Francesco Ferracuti

List of Publications by Year in Descending Order

121 papers	1,196 citations	17 h-index	29 g-index
139 ext. papers	1,578 ext. citations	3.6 avg, IF	4.99 L-index

#	Paper	IF	Citations
121	Deformation-Aware Data-Driven Grasp Synthesis. *IEEE Robotics and Automation Letters*, **2022**, 7, 3038-3045	4.2	3
120	Differential Dynamic Programming With Nonlinear Safety Constraints Under System Uncertainties. *IEEE Robotics and Automation Letters*, **2022**, 7, 1760-1767	4.2	0
119	A Bidirectional Soft Biomimetic Hand Driven by Water Hydraulic for Dexterous Underwater Grasping. *IEEE Robotics and Automation Letters*, **2022**, 7, 2186-2193	4.2	1
118	Social Robot Co-Design Canvases: A Participatory Design Framework. *ACM Transactions on Human-Robot Interaction*, **2022**, 11, 1-39	3.2	0
117	Active Visuo-Haptic Object Shape Completion. *IEEE Robotics and Automation Letters*, **2022**, 7, 5254-5261	4.2	
116	Neuromuscular Control Modelling of Human Perturbed Posture Through Piecewise Affine Autoregressive With Exogenous Input Models.. *Frontiers in Bioengineering and Biotechnology*, **2021**, 9, 804904	5.8	
115	Multi-FinGAN: Generative Coarse-To-Fine Sampling of Multi-Finger Grasps **2021**,		3
114	Optimal error governor for PID controllers. *International Journal of Systems Science*, **2021**, 52, 2480-2492	2.3	2
113	Imitation learning-based framework for learning 6-D linear compliant motions. *Autonomous Robots*, **2021**, 45, 389-405	3	3
112	Few-Shot Model-Based Adaptation in Noisy Conditions. *IEEE Robotics and Automation Letters*, **2021**, 6, 4193-4200	4.2	1
111	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	0.4	0
110	Probabilistic Surface Friction Estimation Based on Visual and Haptic Measurements. *IEEE Robotics and Automation Letters*, **2021**, 6, 2838-2845	4.2	3
109	Augmenting robot intelligence via EEG signals to avoid trajectory planning mistakes of a smart wheelchair. *Journal of Ambient Intelligence and Humanized Computing*, **2021**, 1	3.7	1
108	DeFINE: Delayed feedback-based immersive navigation environment for studying goal-directed human navigation. *Behavior Research Methods*, **2021**, 53, 2668-2688	6.1	0
107	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	3.4	9
106	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	3.1	1
105	Hybrid Deep Learning (hDL)-Based Brain-Computer Interface (BCI) Systems: A Systematic Review. *Brain Sciences*, **2021**, 11,	3.4	12

104	Human-in-the-Loop Approach to Safe Navigation of a Smart Wheelchair via Brain Computer Interface. *Lecture Notes in Electrical Engineering*, **2021**, 197-209	0.2	2
103	Fault Diagnosis of Rotating Machinery Based on Wasserstein Distance and Feature Selection. *IEEE Transactions on Automation Science and Engineering*, **2021**, 1-11	4.9	4
102	DDGC: Generative Deep Dexterous Grasping in Clutter. *IEEE Robotics and Automation Letters*, **2021**, 6, 6899-6906	4.2	8
101	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	3.5	3
100	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	6.9	12
99	AI-Powered Home Electrical Appliances as Enabler of Demand-Side Flexibility. *IEEE Consumer Electronics Magazine*, **2020**, 9, 72-78	3.2	4
98	Static Stability of Robotic Fabric Strip Folding. *IEEE/ASME Transactions on Mechatronics*, **2020**, 25, 2493-2500	5.9	1
97	Safe Grasping with a Force Controlled Soft Robotic Hand **2020**,		2
96	Impacts of robot implementation on care personnel and clients in elderly-care institutions. *International Journal of Medical Informatics*, **2020**, 134, 104041	5.3	46
95	LS-SVM for LPV-ARX Identification: Efficient Online Update by Low-Rank Matrix Approximation **2020**,		2
94	Beyond Top-Grasps Through Scene Completion **2020**,		4
93	Hypermap Mapping Framework and its Application to Autonomous Semantic Exploration **2020**,		1
92	Improving dual-arm assembly by master-slave compliance **2019**,		3
91	Transferring Generalizable Motor Primitives From Simulation to Real World. *IEEE Robotics and Automation Letters*, **2019**, 4, 2172-2179	4.2	6
90	Teacher-Aware Active Robot Learning **2019**,		1
89	Imitating Human Search Strategies for Assembly **2019**,		5
88	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	4.8	23
87	Robust Grasp Planning Over Uncertain Shape Completions **2019**,		17

86	A Participatory Design Process of a Robotic Tutor of Assistive Sign Language for Children with Autism **2019**,		3
85	Recurrence Quantification Analysis of Stator-Current Measurements for Electric Motor Fault Classification **2019**,		1
84	Fault detection of a VTOL UAV using Acceleration Measurements **2019**,		4
83	ErrP Signals Detection for Safe Navigation of a Smart Wheelchair **2019**,		1
82	Robot Robot Gesturing for Anchoring Representations. *IEEE Transactions on Robotics*, **2019**, 35, 216-230	6.5	4
81	Dynamic surface fault tolerant control for underwater remotely operated vehicles. *ISA Transactions* , **2018**, 78, 10-20	5.5	34
80	An instrumental approach for monitoring physical exercises in a visual markerless scenario: A proof of concept. *Journal of Biomechanics*, **2018**, 69, 70-80	2.9	19
79	Statistical Spectral Analysis for Fault Diagnosis of Rotating Machines. *IEEE Transactions on Industrial Electronics*, **2018**, 65, 4301-4310	8.9	82
78	A robust and self-tuning speed control for permanent magnet synchronous motors via meta-heuristic optimization. *International Journal of Advanced Manufacturing Technology*, **2018**, 96, 1283-1292	3.2	6
77	A Hidden Semi-Markov Model based approach for rehabilitation exercise assessment. *Journal of Biomedical Informatics*, **2018**, 78, 1-11	10.2	27
76	rEMpy: a comprehensive software framework for residential energy management. *Energy and Buildings*, **2018**, 171, 131-143	7	4
75	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	2.8	9
74	Segmenting and Sequencing of Compliant Motions **2018**,		2
73	Learning from Demonstration for Hydraulic Manipulators **2018**,		3
72	Hallucinating Robots: Inferring Obstacle Distances from Partial Laser Measurements **2018**,		2
71	A Smart Home Services Demonstration: Monitoring, Control and Security Services Offered to the User **2018**,		4
70	Speeding Up Incremental Learning Using Data Efficient Guided Exploration **2018**,		2
69	Collaborative design of a telerehabilitation system enabling virtual second opinion based on fuzzy logic. *IET Computer Vision*, **2018**, 12, 502-512	1.4	5

68	Robust Control of a Photovoltaic Battery System via Fuzzy Sliding Mode Approach. *Studies in Computational Intelligence*, **2017**, 115-142	0.8	1
67	Particle Swarm Optimization Based Sliding Mode Control Design: Application to a Quadrotor Vehicle. *Studies in Computational Intelligence*, **2017**, 143-169	0.8	3
66	Data-driven models for short-term thermal behaviour prediction in real buildings. *Applied Energy*, **2017**, 204, 1375-1387	10.7	45
65	Real-time mental stress detection based on smartwatch **2017**,		31
64	Model selection for incremental learning of generalizable movement primitives **2017**,		5
63	Temperature control of an innovative aluminium-steel molds induction preheat process placed on automated laser guided vehicles **2017**,		4
62	Active Fault Tolerant Control of Remotely Operated Vehicles via Control Effort Redistribution **2017**,		2
61	A Parametric Optimization Approach of an Induction Heating System for Energy Consumption Reduction **2017**,		2
60	A new open-source Energy Management framework: Functional description and preliminary results **2017**,		1
59	A QR-code localization system for mobile robots: Application to smart wheelchairs **2017**,		5
58	Hybrid control trajectory optimization under uncertainty **2017**,		8
57	A geometric approach for learning compliant motions from demonstration **2017**,		10
56	Real-time fall detection system by using mobile robots in smart homes **2017**,		4
55	Human Indoor Localization for AAL Applications: An RSSI Based Approach. *Lecture Notes in Electrical Engineering*, **2017**, 239-250	0.2	3
54	A thruster failure tolerant control scheme for underwater vehicles **2016**,		3
53	Room occupancy detection: Combining RSS analysis and fuzzy logic **2016**,		6
52	A novel RSSI based approach for human indoor localization: The Fuzzy Discrete Multilateration **2016**,		4
51	Accuracy evaluation of the Kinect v2 sensor during dynamic movements in a rehabilitation scenario. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2016**, 2016, 5409-5412	0.9	27

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50	Serious gaming approach for physical activity monitoring: A visual feedback based on quantitative evaluation **2016**,		3
49	IoT based indoor personal comfort levels monitoring **2016**,		14
48	An Integrated Simulation Module for Cyber-Physical Automation Systems. *Sensors*, **2016**, 16,	3.8	15
47	Temporal arm tracking and probabilistic pointed object selection for robot to robot interaction using deictic gestures **2016**,		3
46	Learning in-contact control strategies from demonstration **2016**,		22
45	Learning compliant assembly motions from demonstration **2016**,		10
44	Sampled differential dynamic programming **2016**,		7
43	Artificial bee colonies based optimal sizing of microgrid components: A profit maximization approach **2016**,		5
42	Microgrid sizing via profit maximization: A population based optimization approach **2016**,		4
41	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	3.3	13
40	A novel computer vision based e-rehabilitation system: From gaming to therapy support **2016**,		8
39	Physical rehabilitation exercises assessment based on Hidden Semi-Markov Model by Kinect v2 **2016**,		20
38	Incrementally assisted kinesthetic teaching for programming by demonstration **2016**,		17
37	Indoor Thermal Comfort Control Based on Fuzzy Logic. *Studies in Fuzziness and Soft Computing*, **2016**, 829-850	0.7	
36	Fuzzy logic based economical analysis of photovoltaic energy management. *Neurocomputing*, **2015**, 170, 296-305	5.4	37
35	Multi-apartment residential microgrid monitoring system based on kernel canonical variate analysis. *Neurocomputing*, **2015**, 170, 306-317	5.4	14
34	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	7.2	24
33	Signal Based Fault Detection and Diagnosis for Rotating Electrical Machines: Issues and Solutions. *Studies in Fuzziness and Soft Computing*, **2015**, 275-309	0.7	5

32	Humidex based multi room thermal comfort regulation via fuzzy logic **2015**,		1
31	Decision making under uncertain segmentations **2015**,		5
30	Multi-apartment residential microgrid with electrical and thermal storage devices: Experimental analysis and simulation of energy management strategies. *Applied Energy*, **2015**, 137, 854-866	10.7	147
29	Indoor thermal comfort control through fuzzy logic PMV optimization **2015**,		8
28	See what i mean-Probabilistic optimization of robot pointing gestures **2015**,		5
27	On the design of observers robust to load variations for synchronous converters **2015**,		2
26	Bayes error based feature selection: An electric motors fault detection case study **2015**,		4
25	A Virtual Thruster-Based Failure Tolerant Control Scheme for Underwater Vehicles. *IFAC-PapersOnLine*, **2015**, 48, 146-151	0.7	5
24	On handing down our tools to robots: Single-phase kinesthetic teaching for dynamic in-contact tasks **2015**,		14
23	A novel LDA-based approach for motor bearing fault detection **2015**,		17
22	A tool for home-based rehabilitation allowing for clinical evaluation in a visual markerless scenario. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2015**, 2015, 8034-7	0.9	9
21	Task-specific grasping of simiiar objects by probabiiistic fusion of vision and tactiie measurements **2015**,		3
20	. *IEEE Transactions on Industrial Electronics*, **2015**, 62, 1770-1780	8.9	86
19	AAL Technologies for Independent Life of Elderly People. *Biosystems and Biorobotics*, **2015**, 329-343	0.2	7
18	Low Cost RGB-D Vision Based System to Support Motor Disabilities Rehabilitation at Home. *Biosystems and Biorobotics*, **2015**, 449-461	0.2	2
17	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	1
16	Kernel canonical variate analysis based management system for monitoring and diagnosing smart homes **2014**,		8
15	RGBD camera monitoring system for Alzheimer¥ disease assessment using Recurrent Neural Networks with Parametric Bias action recognition. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2014**, 47, 3863-3868		10

14   Smart home heating system malfunction and bad behavior diagnosis by Multi-Scale PCA under indoor temperature feedback control **2014**,   5

13   Holding hands - guiding humanoid walking using sensorless force control **2014**,   2

12   Decentralized approaches for cooperative grasp planning **2014**,   4

11   Malfunction and Bad Behavior Diagnosis on Domestic Environment. *Energy Procedia*, **2014**, 62, 246-255   2.3   1

10   Robotic manipulation in object composition space **2014**,   6

9   Autonomous Assistive Robot for Respiratory Rate Detection and Tracking **2014**, 61-72   3

8   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   0.9   4

7   An Inertial and QR Code Landmarks-Based Navigation System for Impaired Wheelchair Users **2014**, 205-214   4

6   Induction motor fault detection and diagnosis using KDE and Kullback-Leibler divergence **2013**,   12

5   Auditory paradigm for a P300 BCI system using spatial hearing **2013**,   7

4   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   3

3   Hidden Markov Model for Health Estimation and Prognosis of Turbofan Engines **2011**,   15

2   Multi-scale PCA based fault diagnosis on a paper mill plant **2011**,   10

1   Optimal Fault Tolerant Error Governor for PID Controllers. *International Journal of Control, Automation and Systems*, 1   2.9