Claudio Castellini

List of Publications by Year
in descending order

106 papers	4,124 citations	185998 28 h-index	143772 57 g-index
111 all docs	111 docs citations	111 times ranked	2877 citing authors

#	Article	IF	Citations
1	Highly Intuitive 3-DOF Simultaneous and Proportional Myocontrol of Wrist and Hand. Biosystems and Biorobotics, 2022, , 377-382.	0.2	1
2	Simultaneous and Proportional Myocontrol of a Hand Exoskeleton for Spinal Muscular Atrophy: A Preliminary Evaluation. Biosystems and Biorobotics, 2022, , 655-659.	0.2	0
3	Online Continuous Detection of Time-Varying Muscle Synergies. Biosystems and Biorobotics, 2022, , 797-801.	0.2	1
4	Learning to teleoperate an upper-limb assistive humanoid robot for bimanual daily-living tasks. Biomedical Physics and Engineering Express, 2022, 8, 015022.	0.6	2
5	EMG-Driven Machine Learning Control of a Soft Glove for Grasping Assistance and Rehabilitation. IEEE Robotics and Automation Letters, 2022, 7, 1566-1573.	3.3	24
6	Editorial: Embodiment and Co-adaptation Through Human-Machine Interfaces: At the Border of Robotics, Neuroscience and Psychology. Frontiers in Neurorobotics, 2022, 16, 871785.	1.6	1
7	Editorial: Current Trends in Deep Learning for Movement Analysis and Prosthesis Control. Frontiers in Neuroscience, 2022, 16, 889202.	1.4	1
8	Peripheral Nervous System Interfaces: Invasive or Non-invasive?. Frontiers in Neurorobotics, 2022, 16, 846866.	1.6	0
9	Interaction in Assistive Robotics: A Radical Constructivist Design Framework. Frontiers in Neurorobotics, 2021, 15, 675657.	1.6	3
10	Peripheral Neuroergonomics â€“ An Elegant Way to Improve Human-Robot Interaction?. Frontiers in Neurorobotics, 2021, 15, 691508.	1.6	3
11	Continuous, Real-Time Emotion Annotation: A Novel Joystick-Based Analysis Framework. IEEE Transactions on Affective Computing, 2020, 11, 78-84.	5.7	25
12	Upper Limb Active Prosthetic systemsâ€"Overview. , 2020, , 365-376.		13
13	Design Principles of a Light, Wearable Upper Limb Interface for Prosthetics and Teleoperation. , 2020, , 377-391.		3
14	The Merits of Dynamic Data Acquisition for Realistic Myocontrol. Frontiers in Bioengineering and Biotechnology, 2020, 8, 361.	2.0	11
15	Online Natural Myocontrol of Combined Hand and Wrist Actions Using Tactile Myography and the Biomechanics of Grasping. Frontiers in Neurorobotics, 2020, 14, 11.	1.6	10
16	Action interference in simultaneous and proportional myocontrol: comparing force- and electromyography. Journal of Neural Engineering, 2020, 17, 026011.	1.8	13
17	Feedback-aided data acquisition improves myoelectric control of a prosthetic hand. Journal of Neural Engineering, 2020, 17, 056047.	1.8	4
18	Human-In-The-Loop Assessment of an Ultralight, Low-Cost Body Posture Tracking Device. Sensors, 2020, 20, 890.	2.1	12

#	ARTICLE	IF	CITATIONS
19	Natural Myocontrol in a Realistic Setting: a Comparison Between Static and Dynamic Data Acquisition. , 2019, 2019, 1061-1066.		4
20	A dataset of continuous affect annotations and physiological signals for emotion analysis. Scientific Data, 2019, 6, 196.	2.4	79
21	Automatic Detection of Myocontrol Failures Based upon Situational Context Information. , 2019, 2019, 398-404.		3
22	Automated Instability Detection for Interactive Myocontrol of Prosthetic Hands. Frontiers in Neurorobotics, 2019, 13, 68.	1.6	6
23	Repairing Learned Controllers with Convex Optimization: A Case Study. Lecture Notes in Computer Science, 2019, , 364-373.	1.0	5
24	Improving Reliability of Myocontrol Using Formal Verification. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2019, 27, 564-571.	2.7	9
25	A functional data analysis approach for continuous 2-D emotion annotations. Web Intelligence, 2019, 17, 41-52.	0.1	5
26	Cover Image, Volume 10, Issue 2. Wiley Interdisciplinary Reviews: Cognitive Science, 2019, 10, e1498.	1.4	0
27	VITAâ€"an everyday virtual reality setup for prosthetics and upper-limb rehabilitation. Journal of Neural Engineering, 2019, 16, 026039.	1.8	38
28	Robotic interfaces for cognitive psychology and embodiment research: A research roadmap. Wiley Interdisciplinary Reviews: Cognitive Science, 2019, 10, e1486.	1.4	52
29	A Novel Physiologically-Inspired Method for Myoelectric Prosthesis Control Using Pattern Classification. Biosystems and Biorobotics, 2019, , 1017-1021.	0.2	0
30	Towards Improving Myocontrol of Prosthetic Hands: A Study on Automated Instability Detection. , 2018, , .		1
31	Feel-Good Robotics: Requirements on Touch for Embodiment in Assistive Robotics. Frontiers in Neurorobotics, 2018, 12, 84.	1.6	50
32	A Classification Method for Myoelectric Control of Hand Prostheses Inspired by Muscle Coordination. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2018, 26, 1745-1755.	2.7	28
33	Tactile Myography: An Off-Line Assessment of Able-Bodied Subjects and One Upper-Limb Amputee. Technologies, 2018, 6, 38.	3.0	11
34	Mechatronic designs for a robotic hand to explore human body experience and sensory-motor skills: a Delphi study. Advanced Robotics, 2018, 32, 670-680.	1.1	6
35	Online Bimanual Manipulation Using Surface Electromyography and Incremental Learning. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2017, 25, 227-234.	2.7	37
36	Exploiting Knowledge Composition to Improve Real-Life Hand Prosthetic Control. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2017, 25, 967-975.	2.7	16

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37	Context-dependent adaptation improves robustness of myoelectric control for upper-limb prostheses. Journal of Neural Engineering, 2017, 14, 056016.	1.8	12
38	Multi-modal myocontrol: Testing combined force- and electromyography. , 2017, 2017, 1364-1368.		11
39	A Humanâ€"Robot Interaction Perspective on Assistive and Rehabilitation Robotics. Frontiers in Neurorobotics, 2017, 11, 24.	1.6	102
40	Editorial: Peripheral Nervous System-Machine Interfaces (PNS-MI). Frontiers in Neurorobotics, 2017, 11, 54.	1.6	0
41	Combining Electromyography and Tactile Myography to Improve Hand and Wrist Activity Detection in Prostheses. Technologies, 2017, 5, 64.	3.0	8
42	Effect of clinical parameters on the control of myoelectric robotic prosthetic hands. Journal of Rehabilitation Research and Development, 2016, 53, 345-358.	1.6	49
43	Optical Myography: Detecting Finger Movements by Looking at the Forearm. Frontiers in Neurorobotics, 2016, 10, 3.	1.6	19
44	Assessment of a Wearable Force- and Electromyography Device and Comparison of the Related Signals for Myocontrol. Frontiers in Neurorobotics, 2016, 10, 17.	1.6	64
45	Wrist and grasp myocontrol: Online validation in a goal-reaching task. , 2016, , .		6
46	Multichannel electrotactile feedback for simultaneous and proportional myoelectric control. Journal of Neural Engineering, 2016, 13, 056015.	1.8	39
47	Towards a synergy framework across neuroscience and robotics: Lessons learned and open questions. Reply to comments on: â€œHand synergies: Integration of robotics and neuroscience for understanding the control of biological and artificial handsâ€• Physics of Life Reviews, 2016, 17, 54-60.	1.5	13
48	Hand synergies: Integration of robotics and neuroscience for understanding the control of biological and artificial hands. Physics of Life Reviews, 2016, 17, 1-23.	1.5	191
49	Incremental Learning of Muscle Synergies: From Calibration to Interaction. Springer Series on Touch and Haptic Systems, 2016, , 171-193.	0.2	5
50	The LET Procedure for Prosthetic Myocontrol: Towards Multi-DOF Control Using Single-DOF Activations. PLoS ONE, 2016, 11, e0161678.	1.1	23
51	Shape conformable high spatial resolution tactile bracelet for detecting hand and wrist activity. , 2015, , .		15
52	Ultrasound imaging for hand prosthesis control: a comparative study of features and classification methods. , 2015, , .		16
53	Wrist and grasp myocontrol: Simplifying the training phase. , 2015, , .		4
54	OMG: Introducing optical myography as a new human machine interface for hand amputees. , 2015, , .		10

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55	Low-cost wearable multichannel surface EMG acquisition for prosthetic hand control. , 2015, , .		38
56	Characterization of a Benchmark Database for Myoelectric Movement Classification. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2015, 23, 73-83.	2.7	193
57	Upper-Limb Prosthetic Myocontrol: Two Recommendations. Frontiers in Neuroscience, 2015, 9, 496.	1.4	24
58	Stable myoelectric control of a hand prosthesis using non-linear incremental learning. Frontiers in Neurorobotics, 2014, 8, 8.	1.6	104
59	A Comparative Analysis of Three Non-Invasive Human-Machine Interfaces for the Disabled. Frontiers in Neurorobotics, 2014, 8, 24.	1.6	89
60	Ultrapiano: A novel human-machine interface applied to virtual reality. , 2014, , .		2
61	A virtual piano-playing environment for rehabilitation based upon ultrasound imaging. , 2014, , .		8
62	A wearable low-cost device based upon Force-Sensing Resistors to detect single-finger forces. , 2014, , .		39
63	sEMG-based estimation of human stiffness: Towards impedance-controlled rehabilitation. , 2014, , .		6
64	Movement Error Rate for Evaluation of Machine Learning Methods for sEMG-Based Hand Movement Classification. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2014, 22, 735-744.	2.7	149
65	Electromyography data for non-invasive naturally-controlled robotic hand prostheses. Scientific Data, 2014, 1, 140053.	2.4	482
66	State of the Art and Perspectives of Ultrasound Imaging as a Human-Machine Interface. Trends in Augmentation of Human Performance, 2014, , 37-58.	0.4	8
67	Evidence of muscle synergies during human grasping. Biological Cybernetics, 2013, 107, 233-245.	0.6	58
68	Improving Control of Dexterous Hand Prostheses Using Adaptive Learning. IEEE Transactions on Robotics, 2013, 29, 207-219.	7.3	70
69	Using a high spatial resolution tactile sensor for intention detection. , 2013, 2013, 6650365.		15
70	Ultrasound imaging as a human-machine interface in a realistic scenario. , 2013, , .		19
71	Evaluating subsampling strategies for sEMG-based prediction of voluntary muscle contractions. , 2013, , .		9
72	A realistic implementation of ultrasound imaging as a human-machine interface for upper-limb amputees. Frontiers in Neurorobotics, 2013, 7, 17.	1.6	58

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73	Using Ultrasound Images of the Forearm to Predict Finger Positions. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2012, 20, 788-797.	2.7	109
74	Using surface electromyography to predict single finger forces. , 2012, , .		16
75	FFLS: An accurate linear device for measuring synergistic finger contractions. , 2012, 2012, 531-4.		21
76	Experimental evaluation of human grasps using a sensorized object. , 2012, , .		9
77	Building the Ninapro database: A resource for the biorobotics community. , 2012, , .		161
78	Preliminary evidence of dynamic muscular synergies in human grasping. , 2011, , .		4
79	EMG-based teleoperation and manipulation with the DLR LWR-III. , 2011, , .		73
80	Trajectory planning for optimal robot catching in real-time. , 2011, , .		79
81	The Use of Phonetic Motor Invariants Can Improve Automatic Phoneme Discrimination. PLoS ONE, 2011, 6, e24055.	1.1	11
82	Ultrasound image features of the wrist are linearly related to finger positions. , 2011, , .		4
83	Using Object Affordances to Improve Object Recognition. IEEE Transactions on Autonomous Mental Development, 2011, 3, 207-215.	2.3	60
84	Ultrasound image features of the wrist are linearly related to finger positions. , 2011, , .		22
85	The Grasp Perturbator: Calibrating human grasp stiffness during a graded force task. , 2011, , .		10
86	Embodiment-specific representation of robot grasping using graphical models and latent-space discretization. , 2011, , .		6
87	On-line independent support vector machines. Pattern Recognition, 2010, 43, 1402-1412.	5.1	57
88	Fine detection of grasp force and posture by amputees via surface electromyography. Journal of Physiology (Paris), 2009, 103, 255-262.	2.1	139
89	Surface EMG in advanced hand prosthetics. Biological Cybernetics, 2009, 100, 35-47.	0.6	356
90	Multi-subject/daily-life activity EMG-based control of mechanical hands. Journal of NeuroEngineering and Rehabilitation, 2009, 6, 41.	2.4	112

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91	Model adaptation with least-squares SVM for adaptive hand prosthetics. , 2009, , .		54
92	Towards a Theoretical Framework for Learning Multi-modal Patterns for Embodied Agents. Lecture Notes in Computer Science, 2009, , 239-248.	1.0	3
93	Surface EMG for force control of mechanical hands. , 2008, , .		37
94	Gaze Tracking in Semi-Autonomous Grasping. Journal of Eye Movement Research, 2008, 2, .	0.5	1
95	Internal models of reaching and grasping. Advanced Robotics, 2007, 21, 1545-1564.	1.1	8
96	Indoor Place Recognition using Online Independent Support Vector Machines. , 2007, , .		18
97	The SAT-based Approach to Separation Logic. Journal of Automated Reasoning, 2006, 35, 237-263.	1.1	2
98	TSAT++: an Open Platform for Satisfiability Modulo Theories. Electronic Notes in Theoretical Computer Science, 2005, 125, 25-36.	0.9	8
99	A SAT-Based Decision Procedure for the Boolean Combination of Difference Constraints. Lecture Notes in Computer Science, 2005, , 16-29.	1.0	29
100	Proof Planning for First-Order Temporal Logic. Lecture Notes in Computer Science, 2005, , 235-249.	1.0	2
101	SAT-Based Decision Procedures for Automated Reasoning: A Unifying Perspective. Lecture Notes in Computer Science, 2005, , 46-58.	1.0	4
102	The SAT-based Approach to Separation Logic. , 2005, , 237-263.		0
103	Software Model Checking Using Linear Constraints. Lecture Notes in Computer Science, 2004, , 209-223.	1.0	5
104	SAT-based planning in complex domains: Concurrency, constraints and nondeterminism. Artificial Intelligence, 2003, 147, 85-117.	3.9	52
105	Proof Planning for Feature Interactions: A Preliminary Report. Lecture Notes in Computer Science, 2002, , 102-114.	1.0	2
106	SAT-Based Procedures for Temporal Reasoning. Lecture Notes in Computer Science, 2000, , 97-108.	1.0	46