	ELM Based Algorithms for Acoustic Template Matching in Home Automation Scenarios: Advancements and Performance Analysis. Smart Innovation, Systems and Technologies, 2016, , 159-168.	0.5	0
76	A novel approach for automatic acoustic novelty detection using a denoising autoencoder with bidirectional LSTM neural networks. , 2015, , .		139
77	Energy management with the support of dynamic pricing strategies in real micro-grid scenarios. , 2015, , .		4
78	A novelty detection approach to identify the occurrence of leakage in smart gas and water grids. , 2015, , .		9
79	Non-linear prediction with LSTM recurrent neural networks for acoustic novelty detection. , 2015, , .		41
80	An integrated system for voice command recognition and emergency detection based on audio signals. Expert Systems With Applications, 2015, 42, 5668-5683.	4.4	44
81	Domestic Water and Natural Gas Demand Forecasting by Using Heterogeneous Data: A Preliminary Study. Smart Innovation, Systems and Technologies, 2015, , 185-194.	0.5	4
82	Short-term load forecasting for smart water and gas grids: A comparative evaluation. , 2015, , .		1
83	A Deep Neural Network approach for Voice Activity Detection in multi-room domestic scenarios. , 2015, , .		14
84	A review of datasets and load forecasting techniques for smart natural gas and water grids: Analysis and experiments. Neurocomputing, 2015, 170, 448-465.	3.5	40
85	Unsupervised algorithms for non-intrusive load monitoring: An up-to-date overview. , 2015, , .		84
86	Acoustic template-matching for automatic emergency state detection: An ELM based algorithm. Neurocomputing, 2015, 149, 426-434.	3.5	62
87	Energy-Aware task scheduler for self-powered sensor nodes: From model to firmware. Ad Hoc Networks, 2015, 24, 73-91.	3.4	10
88	Multi-apartment residential microgrid with electrical and thermal storage devices: Experimental analysis and simulation of energy management strategies. Applied Energy, 2015, 137, 854-866.	5.1	187
89	Signer independent isolated Italian sign recognition based on hidden Markov models. Pattern Analysis and Applications, 2015, 18, 385-402.	3.1	19
90	A real-time implementation of an acoustic novelty detector on the BeagleBoard-xM. , 2014, , .		3

#	ARTICLE	IF	CITATIONS
91	A nonlinear second-order digital oscillator for Virtual Acoustic Feedback. , 2014, , .		0
92	Advanced integration of multimedia assistive technologies: A prospective outlook. , 2014, , .		4
93	Power Normalized Cepstral Coefficients based supervectors and i-vectors for small vocabulary speech recognition. , 2014, , .		7
94	Smart water grids for smart cities: A sustainable prototype demonstrator. , 2014, , .		17
95	Audio onset detection: A wavelet packet based approach with recurrent neural networks. , 2014, , .		5
96	Smart Home Task and Energy Resource Scheduling Based on Nonlinear Programming. Smart Innovation, Systems and Technologies, 2014, , 175-185.	0.5	1
97	Computational Intelligence in Smart water and gas grids: An up-to-date overview. , 2014, , .		11
98	Computational framework based on task and resource scheduling for micro grid design. , 2014, , .		5
99	Multi-resolution linear prediction based features for audio onset detection with bidirectional LSTM neural networks. , 2014, , .		55
100	Reducing the latency in live music transmission with the BeagleBoard xM through resampling. , 2014, , .		6
101	Energy Demand Management Through Uncertain Data Forecasting:. , 2014, , 309-334.		1
102	Wireless M-Bus Sensor Networks for Smart Water Grids: Analysis and Results. International Journal of Distributed Sensor Networks, 2014, 10, 579271.	1.3	27
103	BAR LIS: A Web Tool for Italian Sign Language Synthesis and Interaction. , 2014, , 251-261.		0
104	Learning Capabilities of ELM-Trained Time-Varying Neural Networks. Smart Innovation, Systems and Technologies, 2014, , 41-52.	0.5	0
105	A digital waveguide-based approach for Clavinet modeling and synthesis. Eurasip Journal on Advances in Signal Processing, 2013, 2013, .	1.0	10
106	Online sequential extreme learning machine in nonstationary environments. Neurocomputing, 2013, 116, 94-101.	3.5	53
107	Optimization algorithms for home energy resource scheduling in presence of data uncertainty. , 2013, , .		28
108	A Real-Time Speech Enhancement Framework in Noisy and Reverberated Acoustic Scenarios. Cognitive Computation, 2013, 5, 504-516.	3.6	11

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109	Advances on Brain Inspired Computing. Cognitive Computation, 2013, 5, 161-163.	3.6	2
110	A Comparison between Different Optimization Techniques for Energy Scheduling in Smart Home Environment. Smart Innovation, Systems and Technologies, 2013, , 311-320.	0.5	6
111	Hybrid soft computing algorithmic framework for smart home energy management. Soft Computing, 2013, 17, 1983-2005.	2.1	22
112	Wireless M-Bus sensor nodes in smart water grids: The energy issue. , 2013, , .		19
113	Home energy resource scheduling algorithms and their dependency on the battery model. , 2013, , .		14
114	The neural paradigm for complex systems: new algorithms and applications. Neural Computing and Applications, 2013, 22, 203-204.	3.2	16
115	Real-life voice activity detection with LSTM Recurrent Neural Networks and an application to Hollywood movies. , 2013, , .		148
116	Energy-aware lazy scheduling algorithm for energy-harvesting sensor nodes. Neural Computing and Applications, 2013, 23, 1899-1908.	3.2	22
117	Action dependent heuristic dynamic programming for home energy resource scheduling. International Journal of Electrical Power and Energy Systems, 2013, 48, 148-160.	3.3	128
118	Optimal Home Energy Management Under Dynamic Electrical and Thermal Constraints. IEEE Transactions on Industrial Informatics, 2013, 9, 1518-1527.	7.2	225
119	Evaluation of the Wireless M-Bus standard for future smart water grids. , 2013, , .		19
120	Networked Beagleboards for wireless music applications. , 2012, , .		5
121	Low power high-performance computing on the Beagleboard platform. , 2012, , .		4
122	Robust sensorless speed control of permanent magnet synchronous motors: A C2000 based implementation. , 2012, , .		2
123	Conversational Speech Recognition in Non-stationary Reverberated Environments. Lecture Notes in Computer Science, 2012, , 50-59.	1.0	0
124	Real-Time Activity Detection in a Multi-Talker Reverberated Environment. Cognitive Computation, 2012, 4, 386-397.	3.6	4
125	Cognitive and Emotional Information Processing for Humanâ€“Machine Interaction. Cognitive Computation, 2012, 4, 383-385.	3.6	9
126	Stereophonic hands-free communication system based on microphone array fixed beamforming: real-time implementation and evaluation. Eurasip Journal on Audio, Speech, and Music Processing, 2012, 2012, .	1.3	1

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127	A Real-Time Speech Enhancement Front-End for Multi-Talker Reverberated Scenarios. , 2012, , .		1
128	CO-WORKER: Toward Real-Time and Context-Aware Systems for Human Collaborative Knowledge Building. Cognitive Computation, 2012, 4, 157-171.	3.6	6
129	Environmental robust speech and speaker recognition through multi-channel histogram equalization. Neurocomputing, 2012, 78, 111-120.	3.5	16
130	On-Line Extreme Learning Machine for Training Time-Varying Neural Networks. Lecture Notes in Computer Science, 2012, , 49-54.	1.0	2
131	Real-Time Speech Recognition in a Multi-talker Reverberated Acoustic Scenario. Lecture Notes in Computer Science, 2012, , 379-386.	1.0	2
132	Dominance Detection in a Reverberated Acoustic Scenario. Lecture Notes in Computer Science, 2012, , 394-402.	1.0	1
133	Optimal Task and Energy Scheduling in Dynamic Residential Scenarios. Lecture Notes in Computer Science, 2012, , 650-658.	1.0	11
134	An Energy Aware Approach for Task Scheduling in Energy-Harvesting Sensor Nodes. Lecture Notes in Computer Science, 2012, , 601-610.	1.0	2
135	A New Italian Sign Language Database. Lecture Notes in Computer Science, 2012, , 164-173.	1.0	8
136	Multi-channel Feature Enhancement for Robust Speech Recognition. , 2011, , .		4
137	Preface to the Sentiment Elicitation from Natural Text for Information Retrieval and Extraction Workshop. , 2011, , .		0
138	Adaptive Linear Prediction Filtering in DWT Domain for Real-Time Musical Onset Detection. Eurasip Journal on Advances in Signal Processing, 2011, 2011, .	1.0	6
139	Multi-stream LSTM-HMM decoding and histogram equalization for noise robust keyword spotting. Cognitive Neurodynamics, 2011, 5, 253-264.	2.3	16
140	Real-Time Joint Blind Speech Separation and Dereverberation in Presence of Overlapping Speakers. Lecture Notes in Computer Science, 2011, , 437-446.	1.0	2
141	ELM-Based Time-Variant Neural Networks with Incremental Number of Output Basis Functions. Lecture Notes in Computer Science, 2011, , 403-410.	1.0	3
142	A Real-Time Speech Enhancement Framework for Multi-party Meetings. Lecture Notes in Computer Science, 2011, , 80-87.	1.0	1
143	Efficient SNR Driven SPLICE Implementation for Robust Speech Recognition. Lecture Notes in Computer Science, 2011, , 70-80.	1.0	0
144	Comparative Evaluation of Single-Channel MMSE-Based Noise Reduction Schemes for Speech Recognition. Journal of Electrical and Computer Engineering, 2010, 2010, 1-6.	0.6	12

#	ARTICLE	IF	CITATIONS
145	Robust speech recognition using feature-domain multi-channel bayesian estimators. , 2010, , .		4
146	Joint Multichannel Blind Speech Separation and Dereverberation: A Real-Time Algorithmic Implementation. Communications in Computer and Information Science, 2010, , 85-93.	0.4	7
147	Keyword spotting based system for conversation fostering in tabletop scenarios: Preliminary evaluation. , 2009, , .		8
148	Advanced CIS architecture and algorithms for enhanced in-car audio listening. , 2009, , .		2
149	An Investigation into Audiovisual Speech Correlation in Reverberant Noisy Environments. Lecture Notes in Computer Science, 2009, , 331-343.	1.0	7
150	Stability analysis of natural gradient learning rules in overdetermined ICA. Signal Processing, 2008, 88, 761-766.	2.1	5
151	An extreme learning machine approach for training Time Variant Neural Networks. , 2008, , .		7
152	Joint Acoustic Feedback Cancellation and Noise Reduction Within the Prediction Error Method Framework. , 2008, , .		3
153	A robust iterative inverse filtering approach for speech dereverberation in presence of disturbances. , 2008, , .		9
154	A Multichannel Noise Reduction Front-End Based on Psychoacoustics for Robust Speech Recognition in Highly Noisy Environments. , 2008, , .		7
155	Discrete Stockwell Transform and Reduced Redundancy Versions from Frame Theory Viewpoint. , 2007, , .		1
156	Stability Analysis of Natural Gradient Learning Rules in Complete ICA: A Unifying Perspective. IEEE Signal Processing Letters, 2007, 14, 54-57.	2.1	5
157	Echo State Networks for Real-Time Audio Applications. Lecture Notes in Computer Science, 2007, , 731-740.	1.0	6
158	A Novel Psychoacoustically Motivated Multichannel Speech Enhancement System. , 2007, , 190-199.		4
159	Gaussianization Based Approach for Post-Nonlinear Underdetermined BSS with Delays. Lecture Notes in Computer Science, 2007, , 783-792.	1.0	0
160	Industry-oriented software-based system for quality evaluation of vehicle audio environments. IEEE Transactions on Industrial Electronics, 2006, 53, 855-866.	5.2	7
161	Comparing Performances of Different Multiband Adaptive Architectures for Noise Reduction. , 2006, , .		1
162	A practical Approach Based on Gaussianization for Post-Nonlinear Underdetermined BSS. , 2006, , .		2

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163	Novel Sub-band Adaptive Systems Incorporating Wiener Filtering for Binaural Speech Enhancement. Lecture Notes in Computer Science, 2006, , 318-327.	1.0	4
164	Underdetermined Blind Separation of Speech Signals with Delays in Different Time-Frequency Domains. Lecture Notes in Computer Science, 2005, , 136-163.	1.0	4
165	Signal Sparsity Enhancement Through Wavelet Transforms in Underdetermined BSS. Lecture Notes in Computer Science, 2005, , 384-391.	1.0	0
166	Novel wiener sub-band processing schemes for binaural adaptive speech-enhancement. , 0, , .		0
167	An approach employing signal sparse representation in wavelet domain for underdetermined blind source separation. , 0, , .		1
168	An alternative Natural Gradient approach for Multichannel Blind Deconvolution. , 0, , .		0
169	An ICA based approach for Blind Deconvolution of Three-dimensional Signals. , 0, , .		0
170	New Riemannian metrics for improvement of convergence speed in ICA based learning algorithms. , 0, , .		3
171	A new Time-Variant Neural based approach for non-stationary and non-linear System Identification. , 0, , .		2
172	Detecting and Counting Overlapping Speakers in Distant Speech Scenarios. , 0, , .		8
173	A distributed system for recognizing home automation commands and distress calls in the Italian language. , 0, , .		10