Giovanni Saggio

List of Publications by Year
in descending order

135 papers	1,950 citations	279487 23 h-index	329751 37 g-index
141 all docs	141 docs citations	141 times ranked	1738 citing authors

#	Article	IF	Citations
1	Piezoresistive behaviour of flexible PEDOT:PSS based sensors. Sensors and Actuators B: Chemical, 2009, 139, 304-309.	4.0	142
2	Resistive flex sensors: a survey. Smart Materials and Structures, 2016, 25, 013001.	1.8	112
3	Support vector machines to detect physiological patterns for EEG and EMG-based human–computer interaction: a review. Journal of Neural Engineering, 2017, 14, 011001.	1.8	92
4	A novel array of flex sensors for a goniometric glove. Sensors and Actuators A: Physical, 2014, 205, 119-125.	2.0	75
5	Optimization of EMG-based hand gesture recognition: Supervised vs. unsupervised data preprocessing on healthy subjects and transradial amputees. Biomedical Signal Processing and Control, 2014, 14, 117-125.	3.5	72
6	Advances in SAW-based gas sensors. Smart Materials and Structures, 1997, 6, 689-699.	1.8	66
7	The exploitation of metalloporphyrins as chemically interactive material in chemical sensors. Materials Science and Engineering C, 1998, 5, 209-215.	3.8	62
8	Mechanical model of flex sensors used to sense finger movements. Sensors and Actuators A: Physical, 2012, 185, 53-58.	2.0	54
9	Assessment of Motor Impairments in Early Untreated Parkinson's Disease Patients: The Wearable Electronics Impact. IEEE Journal of Biomedical and Health Informatics, 2020, 24, 120-130.	3.9	45
10	Flex sensor characterization against shape and curvature changes. Sensors and Actuators A: Physical, 2018, 273, 221-231.	2.0	41
11	Worldwide Healthy Adult Voice Baseline Parameters: A Comprehensive Review. Journal of Voice, 2022, 36, 637-649.	0.6	39
12	Voice analysis in adductor spasmodic dysphonia: Objective diagnosis and response to botulinum toxin. Parkinsonism and Related Disorders, 2020, 73, 23-30.	1.1	35
13	Machine-Learning Analysis of Voice Samples Recorded through Smartphones: The Combined Effect of Ageing and Gender. Sensors, 2020, 20, 5022.	2.1	34
14	Sign Language Recognition Using Wearable Electronics: Implementing k-Nearest Neighbors with Dynamic Time Warping and Convolutional Neural Network Algorithms. Sensors, 2020, 20, 3879.	2.1	33
15	Voice Analysis with Machine Learning: One Step Closer to an Objective Diagnosis of Essential Tremor. Movement Disorders, 2021, 36, 1401-1410.	2.2	33
16	Voice in Parkinson's Disease: A Machine Learning Study. Frontiers in Neurology, 2022, 13, 831428.	1.1	32
17	Wearable-based electronics to objectively support diagnosis of motor impairments in school-aged children. Journal of Biomechanics, 2019, 83, 243-252.	0.9	31
18	An integrated optical method for measuring the thickness and refractive index of birefringent thin films. Thin Solid Films, 1997, 292, 255-259.	0.8	30

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19	Sensory-Glove-Based Open Surgery Skill Evaluation. IEEE Transactions on Human-Machine Systems, 2018, 48, 213-218.	2.5	30
20	Technology-Based Complex Motor Tasks Assessment: A 6-DOF Inertial-Based System Versus a Gold-Standard Optoelectronic-Based One. IEEE Sensors Journal, 2021, 21, 1616-1624.	2.4	30
21	Development and evaluation of a novel low-cost sensor-based knee flexion angle measurement system. Knee, 2014, 21, 896-901.	0.8	28
22	Modeling Wearable Bend Sensor Behavior for Human Motion Capture. IEEE Sensors Journal, 2014, 14, 2307-2316.	2.4	27
23	Body-worn triaxial accelerometer coherence and reliability related to static posturography in unilateral vestibular failure. Acta Otorhinolaryngologica Italica, 2017, 37, 231-236.	0.7	27
24	Objective Surgical Skill Assessment: An Initial Experience by Means of a Sensory Glove Paving the Way to Open Surgery Simulation?. Journal of Surgical Education, 2015, 72, 910-917.	1.2	26
25	Technology-Based Objective Measures Detect Subclinical Axial Signs in Untreated, de novo Parkinson's Disease. Journal of Parkinson's Disease, 2020, 10, 113-122.	1.5	25
26	Feasibility of teleoperations with multi-fingered robotic hand for safe extravehicular manipulations. Aerospace Science and Technology, 2014, 39, 666-674.	2.5	23
27	A Fuzzy Integral Ensemble Method in Visual P300 Brain-Computer Interface. Computational Intelligence and Neuroscience, 2016, 2016, 1-9.	1.1	23
28	High-Density ZnO Nanowires as a Reversible Myogenic–Differentiation Switch. ACS Applied Materials & Interfaces, 2018, 10, 14097-14107.	4.0	23
29	A novel application method for wearable bend sensors. , 2009, , .		22
30	New scenarios in human trunk posture measurements for clinical applications. , 2011, , .		20
31	Energy harvesting optimization for built-in power replacement of electronic multisensory architecture. AEU - International Journal of Electronics and Communications, 2019, 107, 170-176.	1.7	20
32	Machine Learning-based Voice Assessment for the Detection of Positive and Recovered COVID-19 Patients. Journal of Voice, 2021, , .	0.6	20
33	Long term measurement of human joint movements for health care and rehabilitation purposes. , 2009, , .		19
34	Reactive ion etching characterization of a-SiC: H in CF4/O2 plasma. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1995, 29, 176-180.	1.7	16
35	Towards the enhancement of body standing balance recovery by means of a wireless audio-biofeedback system. Medical Engineering and Physics, 2018, 54, 74-81.	0.8	16
36	A human body powered sensory glove system based on multisource energy harvester. , 2018, , .		16

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37	A low-cost energy-harvesting sensory headwear useful for tetraplegic people to drive home automation. AEU - International Journal of Electronics and Communications, 2019, 107, 9-14.	1.7	16
38	Toward the Minimum Number of Wearables to Recognize Signer-Independent Italian Sign Language With Machine-Learning Algorithms. IEEE Transactions on Instrumentation and Measurement, 2021, 70, 1-9.	2.4	16
39	A data glove based sensor interface to expressively control musical processes. , 2011, , .		15
40	Constrained Safety-Integrity Performance of Through-the-Arms UHF-RFID Transcutaneous Wireless Communication for the Control of Prostheses. IEEE Journal of Radio Frequency Identification, 2019, 3, 236-244.	1.5	15
41	A novel impedance pattern for fast noise measurements. IEEE Transactions on Instrumentation and Measurement, 2002, 51, 560-564.	2.4	14
42	Experimental performances of 5 GHz harmonic-manipulated high efficiency microwave power amplifiers. Electronics Letters, 2000, 36, 800.	0.5	13
43	Shaping Resistive Bend Sensors to Enhance Readout Linearity. ISRN Electronics, 2012, 2012, 1-7.	1.1	13
44	Fostering Voice Objective Analysis in Patients with Movement Disorders. Movement Disorders, 2021, 36, 1041-1041.	2.2	13
45	A Geometric Model-Based Approach to Hand Gesture Recognition. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2022, 52, 6151-6161.	5.9	13
46	Mechanical modeling of bend sensors exploited to measure human joint movements. , 2009, , .		12
47	Wireless data glove system developed for HMI. , 2010, , .		12
48	In Vitro Analysis of Pyrogenicity and Cytotoxicity Profiles of Flex Sensors to be Used to Sense Human Joint Postures. Sensors, 2014, 14, 11672-11681.	2.1	12
49	Feasibility of an RFID-based Transcutaneous Wireless Communication for the Control of Upper-limb Myoelectric Prosthesis. , 2018, , .		12
50	Bend sensor arrays for hand movement tracking in biomedical systems. , 2011, , .		10
51	Electrical resistance profiling of bend sensors adopted to measure spatial arrangement of the human body. , 2011, , .		10
52	UHF RFID-Based EMG for Prosthetic Control: preliminary results. , 2019, , .		10
53	Technology-based therapy-response and prognostic biomarkers in a prospective study of a de novo Parkinsonâ€™s disease cohort. Npj Parkinson's Disease, 2021, 7, 82.	2.5	10
54	Evaluation of a Stretch Sensor for its inedited application in tracking hand finger movements. , 2016, , .		9

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55	Sensory Systems for Human Body Gesture Recognition and Motion Capture. , 2018, , .		9
56	The Impact of Wearable Electronics in Assessing the Effectiveness of Levodopa Treatment in Parkinson's Disease. IEEE Journal of Biomedical and Health Informatics, 2022, 26, 2920-2928.	3.9	9
57	Characterization of piezoresistive sensors for goniometric glove in hand prostheses. , 2009, , .		8
58	Advanced characterization of piezoresistive sensors for human body movement tracking. , 2010, , .		8
59	Gesture recognition and classification for surgical skill assessment. , 2011, , .		8
60	Wearable Electronics Assess the Effectiveness of Transcranial Direct Current Stimulation on Balance and Gait in Parkinson's Disease Patients. Sensors, 2019, 19, 5465.	2.1	8
61	Measurements comparison of finger joint angles in hand postures between an sEMG armband and a sensory glove. Biocybernetics and Biomedical Engineering, 2021, 41, 605-616.	3.3	8
62	Generalized Finite-Length Fibonacci Sequences in Healthy and Pathological Human Walking: Comprehensively Assessing Recursivity, Asymmetry, Consistency, Self-Similarity, and Variability of Gaits. Frontiers in Human Neuroscience, 2021, 15, 649533.	1.0	8
63	Curvature Characterization of Flex Sensors for Human Posture Recognition. Universal Journal of Biomedical Engineering, 2013, 1, 10-15.	0.4	8
64	Two dimensional image sensors based on amorphous silicon alloy p-i-n diodes. Journal of Non-Crystalline Solids, 1993, 164-166, 789-792.	1.5	7
65	Multiphysics design of a spatial combiner predisposed for thermo-mechanically affected operation. Journal of Electromagnetic Waves and Applications, 2014, 28, 2153-2168.	1.0	7
66	Evaluating the influence of subject-related variables on EMG-based hand gesture classification. , 2014, , .		7
67	Evaluation of an integrated sensory glove at decreasing joint flexion degree. , 2018, , .		7
68	Recognition of Arm-and-Hand Visual Signals by Means of SVM to Increase Aircraft Security. Studies in Computational Intelligence, 2017, , 444-461.	0.7	7
69	Are Sensors and Data Processing Paving the Way to Completely Non-invasive and Not-painful Medical Tests for Widespread Screening and Diagnosis Purposes?. , 2020, , .		7
70	Introducing NPXLab 2010: A tool for the analysis and optimization of P300 based brain-computer interfaces. , 2009, , .		6
71	Ambient assisted living for tetraplegic people by means of an electronic system based on a novel sensory headwear : Increased possibilities for reduced abilities. , 2018, , .		6
72	A novel analytical approach to assess dyskinesia in patients with Parkinson disease. , 2018, , .		6

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73	Near-Field Circular Array for the Transcutaneous Telemetry of UHF RFID-Based Implantable Medical Devices. IEEE Journal of Electromagnetics, RF and Microwaves in Medicine and Biology, 2022, 6, 219-227.	2.3	6
74	A 10-17 DOF Sensory Gloves with Harvesting Capability for Smart Healthcare. Journal of Communications Software and Systems, 2019, 15, .	0.6	6
75	Conversion of Sign Language to Spoken Sentences by Means of a Sensory Glove. Journal of Software, 2014, 9, .	0.6	6
76	A UML model for the description of different brain-computer interface systems. , 2008, 2008, 1363-6.		5
77	UML model applied as a useful tool for Wireless Body Area Networks. , 2009, , .		5
78	A Simple fMRI Compatible Robotic Stimulator to Study the Neural Mechanisms of Touch and Pain. Annals of Biomedical Engineering, 2016, 44, 2431-2441.	1.3	5
79	A Novel Actuating–Sensing Bone Conduction-Based System for Active Hand Pose Sensing and Material Densities Evaluation Through Hand Touch. IEEE Transactions on Instrumentation and Measurement, 2021, 70, 1-7.	2.4	5
80	Virtual reality implementation as a useful software tool for e-health applications. , 2009, , .		4
81	Comparison of two different classifiers for mental tasks-based Brain-Computer Interface: MLP Neural Networks vs. Fuzzy Logic. , 2009, , .		4
82	A Glove Based Adaptive Sensor Interface for Live Musical Performances. , 2010, , .		4
83	A real time FFT-based impedance meter with bias compensation. Measurement: Journal of the International Measurement Confederation, 2011, 44, 702-707.	2.5	4
84	Machine Learning based Voice Analysis in Spasmodic Dysphonia: An Investigation of Most Relevant Features from Specific Vocal Tasks. , 2021, , .		4
85	Reply to: â€œReproducibility of Voice Analysis with Machine Learningâ€. Movement Disorders, 2021, 36, 1283-1284.	2.2	4
86	A Machine Learning-Based Voice Analysis for the Detection of Dysphagia Biomarkers. , 2021, , .		4
87	Gesture recognition through HITEG data glove to provide a new way of communication. , 2011, , .		4
88	Sensory Glove and Surface EMG with Suitable Conditioning Electronics for Extended Monitoring and Functional Hand Assessment. , 2016, , .		4
89	Assessment of Gait Harmony in Older and Young People. , 2018, , .		4
90	Virtuality Supports Reality for e-Health Applications. , 0, , .		4

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91	Assessment of Hand Rehabilitation after Hand Surgery by Means of a Sensory Glove. , 2016, , .		4
92	Evaluation of Dedicated Bluetooth Low Energy Wireless Data Transfer for an Implantable EMG Sensor. , 2020, , .		4
93	Single-sided objective speech intelligibility assessment based on Sparse signal representation. , 2012, , .		3
94	Advanced algorithms for surgical gesture classification. , 2014, , .		3
95	Computational Model of a Buncher Cavity for Millimetric Klystron. , 2015, , .		3
96	Bending Sensors Based on Thin Films of Semitransparent Bithiophene–Fulleropyrrolidine Bisadducts. ChemPlusChem, 2020, 85, 2455-2464.	1.3	3
97	Wireless Sensory Glove System developed for advanced Human Computer Interface. International Journal of Information Science, 2012, 2, 54-59.	0.2	3
98	A Novel Automatic Method to Determine Blood Pressure Based on Thresholds of Audibility. British Journal of Applied Science & Technology, 2015, 7, 364-371.	0.2	3
99	Global Design of a Waveguide X-Band Power Amplifier. International Journal of Simulation: Systems, Science and Technology, 0, , .	0.0	3
100	Vocal test Analysis for Assessing Parkinson's Disease at Early Stage. , 2021, , .		3
101	On the use of field programmable gate arrays in light detection and ranging systems. Review of Scientific Instruments, 2021, 92, 121501.	0.6	3
102	Brain Computer Interface research at the Neuroscience Department of the "Tor Vergata" University of Rome, Italy. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 4715-8.	0.5	2
103	Mental task recognition based on SVM classification. , 2009, , .		2
104	The multisensory integrated modules for training. , 2014, , .		2
105	Tuberculosis Screening by Means of Speech Analysis. Journal of Communication Navigation Sensing and Services (CONASENSE), 2016, 2016, 45-56.	0.2	2
106	Performance Comparison of Patch and Loop Antennas for the Wireless Power Transfer and Transcutaneous Telemetry in the 860–960 MHz Frequency Band. , 2019, , .		2
107	Combination of Classifiers using the Fuzzy Integral for Uncertainty Identification and Subject Specific Optimization - Application to Brain-Computer Interface. , 2014, , .		2
108	In-vitro Force Assessments of an Autoclavable Instrumented Sternal Retractor. , 2017, , .		2

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109	Inedited SVM Application to Automatically Tracking and Recognizing Arm-and-Hand Visual Signals to Aircraft. , 2015, , .		2
110	Performance Index for in Home Assessment of Motion Abilities in Ataxia Telangiectasia: A Pilot Study. Applied Sciences (Switzerland), 2022, 12, 4093.	1.3	2
111	Sensor and Actuator Electronic System for Active Hand Pose Sensing. Lecture Notes in Electrical Engineering, 2023, , 289-294.	0.3	2
112	Broadband peaking techniques for HEMT-based monolithic transimpedance amplifiers. Microwave and Optical Technology Letters, 2000, 24, 147-151.	0.9	1
113	Lowering the uncertainty in fast noise measurement procedures. , 0, , .		1
114	Power efficient wireless connectivity of a wearable data glove. , 2010, , .		1
115	Methods and hints to linearise the resistance values vs. bending angle relationship of bend sensors. , 2011, , .		1
116	A sensor interface based on sparse NMF for piano musical transcription. , 2011, , .		1
117	Towards the improvement of postural stability through audio bio-feedback. , 2015, , .		1
118	RFID interface for compact pliable EMG wireless epidermal sensor. , 2020, , .		1
119	Objective Assessment of Walking Impairments in Myotonic Dystrophy by Means of a Wearable Technology and a Novel Severity Index. Electronics (Switzerland), 2021, 10, 708.	1.8	1
120	Surgical Skill Evaluation by Means of a Sensory Glove and a Neural Network. , 2014, , .		1
121	Towards an Objective Tool for Evaluating the Surgical Skill. Studies in Computational Intelligence, 2016, , 325-335.	0.7	1
122	A Sensor Which Can Be Varied in Humidity Sensitivity. , 2018, , .		1
123	Vocal Test Analysis for the Assessment of Adductor-type Spasmodic Dysphonia. , 2021, , .		1
124	Machine Learning-based Study of Dysphonic Voices for the Identification and Differentiation of Vocal Cord Paralysis and Vocal Nodules. , 2022, , .		1
125	Efficiency of a BCI system in a visual P300 protocol with different stimulation intervals. , 2009, , .		0
126	On the reduction of complexity problem on driving of human hand prosthesis. , 2010, , .		0

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127	Optimal mental task discrimination for brain-computer interface. , 2010, , .		0
128	On the use of NMF for onset detection in poliphonic piano music. , 2011, , .		0
129	Use of the Choquet integral for combination of classifiers in P300 based brain-computer interface. , 2011, , .		0
130	Injection/bunching section design of a Sub-millimetric klystron. , 2015, , .		0
131	Sensorized Garments Developed for Remote Postural and Motor Rehabilitation. , 2013, , 265-289.		0
132	Sensorized Garments Developed for Remote Postural and Motor Rehabilitation. , 2015, , 511-536.		0
133	Cells Microenvironment Engineering - Multiphoton Absorption for Muscle Regeneration Optimization. , 2016, , .		0
134	Choosing the individual rehabilitation program for patients with intermittent claudication. Giornale Di Chirurgia, 2017, 38, 90.	0.5	0
135	Low Cost and Fast Development of 3D Printed Gloves for 10 Degrees of Freedom Gesture Recognition. , 2019, , .		0