

# Massimiliano Zecca

## List of Publications by Year in descending order

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Version: 2024-02-01

113  
papers

2,120  
citations

516215

16  
h-index

329751

37  
g-index

117  
all docs

117  
docs citations

117  
times ranked

2184  
citing authors

#	ARTICLE	IF	CITATIONS
1	Control of Multifunctional Prosthetic Hands by Processing the Electromyographic Signal. <i>Critical Reviews in Biomedical Engineering</i> , 2002, 30, 459-485.	0.5	512
2	Brain Response to a Humanoid Robot in Areas Implicated in the Perception of Human Emotional Gestures. <i>PLoS ONE</i> , 2010, 5, e11577.	1.1	98
3	The development of a novel prosthetic hand-ongoing research and preliminary results. <i>IEEE/ASME Transactions on Mechatronics</i> , 2002, 7, 108-114.	3.7	90
4	Age-related decrements in dual-task performance: Comparison of different mobility and cognitive tasks. A cross sectional study. <i>PLoS ONE</i> , 2017, 12, e0181698.	1.1	79
5	GENERATION OF HUMANOID ROBOT'S FACIAL EXPRESSIONS FOR CONTEXT-AWARE COMMUNICATION. <i>International Journal of Humanoid Robotics</i> , 2013, 10, 1350013.	0.6	74
6	Whole body emotion expressions for KOBIAN humanoid robot " preliminary experiments with different Emotional patterns ". , 2009, , .		63
7	A Methodology for the Performance Evaluation of Inertial Measurement Units. <i>Journal of Intelligent and Robotic Systems: Theory and Applications</i> , 2013, 71, 143-157.	2.0	52
8	Objective Skill Evaluation for Laparoscopic Training Based on Motion Analysis. <i>IEEE Transactions on Biomedical Engineering</i> , 2013, 60, 977-985.	2.5	50
9	Design of the humanoid robot KOBIAN - preliminary analysis of facial and whole body emotion expression capabilities-. , 2008, , .		46
10	Cross-cultural study on human-robot greeting interaction: acceptance and discomfort by Egyptians and Japanese. <i>Paladyn</i> , 2013, 4, .	1.9	43
11	Walking in the uncanny valley: importance of the attractiveness on the acceptance of a robot as a working partner. <i>Frontiers in Psychology</i> , 2015, 6, 204.	1.1	43
12	Validity of the Perception Neuron inertial motion capture system for upper body motion analysis. <i>Measurement: Journal of the International Measurement Confederation</i> , 2020, 149, 107024.	2.5	40
13	Fear of falling and activities of daily living function: mediation effect of dual-task ability. <i>Aging and Mental Health</i> , 2018, 22, 856-861.	1.5	39
14	Development of whole-body emotion expression humanoid robot. , 2008, , .		38
15	Technology Used to Recognize Activities of Daily Living in Community-Dwelling Older Adults. <i>International Journal of Environmental Research and Public Health</i> , 2021, 18, 163.	1.2	33
16	Impact of Obesity on Surgeon Ergonomics in Robotic and Straight-Stick Laparoscopic Surgery. <i>Journal of Minimally Invasive Gynecology</i> , 2020, 27, 1063-1069.	0.3	30
17	Development of a Bioinstrumentation System in the Interaction between a Human and a Robot. , 2006, , .		29
18	Behavior model of humanoid robots based on operant conditioning. , 0, , .		28

#	ARTICLE	IF	CITATIONS
19	Development of a real-time IMU-based motion capture system for gait rehabilitation. , 2013, , .		28
20	Development of the wireless ultra-miniaturized inertial measurement unit WB-4: Preliminary performance evaluation. , 2011, 2011, 6927-30.		25
21	Design of a wireless miniature low cost EMG sensor using gold plated dry electrodes for biomechanics research. , 2013, , .		21
22	Cross-Cultural Perspectives on Emotion Expressive Humanoid Robotic Head: Recognition of Facial Expressions and Symbols. International Journal of Social Robotics, 2013, 5, 515-527.	3.1	20
23	The influences of emotional intensity for happiness and sadness on walking. , 2013, 2013, 7452-5.		20
24	Mechanical Design of Emotion Expression Humanoid Robot WE-4RII. , 2006, , 255-262.		20
25	A Novel Greeting Selection System for a Culture-Adaptive Humanoid Robot. International Journal of Advanced Robotic Systems, 2015, 12, 34.	1.3	19
26	Measurement invariance of TGMD-3 in children with and without mental and behavioral disorders.. Psychological Assessment, 2018, 30, 1421-1429.	1.2	19
27	Surgical training technology for cerebrovascular anastomosis. Journal of Clinical Neuroscience, 2014, 21, 554-558.	0.8	18
28	Development of the miniaturized wireless Inertial Measurement Unit WB-4: Pilot test for mastication analysis. , 2010, , .		17
29	Perception of emotion and emotional intensity in humanoid robots gait. , 2013, , .		17
30	Effects of Simultaneously Performed Dual-Task Training with Aerobic Exercise and Working Memory Training on Cognitive Functions and Neural Systems in the Elderly. Neural Plasticity, 2020, 2020, 1-17.	1.0	17
31	Development of an Ultra-Miniaturized Inertial Measurement Unit for Jaw Movement Analysis during Free Chewing. Journal of Computer Science, 2010, 6, 896-903.	0.5	15
32	Towards culture-specific robot customisation: A study on greeting interaction with Egyptians. , 2013, , .		15
33	Bone fracture monitoring using implanted antennas in the radius, tibia and phalange heterogeneous bone phantoms. Biomedical Physics and Engineering Express, 2018, 4, 045006.	0.6	15
34	Development of an ultra-miniaturized inertial measurement unit WB-3 for human body motion tracking. , 2010, , .		14
35	Anatomical Calibration through Post-Processing of Standard Motion Tests Data. Sensors, 2016, 16, 2011.	2.1	14
36	Validation of the ADAMO Care Watch for step counting in older adults. PLoS ONE, 2018, 13, e0190753.	1.1	14

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37	Comparison of gait event detection from shanks and feet in single-task and multi-task walking of healthy older adults. , 2016, , .		13
38	Psychometric proprieties of the Test of Gross Motor Developmentâ€“Third Edition in a large sample of Italian children. Journal of Science and Medicine in Sport, 2020, 23, 860-865.	0.6	12
39	The ergonomic impact of patient body mass index on surgeon posture during simulated laparoscopy. Applied Ergonomics, 2021, 97, 103501.	1.7	12
40	Using the Waseda Bioinstrumentation System WB-1R to analyze Surgeonâ€™s performance during laparoscopy - towards the development of a global performance index -. , 2007, , .		11
41	Bipedal humanoid robot that makes humans laugh with use of the method of comedy and affects their psychological state actively. , 2014, , .		11
42	Waseda Bioinstrumentation System #3 as a tool for objective rehabilitation measurement and assessment - Development of the inertial measurement unit -. , 2009, , .		10
43	Waseda Bioinstrumentation system WB-3 as a wearable tool for objective laparoscopic skill evaluation. , 2011, , .		10
44	Development of a human-like neurologic model to simulate the influences of diseases for neurologic examination training. , 2013, , .		10
45	Natural humanâ€™robot musical interaction: understanding the music conductor gestures by using the WB-4 inertial measurement system. Advanced Robotics, 2014, , 1-12.	1.1	10
46	An implanted antenna system for the monitoring of the healing of bone fractures. , 2015, , .		10
47	A Novel Algorithm for Determining the Contextual Characteristics of Movement Behaviors by Combining Accelerometer Features and Wireless Beacons: Development and Implementation. JMIR MHealth and UHealth, 2018, 6, e100.	1.8	10
48	Waseda Bioinstrumentation System WB-2 - the new Inertial Measurement Unit for the new Motion Caption System â€“. , 2007, , .		9
49	Uncanny valley, robot and autism: Perception of the uncanniness in an emotional gait. , 2014, , .		9
50	Emotional gait: Effects on humans' perception of humanoid robots. , 2014, , .		9
51	Sit to stand sensing using wearable IMUs based on adaptive Neuro Fuzzy and Kalman Filter. , 2014, , .		9
52	Reliability of the step phase detection using inertial measurement units: pilot study. Healthcare Technology Letters, 2015, 2, 58-63.	1.9	9
53	The mediation effect of political interest on the connection between social trust and wellbeing among older adults. Ageing and Society, 2018, 38, 2376-2395.	1.2	9
54	From the Human Hand to a Humanoid Hand: Biologically-Inspired Approach for the Development of RoboCasa Hand #1. , 2006, , 287-294.		9

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55	On the development of the Bioinstrumentation System WB-1R for the evaluation of human-robot interaction - Head and Hands Motion Capture Systems -. , 2007, , .		8
56	Human-humanoid robot social interaction: Laughter. , 2013, , .		8
57	Waseda Bioinstrumentation system WB-2R as a wearable tool for an objective analysis of surgeon's performance. , 2009, , .		7
58	Baseline Adaptive Wavelet Thresholding Technique for sEMG Denoising. , 2011, , .		7
59	Wavelet thresholding technique for sEMG denoising by baseline estimation. International Journal of Computer Aided Engineering and Technology, 2012, 4, 517.	0.1	7
60	Use of an ultra-miniaturized IMU-based motion capture system for objective evaluation and assessment of walking skills. , 2013, 2013, 4883-6.		7
61	Application of wireless inertial measurement units and EMG sensors for studying deglutition &#x2014; Preliminary results. , 2014, 2014, 5381-4.		7
62	Development of subliminal persuasion system to improve the upper limb posture in laparoscopic training: a preliminary study. International Journal of Computer Assisted Radiology and Surgery, 2015, 10, 1863-1871.	1.7	7
63	Development of Sensorised Resistance Band for Objective Exercise Measurement: Activities Classification Trial. , 2018, 2018, 3942-3945.		7
64	Development of the Ultra-Miniaturized Inertial Measurement Unit WB3 for Objective Skill Analysis and Assessment in Neurosurgery: Preliminary Results. Lecture Notes in Computer Science, 2009, 12, 443-450.	1.0	7
65	Gait Phase Detection Using Foot Acceleration for Estimating Ground Reaction Force in Long Distance Gait Rehabilitation. Journal of Robotics and Mechatronics, 2012, 24, 828-837.	0.5	7
66	Perceptions of In-home Monitoring Technology for Activities of Daily Living: Semistructured Interview Study With Community-Dwelling Older Adults. JMIR Aging, 2022, 5, e33714.	1.4	7
67	Objective skill analysis and assessment in neurosurgery by using an ultra-miniaturized inertial measurement unit WB-3 &#x2014; Pilot tests &#x2014;. , 2009, 2009, 2320-3.		6
68	Non visual sensor based shape perception method for gait control of flexible colonoscopy robot. , 2011, , .		6
69	Effects of 1 Year of Lifestyle Intervention on Institutionalized Older Adults. International Journal of Environmental Research and Public Health, 2021, 18, 7612.	1.2	6
70	Objective assessment of surgeon kinematics during simulated laparoscopic surgery: a preliminary evaluation of the effect of high body mass index models. International Journal of Computer Assisted Radiology and Surgery, 2022, 17, 75-83.	1.7	6
71	Assessment of walking quality by using Inertial Measurement Units. , 2012, , .		5
72	Improving the human-robot interaction through emotive movements A special case: Walking. , 2013, , .		5

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73	Walking assessment in the phase space by using ultra-miniaturized Inertial Measurement Units. , 2013, , .		5
74	Conveying emotion intensity with bio-inspired expressive walking - Experiments with sadness and happiness. , 2013, , .		5
75	Development of a novel ankle rehabilitation robot with three freedoms for ankle rehabilitation training. , 2015, , .		5
76	Modular Design of Emotion Expression Humanoid Robot KOBIAN. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2010, , 465-472.	0.3	5
77	Evaluation of the KOBIAN and HABIAN Emotion Expression Humanoid Robots with European Elderly People. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2010, , 449-456.	0.3	5
78	New memory model for humanoid robots - introduction of co-associative memory using mutually coupled chaotic neural networks. , 0, , .		4
79	Ultra-miniaturized WB-3 Inertial Measurement Unit: Performance evaluation of the attitude estimation. , 2010, , .		4
80	Online magnetic calibration of a cutting edge 9-axis wireless Inertial Measurement Unit. International Journal of Applied Electromagnetics and Mechanics, 2012, 39, 779-785.	0.3	4
81	Musical robots: Towards a natural joint performance. , 2012, , .		4
82	Tightly-coupled stereo vision-aided inertial navigation using feature-based motion sensors. Advanced Robotics, 0, , 1-13.	1.1	4
83	Development of a human-like motor nerve model to simulate the diseases effects on muscle tension for neurologic examination training. , 2014, , .		4
84	Development of new muscle contraction sensor to replace sEMG for using in muscles analysis fields. , 2014, 2014, 6945-8.		4
85	Development of a rehabilitation robot for hand and wrist rehabilitation training. , 2015, , .		4
86	Step Sequence and Direction Detection of Four Square Step Test. IEEE Robotics and Automation Letters, 2017, 2, 2194-2200.	3.3	4
87	2P2-A05 Evolutionary Design of a Fuzzy Classifier for EMG-based Control : Control of a Multi-DoFs Underactuated Hand Prosthesis. The Proceedings of JSME Annual Conference on Robotics and Mechatronics (Robomec), 2006, 2006, _2P2-A05_1-_2P2-A05_4.	0.0	4
88	Objective evaluation of laparoscopic surgical skills using Waseda bioinstrumentation system WB-3. , 2010, , .		3
89	Performance evaluation of the wireless inertial measurement unit WB-4 with magnetic field calibration. , 2012, , .		3
90	Music conductor gesture recognition by using inertial measurement system for human-robot musical interaction. , 2012, , .		3

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91	A novel approach to evaluate skills in Endotracheal Intubation using biomechanical measurement system. , 2013, , .		3
92	Design Choices in the Development of a Robotic Head: Human-Likeness, Form and Colours. Mechanisms and Machine Science, 2014, , 225-233.	0.3	3
93	Surface EMG and heartbeat analysis preliminary results in surgical training: Dry boxes and live tissue. , 2011, 2011, 1113-6.		2
94	Comparison of bipedal humanoid walking with human being using inertial measurement units and force-torque sensors. , 2013, , .		2
95	Biomechanical evaluation of the phases during simulated Endotracheal Intubation (ETI): Pilot study on the effect of different laryngoscopes. , 2013, 2013, 4887-90.		2
96	Angular sway propagation in One Leg Stance and quiet stance with Inertial Measurement Units for older adults. , 2015, 2015, 6955-8.		2
97	Development an arm robot to simulate the lead-pipe rigidity for medical education. , 2015, , .		2
98	Development of lower limb rehabilitation evaluation system based on virtual reality technology. , 2016, , .		2
99	Analysis of the validity of the mathematical assumptions of electrical impedance tomography for human head tissues. Biomedical Physics and Engineering Express, 2021, 7, 025011.	0.6	2
100	Objective skill analysis and assessment of neurosurgery by using the waseda bioinstrumentation system WB-3. , 2009, , .		1
101	Biomechanical analysis of induced mental stress in laparoscopy surgical training by surface Electromyography. , 2012, , .		1
102	Balance analysis of one leg stance for older adults with Inertial Measurement Units. , 2014, , .		1
103	Development of a portable sensorised handle for the objective assessment of the effectiveness and concordance of intervention plans in dementia. , 2017, 2017, 2337-2340.		1
104	Evaluation of the effects of the shape of the artificial hand on the quality of the interaction. , 2009, , .		0
105	System integration: Development of a global network communication protocol. , 2010, , .		0
106	Towards high-level, cloud-distributed robotic telepresence: Concept introduction and preliminary experiments. , 2011, , .		0
107	Development of a nerve model of eyeball motion nerves to simulate the disorders of eyeball movements for neurologic examination training. , 2014, , .		0
108	Objective skill evaluation of endotracheal intubation using muscle contraction sensor. , 2014, , .		0

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109	Development of an ankle motion detecting mechanism for ankle rehabilitation training. , 2015, , .		0
110	Gait motion analysis based on WB-4 sensor with quaternion algorithm. , 2016, , .		0
111	The Italyâ€™Japan Workshop: A History of Bilateral Cooperation, Pushing the Boundaries of Robotics. IEEE Robotics and Automation Magazine, 2021, 28, 150-162.	2.2	0
112	Assessment of Machine Learning Performance for the Detection of Activity Type in Military Training. Medicine and Science in Sports and Exercise, 2019, 51, 368-368.	0.2	0
113	Novel Low Memory Footprint DNN Models for Edge Classification of Surgeonsâ€™ Postures. IEEE Embedded Systems Letters, 2023, 15, 21-24.	1.3	0