Simone Benatti

List of Publications by Year
in descending order

48	1,514	687363	752698
papers	citations	13 h-index	20 g-index

48	48	48	1362
all docs	docs citations	times ranked	citing authors

#	ARTICLE	IF	CITATIONS
1	A Low-Power Transprecision Floating-Point Cluster for Efficient Near-Sensor Data Analytics. IEEE Transactions on Parallel and Distributed Systems, 2022, 33, 1038-1053.	5.6	9
2	Embedding Temporal Convolutional Networks for Energy-efficient PPG-based Heart Rate Monitoring. ACM Transactions on Computing for Healthcare, 2022, 3, 1-25.	5.0	9
3	Bioformers: Embedding Transformers for Ultra-Low Power sEMG-based Gesture Recognition. , 2022, , .		10
4	A wearable biosensing system with in-sensor adaptive machine learning for hand gesture recognition. Nature Electronics, 2021, 4, 54-63.	26.0	317
5	Embedded Streaming Principal Components Analysis for Network Load Reduction in Structural Health Monitoring. IEEE Internet of Things Journal, 2021, 8, 4433-4447.	8.7	20
6	An Ensemble of Hyperdimensional Classifiers: Hardware-Friendly Short-Latency Seizure Detection With Automatic iEEG Electrode Selection. IEEE Journal of Biomedical and Health Informatics, 2021, 25, 935-946.	6.3	27
7	Efficient Transform Algorithms for Parallel Ultra-Low-Power IoT End Nodes. IEEE Embedded Systems Letters, 2021, 13, 210-213.	1.9	1
8	A Fully Integrated 5-mW, 0.8-Gbps Energy-Efficient Chip-to-Chip Data Link for Ultralow-Power IoT End-Nodes in 65-nm CMOS. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2021, , 1-12.	3.1	1
9	Robust and Energy-Efficient PPG-Based Heart-Rate Monitoring. , 2021, , .		12
10	sEMG-based Regression of Hand Kinematics with Temporal Convolutional Networks on a Low-Power Edge Microcontroller. , 2021, , .		8
11	Low-Latency Detection of Epileptic Seizures from iEEG with Temporal Convolutional Networks on a Low-Power Parallel MCU. , 2021, , .		3
12	Tackling Time-Variability in sEMG-based Gesture Recognition with On-Device Incremental Learning and Temporal Convolutional Networks. , 2021, , .		5
13	Q-PPG: Energy-Efficient PPG-Based Heart Rate Monitoring on Wearable Devices. IEEE Transactions on Biomedical Circuits and Systems, 2021, 15, 1196-1209.	4.0	20
14	Towards Long-term Non-invasive Monitoring for Epilepsy via Wearable EEG Devices. , 2021, , .		15
15	Efficient Artifact Removal from Low-Density Wearable EEG using Artifacts Subspace Reconstruction. , 2021, 2021, 333-336.		11
16	UStEMG: an Ultrasound Transparent Tattoo-based sEMG System for Unobtrusive Parallel Acquisitions of Muscle Electro-mechanics. , 2021, 2021, 7077-7082.		3
17	Robust Real-Time Embedded EMG Recognition Framework Using Temporal Convolutional Networks on a Multicore IoT Processor. IEEE Transactions on Biomedical Circuits and Systems, 2020, 14, 244-256.	4.0	81
18	Using Low-Power, Low-Cost IoT Processors in Clinical Biosignal Research: an In-depth Feasibility Check. , 2020, 2020, 4008-4011.		2

#	ARTICLE	IF	CITATIONS
19	Neuro-PULP: A Paradigm Shift Towards Fully Programmable Platforms for Neural Interfaces. , 2020, , .		0
20	A Cost-Effective Embedded Platform for Scalable Multichannel Biopotential Acquisition. EAI/Springer Innovations in Communication and Computing, 2020, , 353-364.	1.1	0
21	A Wearable Device for Brainâ€"Machine Interaction with Augmented Reality Head-Mounted Display. EAI/Springer Innovations in Communication and Computing, 2020, , 339-351.	1.1	1
22	A Minimally Invasive Low-Power Platform for Real-Time Brain Computer Interaction Based on Canonical Correlation Analysis. IEEE Internet of Things Journal, 2019, 6, 967-977.	8.7	12
23	An Energy-Efficient IoT node for HMI applications based on an ultra-low power Multicore Processor. , 2019, , .		12
24	ÂBioWolf: A Sub-10-mW 8-Channel Advanced Brainâ€"Computer Interface Platform With a Nine-Core Processor and BLE Connectivity. IEEE Transactions on Biomedical Circuits and Systems, 2019, 13, 893-906.	4.0	32
25	Online Learning and Classification of EMG-Based Gestures on a Parallel Ultra-Low Power Platform Using Hyperdimensional Computing. IEEE Transactions on Biomedical Circuits and Systems, 2019, 13, 516-528.	4.0	53
26	Towards Versatile Fast Training for Wearable Interfaces in Prosthetics. Biosystems and Biorobotics, 2019, , 157-161.	0.3	0
27	An sEMG-Based Humanâ€"Robot Interface for Robotic Hands Using Machine Learning and Synergies. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2018, 8, 1149-1158.	2.5	73
28	A sensor fusion approach for drowsiness detection in wearable ultra-low-power systems. Information Fusion, 2018, 43, 66-76.	19.1	56
29	PULP-HD: Accelerating Brain-Inspired High-Dimensional Computing on a Parallel Ultra-Low Power Platform. , 2018, , .		6
30	A Wearable Device for Minimally-Invasive Behind-the-Ear EEG and Evoked Potentials. , 2018, , .		12
31	PULP-HD. , 2018, , .		32
32	An EMG Gesture Recognition System with Flexible High-Density Sensors and Brain-Inspired High-Dimensional Classifier. , 2018, , .		65
33	Design challenges for wearable EMG applications. , 2017, , .		31
34	A wearable EEG-based drowsiness detection system with blink duration and alpha waves analysis. , 2017, , .		20
35	Towards a Novel HMI Paradigm Based on Mixed EEG and Indoor Localization Platforms. , 2017, , .		4
36	A sub-10mW real-time implementation for EMG hand gesture recognition based on a multi-core biomedical SoC. , 2017, , .		21

#	Article	IF	Citations
37	A machine learning approach for automated wide-range frequency tagging analysis in embedded neuromonitoring systems. Methods, 2017, 129, 96-107.	3.8	8
38	Flexible, Scalable and Energy Efficient Bio-Signals Processing on the PULP Platform: A Case Study on Seizure Detection. Journal of Low Power Electronics and Applications, 2017, 7, 16.	2.0	15
39	A Prosthetic Hand Body Area Controller Based on Efficient Pattern Recognition Control Strategies. Sensors, 2017, 17, 869.	3.8	49
40	Hyperdimensional biosignal processing: A case study for EMG-based hand gesture recognition. , 2016, , .		103
41	Power Line Interference Removal for High-Quality Continuous Biosignal Monitoring With Low-Power Wearable Devices. IEEE Sensors Journal, 2016, 16, 3887-3895.	4.7	53
42	Experimental evaluation of a sEMG-based human-robot interface for human-like grasping tasks. , 2015, , .		19
43	Digitally controlled feedback for DC offset cancellation in a wearable multichannel EMG platform. , 2015, 2015, 3189-92.		5
44	A Versatile Embedded Platform for EMG Acquisition and Gesture Recognition. IEEE Transactions on Biomedical Circuits and Systems, 2015, 9, 620-630.	4.0	173
45	Hybrid EMG classifier based on HMM and SVM for hand gesture recognition in prosthetics. , 2015, , .		45
46	Multiple Biopotentials Acquisition System for Wearable Applications. , 2015, , .		10
47	Towards EMG control interface for smart garments. , 2014, , .		15
48	EMG-based hand gesture recognition with flexible analog front end. , 2014, , .		35