

Francesco Ferracuti

List of Publications by Year in descending order

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137
papers

2,007
citations

489802

18
h-index

425179

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g-index

139
all docs

139
docs citations

139
times ranked

2442
citing authors

#	ARTICLE	IF	CITATIONS
1	Multi-apartment residential microgrid with electrical and thermal storage devices: Experimental analysis and simulation of energy management strategies. Applied Energy, 2015, 137, 854-866.	5.1	187
2	Electric Motor Fault Detection and Diagnosis by Kernel Density Estimation and Kullback-Leibler Divergence Based on Stator Current Measurements. IEEE Transactions on Industrial Electronics, 2015, 62, 1770-1780.	5.2	129
3	Statistical Spectral Analysis for Fault Diagnosis of Rotating Machines. IEEE Transactions on Industrial Electronics, 2018, 65, 4301-4310.	5.2	110
4	Impacts of robot implementation on care personnel and clients in elderly-care institutions. International Journal of Medical Informatics, 2020, 134, 104041.	1.6	90
5	Data-driven models for short-term thermal behaviour prediction in real buildings. Applied Energy, 2017, 204, 1375-1387.	5.1	63
6	The KIMORE Dataset: Kinematic Assessment of Movement and Clinical Scores for Remote Monitoring of Physical Rehabilitation. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2019, 27, 1436-1448.	2.7	58
7	Real-time mental stress detection based on smartwatch. , 2017, , .		55
8	Hybrid Deep Learning (hDL)-Based Brain-Computer Interface (BCI) Systems: A Systematic Review. Brain Sciences, 2021, 11, 75.	1.1	54
9	Dynamic surface fault tolerant control for underwater remotely operated vehicles. ISA Transactions, 2018, 78, 10-20.	3.1	53
10	Fuzzy logic based economical analysis of photovoltaic energy management. Neurocomputing, 2015, 170, 296-305.	3.5	42
11	A Hidden Semi-Markov Model based approach for rehabilitation exercise assessment. Journal of Biomedical Informatics, 2018, 78, 1-11.	2.5	40
12	Learning in-contact control strategies from demonstration. , 2016, , .		37
13	Accuracy evaluation of the Kinect v2 sensor during dynamic movements in a rehabilitation scenario. , 2016, 2016, 5409-5412.		36
14	A Novel Soft Robotic Hand Design With Human-Inspired Soft Palm: Achieving a Great Diversity of Grasps. IEEE Robotics and Automation Magazine, 2021, 28, 37-49.	2.2	35
15	Electric motor defects diagnosis based on kernel density estimation and Kullback-Leibler divergence in quality control scenario. Engineering Applications of Artificial Intelligence, 2015, 44, 25-32.	4.3	29
16	Robust Grasp Planning Over Uncertain Shape Completions. , 2019, , .		29
17	DDGC: Generative Deep Dexterous Grasping in Clutter. IEEE Robotics and Automation Letters, 2021, 6, 6899-6906.	3.3	26
18	Hidden Markov Model for Health Estimation and Prognosis of Turbofan Engines. , 2011, , .		24

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19	Incrementally assisted kinesthetic teaching for programming by demonstration. , 2016, , .		24
20	An instrumental approach for monitoring physical exercises in a visual markerless scenario: A proof of concept. Journal of Biomechanics, 2018, 69, 70-80.	0.9	24
21	A novel LDA-based approach for motor bearing fault detection. , 2015, , .		22
22	Fire exit signs: The use of neurological activity analysis for quantitative evaluations on their perceptiveness in a virtual environment. Fire Safety Journal, 2016, 82, 63-75.	1.4	22
23	Predicting Motor and Cognitive Improvement Through Machine Learning Algorithm in Human Subject that Underwent a Rehabilitation Treatment in the Early Stage of Stroke. Journal of Stroke and Cerebrovascular Diseases, 2018, 27, 2962-2972.	0.7	22
24	On handing down our tools to robots: Single-phase kinesthetic teaching for dynamic in-contact tasks. , 2015, , .		20
25	Multi-apartment residential microgrid monitoring system based on kernel canonical variate analysis. Neurocomputing, 2015, 170, 306-317.	3.5	20
26	Physical rehabilitation exercises assessment based on Hidden Semi-Markov Model by Kinect v2. , 2016, , .		20
27	Induction motor fault detection and diagnosis using KDE and Kullback-Leibler divergence. , 2013, , .		19
28	Multi-FinGAN: Generative Coarse-To-Fine Sampling of Multi-Finger Grasps. , 2021, , .		19
29	An Integrated Simulation Module for Cyber-Physical Automation Systems. Sensors, 2016, 16, 645.	2.1	18
30	IoT based indoor personal comfort levels monitoring. , 2016, , .		18
31	A functional source separation algorithm to enhance error-related potentials monitoring in noninvasive brain-computer interface. Computer Methods and Programs in Biomedicine, 2020, 191, 105419.	2.6	18
32	Multi-scale PCA based fault diagnosis on a paper mill plant. , 2011, , .		16
33	A Bidirectional Soft Biomimetic Hand Driven by Water Hydraulic for Dexterous Underwater Grasping. IEEE Robotics and Automation Letters, 2022, 7, 2186-2193.	3.3	16
34	Beyond Top-Grasps Through Scene Completion. , 2020, , .		15
35	Artificial bee colonies based optimal sizing of microgrid components: A profit maximization approach. , 2016, , .		14
36	Transferring Generalizable Motor Primitives From Simulation to Real World. IEEE Robotics and Automation Letters, 2019, 4, 2172-2179.	3.3	14

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37	A Participatory Design Process of a Robotic Tutor of Assistive Sign Language for Children with Autism. , 2019, , .		14
38	RGBD camera monitoring system for Alzheimer's disease assessment using Recurrent Neural Networks with Parametric Bias action recognition. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 3863-3868.	0.4	13
39	Indoor thermal comfort control through fuzzy logic PMV optimization. , 2015, , .		13
40	Sampled differential dynamic programming. , 2016, , .		13
41	A geometric approach for learning compliant motions from demonstration. , 2017, , .		12
42	A Virtual Thruster-Based Failure Tolerant Control Scheme for Underwater Vehicles. IFAC-PapersOnLine, 2015, 48, 146-151.	0.5	11
43	Signal Based Fault Detection and Diagnosis for Rotating Electrical Machines: Issues and Solutions. Studies in Fuzziness and Soft Computing, 2015, , 275-309.	0.6	11
44	Learning compliant assembly motions from demonstration. , 2016, , .		11
45	A QR-code localization system for mobile robots: Application to smart wheelchairs. , 2017, , .		11
46	A Smart Home Services Demonstration: Monitoring, Control and Security Services Offered to the User. , 2018, , .		11
47	Fault detection of a VTOL UAV using Acceleration Measurements. , 2019, , .		11
48	Fault Diagnosis of Rotating Machinery Based on Wasserstein Distance and Feature Selection. IEEE Transactions on Automation Science and Engineering, 2022, 19, 1997-2007.	3.4	11
49	Arc fault detection and appliances classification in AC home electrical networks using recurrence quantification plots and image analysis. Electric Power Systems Research, 2021, 201, 107503.	2.1	11
50	Auditory paradigm for a P300 BCI system using spatial hearing. , 2013, , .		10
51	Imitating Human Search Strategies for Assembly. , 2019, , .		10
52	AI-Powered Home Electrical Appliances as Enabler of Demand-Side Flexibility. IEEE Consumer Electronics Magazine, 2020, 9, 72-78.	2.3	10
53	AAL Technologies for Independent Life of Elderly People. Biosystems and Biorobotics, 2015, , 329-343.	0.2	10
54	Active Visuo-Haptic Object Shape Completion. IEEE Robotics and Automation Letters, 2022, 7, 5254-5261.	3.3	10

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55	Robotic manipulation in object composition space. , 2014, , .		9
56	Kernel canonical variate analysis based management system for monitoring and diagnosing smart homes. , 2014, , .		9
57	Bayes error based feature selection: An electric motors fault detection case study. , 2015, , .		9
58	A tool for home-based rehabilitation allowing for clinical evaluation in a visual markerless scenario. , 2015, 2015, 8034-7.		9
59	A novel computer vision based e-rehabilitation system: From gaming to therapy support. , 2016, , .		9
60	Hybrid control trajectory optimization under uncertainty. , 2017, , .		9
61	Season-Invariant GNSS-Denied Visual Localization for UAVs. IEEE Robotics and Automation Letters, 2022, 7, 10232-10239.	3.3	9
62	Improving dual-arm assembly by master-slave compliance. , 2019, , .		8
63	LS-SVM for LPV-ARX Identification: Efficient Online Update by Low-Rank Matrix Approximation. , 2020, , .		8
64	Deformation-Aware Data-Driven Grasp Synthesis. IEEE Robotics and Automation Letters, 2022, 7, 3038-3045.	3.3	8
65	MSPCA with KDE thresholding to support QC in electrical motors production line. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 1542-1547.	0.4	7
66	See what i mean-Probabilistic optimization of robot pointing gestures. , 2015, , .		7
67	Decision making under uncertain segmentations. , 2015, , .		7
68	Microgrid sizing via profit maximization: A population based optimization approach. , 2016, , .		7
69	Model selection for incremental learning of generalizable movement primitives. , 2017, , .		7
70	Real-time fall detection system by using mobile robots in smart homes. , 2017, , .		7
71	rEMpy: a comprehensive software framework for residential energy management. Energy and Buildings, 2018, 171, 131-143.	3.1	7
72	Optimal error governor for PID controllers. International Journal of Systems Science, 2021, 52, 2480-2492.	3.7	7

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73	Imitation learning-based framework for learning 6-D linear compliant motions. <i>Autonomous Robots</i> , 2021, 45, 389-405.	3.2	7
74	Probabilistic Surface Friction Estimation Based on Visual and Haptic Measurements. <i>IEEE Robotics and Automation Letters</i> , 2021, 6, 2838-2845.	3.3	7
75	Augmenting robot intelligence via EEG signals to avoid trajectory planning mistakes of a smart wheelchair. <i>Journal of Ambient Intelligence and Humanized Computing</i> , 2023, 14, 223-235.	3.3	7
76	Social Robot Co-Design Canvases: A Participatory Design Framework. <i>ACM Transactions on Human-Robot Interaction</i> , 2022, 11, 1-39.	3.2	7
77	Room occupancy detection: Combining RSS analysis and fuzzy logic. , 2016, , .		6
78	Temperature control of an innovative aluminium-steel molds induction preheat process placed on automated laser guided vehicles. , 2017, , .		6
79	A robust and self-tuning speed control for permanent magnet synchronous motors via meta-heuristic optimization. <i>International Journal of Advanced Manufacturing Technology</i> , 2018, 96, 1283-1292.	1.5	6
80	Learning from Demonstration for Hydraulic Manipulators. , 2018, , .		6
81	Collaborative design of a telerehabilitation system enabling virtual second opinion based on fuzzy logic. <i>IET Computer Vision</i> , 2018, 12, 502-512.	1.3	6
82	Teacher-Aware Active Robot Learning. , 2019, , .		6
83	Hypermap Mapping Framework and its Application to Autonomous Semantic Exploration. , 2020, , .		6
84	Comparing between Different Sets of Preprocessing, Classifiers, and Channels Selection Techniques to Optimise Motor Imagery Pattern Classification System from EEG Pattern Recognition. <i>Brain Sciences</i> , 2022, 12, 57.	1.1	6
85	Decentralized approaches for cooperative grasp planning. , 2014, , .		5
86	Smart home heating system malfunction and bad behavior diagnosis by Multi-Scale PCA under indoor temperature feedback control. , 2014, , .		5
87	A novel RSSI based approach for human indoor localization: The Fuzzy Discrete Multilateration. , 2016, , .		5
88	Serious gaming approach for physical activity monitoring: A visual feedback based on quantitative evaluation. , 2016, , .		5
89	Particle Swarm Optimization Based Sliding Mode Control Design: Application to a Quadrotor Vehicle. <i>Studies in Computational Intelligence</i> , 2017, , 143-169.	0.7	5
90	Speeding Up Incremental Learning Using Data Efficient Guided Exploration. , 2018, , .		5

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91	Robotâ€“Robot Gesturing for Anchoring Representations. IEEE Transactions on Robotics, 2019, 35, 216-230.	7.3	5
92	Few-Shot Model-Based Adaptation in Noisy Conditions. IEEE Robotics and Automation Letters, 2021, 6, 4193-4200.	3.3	5
93	RGB-D Video Monitoring System to Assess the Dementia Disease State Based on Recurrent Neural Networks with Parametric Bias Action Recognition and DAFS Index Evaluation. Lecture Notes in Computer Science, 2014, , 156-163.	1.0	5
94	An Inertial and QR Code Landmarks-Based Navigation System for Impaired Wheelchair Users. , 2014, , 205-214.		5
95	Safe Grasping with a Force Controlled Soft Robotic Hand. , 2020, , .		5
96	GNSS-denied geolocalization of UAVs by visual matching of onboard camera images with orthophotos. , 2021, , .		5
97	Task-specific grasping of simiiar objects by probabiistic fusion of vision and tactiie measurements. , 2015, , .		4
98	A thruster failure tolerant control scheme for underwater vehicles. , 2016, , .		4
99	Compliant Manipulation of Free-Floating Objects. , 2018, , .		4
100	Static Stability of Robotic Fabric Strip Folding. IEEE/ASME Transactions on Mechatronics, 2020, 25, 2493-2500.	3.7	4
101	Autonomous Assistive Robot for Respiratory Rate Detection and Tracking. , 2014, , 61-72.		4
102	Sparse Approximation of LS-SVM for LPV-ARX Model Identification: Application to a Powertrain Subsystem. , 2020, , .		4
103	Temporal arm tracking and probabilistic pointed object selection for robot to robot interaction using deictic gestures. , 2016, , .		3
104	Active Fault Tolerant Control of Remotely Operated Vehicles via Control Effort Redistribution. , 2017, , .		3
105	A Parametric Optimization Approach of an Induction Heating System for Energy Consumption Reduction. , 2017, , .		3
106	A new open-source Energy Management framework: Functional description and preliminary results. , 2017, , .		3
107	Safe- to-Explore State Spaces: Ensuring Safe Exploration in Policy Search with Hierarchical Task Optimization. , 2018, , .		3
108	Segmenting and Sequencing of Compliant Motions. , 2018, , .		3

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109	Hallucinating Robots: Inferring Obstacle Distances from Partial Laser Measurements. , 2018, , .		3
110	Human Indoor Localization for AAL Applications: An RSSI Based Approach. Lecture Notes in Electrical Engineering, 2017, , 239-250.	0.3	3
111	Simulation-based risk assessment of robot fleets in flooded environments. , 2013, , .		2
112	Holding hands - guiding humanoid walking using sensorless force control. , 2014, , .		2
113	On the design of observers robust to load variations for synchronous converters. , 2015, , .		2
114	Learning movement synchronization in multi-component robotic systems. , 2016, , .		2
115	Autonomous Generation of Robust and Focused Explanations for Robot Policies. , 2019, , .		2
116	ErrP Signals Detection for Safe Navigation of a Smart Wheelchair. , 2019, , .		2
117	From Video Game to Real Robot: The Transfer Between Action Spaces. , 2020, , .		2
118	Low Cost RGB-D Vision Based System to Support Motor Disabilities Rehabilitation at Home. Biosystems and Biorobotics, 2015, , 449-461.	0.2	2
119	Training and Retraining Motor Functions at Home with the Help of Current Technology for Video Games: Basis for the Project. Biosystems and Biorobotics, 2015, , 439-447.	0.2	2
120	Differential Dynamic Programming With Nonlinear Safety Constraints Under System Uncertainties. IEEE Robotics and Automation Letters, 2022, 7, 1760-1767.	3.3	2
121	Optimal Fault Tolerant Error Governor for PID Controllers. International Journal of Control, Automation and Systems, 2022, 20, 1814-1826.	1.6	2
122	Malfunction and Bad Behavior Diagnosis on Domestic Environment. Energy Procedia, 2014, 62, 246-255.	1.8	1
123	Humidex based multi room thermal comfort regulation via fuzzy logic. , 2015, , .		1
124	Indoor Thermal Comfort Control Based on Fuzzy Logic. Studies in Fuzziness and Soft Computing, 2016, , 829-850.	0.6	1
125	Robust Control of a Photovoltaic Battery System via Fuzzy Sliding Mode Approach. Studies in Computational Intelligence, 2017, , 115-142.	0.7	1
126	Multimedia experience enhancement through affective computing. , 2017, , .		1

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127	Nonlinear control of a photovoltaic battery system via ABC-tuned Dynamic Surface Controller. , 2017, , .		1
128	Active Incremental Learning of a Contextual Skill Model. , 2019, , .		1
129	Recurrence Quantification Analysis of Stator-Current Measurements for Electric Motor Fault Classification. , 2019, , .		1
130	A Methodology to Enable Electric Boiler as a Storage for Residential Energy Management. , 2020, , .		1
131	Functional evaluation of triceps surae during heel rise test: from EMG frequency analysis to machine learning approach. Medical and Biological Engineering and Computing, 2021, 59, 41-56.	1.6	1
132	Black box modelling of a latent heat thermal energy storage system coupled with heat pipes. IOP Conference Series: Materials Science and Engineering, 2021, 1139, 012010.	0.3	1
133	DeFINE: Delayed feedback-based immersive navigation environment for studying goal-directed human navigation. Behavior Research Methods, 2021, 53, 2668-2688.	2.3	1
134	Neuromuscular Control Modelling of Human Perturbed Posture Through Piecewise Affine Autoregressive With Exogenous Input Models. Frontiers in Bioengineering and Biotechnology, 2021, 9, 804904.	2.0	1
135	Fault detection of nonlinear processes based on switching linear regression models. , 2016, , .		0
136	Hear to see - See to hear: a Smart Home System User Interface for visually or hearing-impaired people. , 2018, , .		0
137	Constrained Control Allocation for a Remotely Operated Vehicle with Collective Azimuth Thrusters. , 2020, , .		0