

Calogero M Oddo

List of Publications by Year in descending order

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90
papers

4,730
citations

172457

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98798

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97
all docs

97
docs citations

97
times ranked

5012
citing authors

#	ARTICLE	IF	CITATIONS
1	Restoring Natural Sensory Feedback in Real-Time Bidirectional Hand Prostheses. <i>Science Translational Medicine</i> , 2014, 6, 222ra19.	12.4	805
2	Review of assistive strategies in powered lower-limb orthoses and exoskeletons. <i>Robotics and Autonomous Systems</i> , 2015, 64, 120-136.	5.1	566
3	Piezoelectric Energy Harvesting Solutions. <i>Sensors</i> , 2014, 14, 4755-4790.	3.8	319
4	Intraneural stimulation elicits discrimination of textural features by artificial fingertip in intact and amputee humans. <i>ELife</i> , 2016, 5, e09148.	6.0	286
5	Fiber Bragg Gratings for Medical Applications and Future Challenges: A Review. <i>IEEE Access</i> , 2020, 8, 156863-156888.	4.2	187
6	Visual-Based Defect Detection and Classification Approaches for Industrial Applications – A SURVEY. <i>Sensors</i> , 2020, 20, 1459.	3.8	182
7	A Wireless Flexible Sensorized Insole for Gait Analysis. <i>Sensors</i> , 2014, 14, 1073-1093.	3.8	180
8	Wearable System Based on Flexible FBG for Respiratory and Cardiac Monitoring. <i>IEEE Sensors Journal</i> , 2019, 19, 7391-7398.	4.7	147
9	Roughness Encoding for Discrimination of Surfaces in Artificial Active-Touch. <i>IEEE Transactions on Robotics</i> , 2011, 27, 522-533.	10.3	125
10	Synthetic and Bio-Artificial Tactile Sensing: A Review. <i>Sensors</i> , 2013, 13, 1435-1466.	3.8	124
11	Frontiers of robotic endoscopic capsules: a review. <i>Journal of Micro-Bio Robotics</i> , 2016, 11, 1-18.	2.1	116
12	A capacitive tactile sensor array for surface texture discrimination. <i>Microelectronic Engineering</i> , 2011, 88, 1811-1813.	2.4	101
13	Microfabricated Tactile Sensors for Biomedical Applications: A Review. <i>Biosensors</i> , 2014, 4, 422-448.	4.7	88
14	Development of a bioinspired MEMS based capacitive tactile sensor for a robotic finger. <i>Sensors and Actuators A: Physical</i> , 2011, 165, 221-229.	4.1	87
15	Cardio-Respiratory Monitoring in Archery Using a Smart Textile Based on Flexible Fiber Bragg Grating Sensors. <i>Sensors</i> , 2019, 19, 3581.	3.8	82
16	Neuromorphic Artificial Touch for Categorization of Naturalistic Textures. <i>IEEE Transactions on Neural Networks and Learning Systems</i> , 2017, 28, 819-829.	11.3	79
17	A Machine-Learning-Based Approach to Solve Both Contact Location and Force in Soft Material Tactile Sensors. <i>Soft Robotics</i> , 2020, 7, 409-420.	8.0	61
18	A Multi-Parametric Wearable System to Monitor Neck Movements and Respiratory Frequency of Computer Workers. <i>Sensors</i> , 2020, 20, 536.	3.8	60

#	ARTICLE	IF	CITATIONS
19	Artificial Roughness Encoding with a Bio-inspired MEMS-based Tactile Sensor Array. <i>Sensors</i> , 2009, 9, 3161-3183.	3.8	58
20	Digital transformation, for better or worse: a critical multi-level research agenda. <i>R and D Management</i> , 2022, 52, 930-954.	5.3	55
21	Functional mimicry of Ruffini receptors with fibre Bragg gratings and deep neural networks enables a bio-inspired large-area tactile-sensitive skin. <i>Nature Machine Intelligence</i> , 2022, 4, 425-435.	16.0	53
22	Roughness Encoding in Human and Biomimetic Artificial Touch: Spatiotemporal Frequency Modulation and Structural Anisotropy of Fingerprints. <i>Sensors</i> , 2011, 11, 5596-5615.	3.8	46
23	Haptic-assistive technologies for audition and vision sensory disabilities. <i>Disability and Rehabilitation: Assistive Technology</i> , 2018, 13, 394-421.	2.2	46
24	Investigation on calibration methods for multi-axis, linear and redundant force sensors. <i>Measurement Science and Technology</i> , 2007, 18, 623-631.	2.6	45
25	Learning tactile skills through curious exploration. <i>Frontiers in Neurorobotics</i> , 2012, 6, 6.	2.8	41
26	Slippage Detection with Piezoresistive Tactile Sensors. <i>Sensors</i> , 2017, 17, 1844.	3.8	38
27	Artificial spatiotemporal touch inputs reveal complementary decoding in neocortical neurons. <i>Scientific Reports</i> , 2017, 7, 45898.	3.3	37
28	Feedforward Neural Network for Force Coding of an MRI-Compatible Tactile Sensor Array Based on Fiber Bragg Grating. <i>Journal of Sensors</i> , 2015, 2015, 1-9.	1.1	33
29	A Wearable System Based on Flexible Sensors for Unobtrusive Respiratory Monitoring in Occupational Settings. <i>IEEE Sensors Journal</i> , 2021, 21, 14369-14378.	4.7	32
30	Physical Factors Influencing Pleasant Touch during Passive Fingertip Stimulation. <i>PLoS ONE</i> , 2014, 9, e101361.	2.5	31
31	Intracellular Dynamics in Cuneate Nucleus Neurons Support Self-Stabilizing Learning of Generalizable Tactile Representations. <i>Frontiers in Cellular Neuroscience</i> , 2018, 12, 210.	3.7	30
32	Tactile Sensing and Control of Robotic Manipulator Integrating Fiber Bragg Grating Strain-Sensor. <i>Frontiers in Neurorobotics</i> , 2019, 13, 8.	2.8	30
33	Morphological Neural Computation Restores Discrimination of Naturalistic Textures in Trans-radial Amputees. <i>Scientific Reports</i> , 2020, 10, 527.	3.3	30
34	Spatiotemporal Dynamics of the Cortical Responses Induced by a Prolonged Tactile Stimulation of the Human Fingertips. <i>Brain Topography</i> , 2017, 30, 473-485.	1.8	29
35	A mechatronic platform for human touch studies. <i>Mechatronics</i> , 2011, 21, 604-613.	3.3	26
36	Vision-Based Pose Estimation for Robot-Mediated Hand Telerehabilitation. <i>Sensors</i> , 2016, 16, 208.	3.8	26

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37	Soft-neuromorphic artificial touch for applications in neuro-robotics. , 2012, , .		24
38	Encapsulation of Piezoelectric Transducers for Sensory Augmentation and Substitution with Wearable Haptic Devices. Micromachines, 2017, 8, 270.	2.9	23
39	Hydrothermally Grown ZnO Nanorods as Promising Materials for Low Cost Electronic Skin. ChemNanoMat, 2020, 6, 15-31.	2.8	23
40	A biomimetic MEMS-based tactile sensor array with fingerprints integrated in a robotic fingertip for artificial roughness encoding. , 2009, , .		20
41	PARLOMA â€” A Novel Human-Robot Interaction System for Deaf-Blind Remote Communication. International Journal of Advanced Robotic Systems, 2015, 12, 57.	2.1	20
42	Increased Symmetry of Lower-Limb Amputees Walking With Concurrent Bilateral Vibrotactile Feedback. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2021, 29, 74-84.	4.9	20
43	Bioinspired Fingertip for Anthropomorphic Robotic Hands. Applied Bionics and Biomechanics, 2014, 11, 25-38.	1.1	19
44	Neuromorphic Vibrotactile Stimulation of Fingertips for Encoding Object Stiffness in Telepresence Sensory Substitution and Augmentation Applications. Sensors, 2018, 18, 261.	3.8	18
45	Ubiquitous Neocortical Decoding of Tactile Input Patterns. Frontiers in Cellular Neuroscience, 2019, 13, 140.	3.7	16
46	An innovative robotic platform for magnetically-driven painless colonoscopy. Annals of Translational Medicine, 2017, 5, 421-421.	1.7	16
47	Haptic Glove and Platform with Gestural Control For Neuromorphic Tactile Sensory Feedback In Medical Telepresence â€. Sensors, 2019, 19, 641.	3.8	15
48	Long-latency components of somatosensory evoked potentials during passive tactile perception of gratings. , 2016, 2016, 1648-1651.		13
49	Bilateral Tactile Input Patterns Decoded at Comparable Levels But Different Time Scales in Neocortical Neurons. Journal of Neuroscience, 2018, 38, 3669-3679.	3.6	13
50	Fluidic Haptic Interface for Mechano-Tactile Feedback. IEEE Transactions on Haptics, 2020, 13, 204-210.	2.7	13
51	Seedless Hydrothermal Growth of ZnO Nanorods as a Promising Route for Flexible Tactile Sensors. Nanomaterials, 2020, 10, 977.	4.1	13
52	Cuneate spiking neural network learning to classify naturalistic texture stimuli under varying sensing conditions. Neural Networks, 2020, 123, 273-287.	5.9	12
53	Implantable Fiber Bragg Grating Sensor for Continuous Heart Activity Monitoring: <i>Ex-Vivo</i> and <i>In-Vivo</i> Validation. IEEE Sensors Journal, 2021, 21, 14051-14059.	4.7	11
54	Development of a Biomimetic MEMS based Capacitive Tactile Sensor. Procedia Chemistry, 2009, 1, 124-127.	0.7	10

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55	Insights and Perspectives on Sensory-Motor Integration and Rehabilitation. Multisensory Research, 2016, 29, 607-633.	1.1	9
56	Tactile Decoding of Edge Orientation With Artificial Cuneate Neurons in Dynamic Conditions. Frontiers in Neurobotics, 2019, 13, 44.	2.8	9
57	Real-Time Single Camera Hand Gesture Recognition System for Remote Deaf-Blind Communication. Lecture Notes in Computer Science, 2014, , 35-52.	1.3	8
58	Convergence of regular spiking and intrinsically bursting Izhikevich neuron models as a function of discretization time with Euler method. Neurocomputing, 2019, 350, 237-247.	5.9	8
59	Identification of Slippage on Naturalistic Surfaces via Wavelet Transform of Tactile Signals. IEEE Sensors Journal, 2019, 19, 1260-1268.	4.7	8
60	An Autonomous Robotic Platform for Manipulation and Inspection of Metallic Surfaces in Industry 4.0. IEEE Transactions on Automation Science and Engineering, 2022, 19, 1691-1706.	5.2	8
61	A Bio-Hybrid Tactile Sensor Incorporating Living Artificial Skin and an Impedance Sensing Array. Sensors, 2014, 14, 23781-23802.	3.8	7
62	Design and Development of Large-Area FBG-Based Sensing Skin for Collaborative Robotics. , 2019, , .		7
63	A meta-learning algorithm for respiratory flow prediction from FBG-based wearables in unrestrained conditions. Artificial Intelligence in Medicine, 2022, 130, 102328.	6.5	7
64	Neuromorphic Artificial Sense of Touch: Bridging Robotics and Neuroscience. Springer Proceedings in Advanced Robotics, 2018, , 617-630.	1.3	6
65	A Neuromorphic Model to Match the Spiking Activity of Merkel Mechanoreceptors With Biomimetic Tactile Sensors for Bioengineering Applications. IEEE Transactions on Medical Robotics and Bionics, 2019, 1, 97-105.	3.2	6
66	Hybrid 6-DoF Magnetic Localization for Robotic Capsule Endoscopes Compatible With High-Grade Magnetic Field Navigation. IEEE Access, 2022, 10, 4414-4430.	4.2	6
67	A bio-hybrid mechanotransduction system based on ciliate cells. Microelectronic Engineering, 2015, 144, 51-56.	2.4	5
68	Assessment of Intuitiveness and Comfort of Wearable Haptic Feedback Strategies for Assisting Level and Stair Walking. Electronics (Switzerland), 2020, 9, 1676.	3.1	5
69	Endoscopic Tactile Capsule for Non-Polypoid Colorectal Tumour Detection. IEEE Transactions on Medical Robotics and Bionics, 2021, 3, 64-73.	3.2	5
70	Neuro-robotics Paradigm for Intelligent Assistive Technologies. Springer Tracts in Advanced Robotics, 2015, , 1-40.	0.4	4
71	A Mechatronic Platform for Computer Aided Detection of Nodules in Anatomopathological Analyses via Stiffness and Ultrasound Measurements. Sensors, 2019, 19, 2512.	3.8	4
72	A Wearable Haptic Feedback System for Assisting Lower-Limb Amputees in Multiple Locomotion Tasks. Biosystems and Biorobotics, 2019, , 115-119.	0.3	4

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73	A simple highly efficient non invasive EMG-based HMI. , 2006, 2006, 3403-6.		3
74	Robotic endoscopic capsule for closed-loop force-based control and safety strategies. , 2017, , .		3
75	Endoscopic tactile instrument for remote tissue palpation in colonoscopic procedures. , 2017, , .		3
76	Neuromorphic haptic glove and platform with gestural control for tactile sensory feedback in medical telepresence applications. , 2018, , .		3
77	Tradeoff between accuracy and computational cost of Euler and Runge Kutta ODE solvers for the Izhikevich spiking neuron model. , 2021, , .		3
78	Incorporation of Novel MEMS Tactile Sensors into Tissue Engineered Skin. International Conference on Bioinformatics and Biomedical Engineering: [proceedings] International Conference on Bioinformatics and Biomedical Engineering, 2010, , .	0.0	2
79	Decoding of naturalistic textures from spike patterns of neuromorphic artificial mechanoreceptors. BMC Neuroscience, 2015, 16, .	1.9	2
80	Editorial: Human-Like Advances in Robotics: Motion, Actuation, Sensing, Cognition and Control. Frontiers in Neurobotics, 2019, 13, 85.	2.8	2
81	Soft large area FBC tactile sensors for exteroception and proprioception in a collaborative robotic manipulator. , 2021, , .		2
82	Contact Force and Duration Effects on Static and Dynamic Tactile Texture Discrimination. Lecture Notes in Computer Science, 2010, , 9-16.	1.3	2
83	Neuromorphic tactile sensor array based on fiber Bragg gratings to encode object qualities. , 2019, , .		2
84	Design and preliminary evaluation of haptic devices for upper limb stimulation and integration within a virtual reality cave. , 2016, , .		1
85	Real time position control of industrial robot over ethernet based communication framework. AIP Conference Proceedings, 2019, , .	0.4	1
86	An Improved Strategy for Detection and Localization of Nodules in Liver Tissues by a 16 MHz Needle Ultrasonic Probe Mounted on a Robotic Platform. Sensors, 2020, 20, 1183.	3.8	1
87	Intraoperative-technologies advancements in automated cancer detection: a narrative review. , 2021, , .		1
88	Toward the Development of a Neuro-Controlled Bidirectional Hand Prosthesis. Lecture Notes in Computer Science, 2015, , 105-110.	1.3	0
89	Guest Editorial Special Issue on Advances and Current Trends in Sensing Physiological Parameters for Human Wellness and Patient Monitoring. IEEE Sensors Journal, 2021, 21, 13965-13966.	4.7	0
90	Selective stimulation with intraneural electrodes for bionic limb prostheses can contribute to shed light on human touch sensorimotor integration. Journal of Physiology, 2022, 600, 1279-1280.	2.9	0