Silvia Ferrari

List of Publications by Year
in descending order

108 papers	2,052 citations	257357 24 h-index	289141 40 g-index
109 all docs	109 docs citations	109 times ranked	1699 citing authors

#	Article	IF	Citations
1	Smooth Function Approximation Using Neural Networks. IEEE Transactions on Neural Networks, 2005, 16, 24-38.	4.8	263
2	Online Adaptive Critic Flight Control. Journal of Guidance, Control, and Dynamics, 2004, 27, 777-786.	1.6	122
3	Information-Driven Sensor Path Planning by Approximate Cell Decomposition. IEEE Transactions on Systems, Man, and Cybernetics, 2009, 39, 672-689.	5.5	121
4	A constrained integration (CINT) approach to solving partial differential equations using artificial neural networks. Neurocomputing, 2015, 155, 277-285.	3.5	74
5	A Mobile Sensing Approach for Regional Surveillance of Fugitive Methane Emissions in Oil and Gas Production. Environmental Science & Technology, 2016, 50, 2487-2497.	4.6	65
6	Deep learning feature extraction for target recognition and classification in underwater sonar images. , 2017, , .		63
7	Network models of criminal behavior. IEEE Control Systems, 2008, 28, 65-77.	1.0	59
8	Constructing Bayesian networks for criminal profiling from limited data. Knowledge-Based Systems, 2008, 21, 563-572.	4.0	58
9	Distributed optimal control for multi-agent trajectory optimization. Automatica, 2014, 50, 149-154.	3.0	58
10	Optimal Control of an Underwater Sensor Network for Cooperative Target Tracking. IEEE Journal of Oceanic Engineering, 2009, 34, 678-697.	2.1	46
11	An Information Roadmap Method for Robotic Sensor Path Planning. Journal of Intelligent and Robotic Systems: Theory and Applications, 2009, 56, 69-98.	2.0	44
12	A Constrained Optimization Approach to Preserving Prior Knowledge During Incremental Training. IEEE Transactions on Neural Networks, 2008, 19, 996-1009.	4.8	42
13	A Hybrid-Adaptive Dynamic Programming Approach for the Model-Free Control of Nonlinear Switched Systems. IEEE Transactions on Automatic Control, 2016, 61, 3203-3208.	3.6	42
14	Adaptive Feedback Control by Constrained Approximate Dynamic Programming. IEEE Transactions on Systems, Man, and Cybernetics, 2008, 38, 982-987.	5.5	40
15	A Geometric Optimization Approach to Detecting and Intercepting Dynamic Targets Using a Mobile Sensor Network. SIAM Journal on Control and Optimization, 2009, 48, 292-320.	1.1	40
16	Demining sensor modeling and feature-level fusion by Bayesian networks. IEEE Sensors Journal, 2006, 6, 471-483.	2.4	37
17	A Constrained Backpropagation Approach for the Adaptive Solution of Partial Differential Equations. IEEE Transactions on Neural Networks and Learning Systems, 2014, 25, 571-584.	7.2	36
18	Distributed Optimal Control of Sensor Networks for Dynamic Target Tracking. IEEE Transactions on Control of Network Systems, 2018, 5, 142-153.	2.4	36

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19	Spiking neural network (SNN) control of a flapping insect-scale robot. , 2016, , .		33
20	A Geometric Transversal Approach to Analyzing Track Coverage in Sensor Networks. IEEE Transactions on Computers, 2008, 57, 1113-1128.	2.4	32
21	Robust Deployment of Dynamic Sensor Networks for Cooperative Track Detection. IEEE Sensors Journal, 2009, 9, 1029-1048.	2.4	31
22	An Information Potential Approach to Integrated Sensor Path Planning and Control. IEEE Transactions on Robotics, 2014, 30, 919-934.	7.3	27
23	Classical/Neural Synthesis of Nonlinear Control Systems. Journal of Guidance, Control, and Dynamics, 2002, 25, 442-448.	1.6	26
24	Emergent bursting and synchrony in computer simulations of neuronal cultures. Frontiers in Computational Neuroscience, 2012, 6, 15.	1.2	26
25	A Comparison of Information Functions and Search Strategies for Sensor Planning in Target Classification. IEEE Transactions on Systems, Man, and Cybernetics, 2012, 42, 2-16.	5.5	26
26	Distributed Optimal Control of Multiscale Dynamical Systems: A Tutorial. IEEE Control Systems, 2016, 36, 102-116.	1.0	25
27	A Scalable Weight-Free Learning Algorithm for Regulatory Control of Cell Activity in Spiking Neuronal Networks. International Journal of Neural Systems, 2018, 28, 1750015.	3.2	25
28	Probabilistic Track Coverage in Cooperative Sensor Networks. IEEE Transactions on Systems, Man, and Cybernetics, 2010, 40, 1492-1504.	5.5	22
29	Satisficing in split-second decision making is characterized by strategic cue discounting.. Journal of Experimental Psychology: Learning Memory and Cognition, 2016, 42, 1937-1956.	0.7	22
30	Track coverage in sensor networks. , 2006, , .		21
31	Information-Driven Search Strategies in the Board Game of CLUE $^{circit{R}}$. IEEE Transactions on Systems, Man, and Cybernetics, 2009, 39, 607-625.	5.5	20
32	Digital implementation of a virtual insect trained by spike-timing dependent plasticity. The Integration VLSI Journal, 2016, 54, 109-117.	1.3	18
33	A Generalized Reduced Gradient Method for the Optimal Control of Very-Large-Scale Robotic Systems. IEEE Transactions on Robotics, 2017, 33, 1226-1232.	7.3	16
34	Automatic Panâ€“Tilt Camera Control for Learning Dirichlet Process Gaussian Process (DPGP) Mixture Models of Multiple Moving Targets. IEEE Transactions on Automatic Control, 2019, 64, 159-173.	3.6	16
35	Optimal self-triggering for nonlinear systems via Approximate Dynamic Programming. , 2012, , .		15
36	A potential field approach to finding minimum-exposure paths in wireless sensor networks. , 2010, , .		14

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37	Bayesian Network Modeling of Acoustic Sensor Measurements. , 2007, , .		13
38	Optimized visibility motion planning for target tracking and localization. , 2014, , .		13
39	Necessary conditions for optimality for a distributed optimal control problem. , 2010, , .		12
40	A Geometric Optimization Approach to Detecting and Intercepting Dynamic Targets. Proceedings of the American Control Conference, 2007, , .	0.0	11
41	An adaptive artificial potential function approach for geometric sensing. , 2009, , .		11
42	A geometric optimization approach to tracking maneuvering targets using a heterogeneous mobile sensor network. , 2009, , .		11
43	A model-based cell decomposition approach to on-line pursuit-evasion path planning and the video game Ms. Pac-Man. , 2012, , .		11
44	A generalized reduced gradient method for the optimal control of multiscale dynamical systems. , 2013, , .		11
45	Digital implementation of a spiking neural network (SNN) capable of spike-timing-dependent plasticity (STDP) learning. , 2014, , .		11
46	Video-guided Camera Control for Target Tracking and Following. IFAC-PapersOnLine, 2019, 51, 176-183.	0.5	11
47	Comparison of Information-Theoretic Objective Functions for Decision Support in Sensor Systems. Proceedings of the American Control Conference, 2007, , .	0.0	10
48	Multiobjective Algebraic Synthesis of Neural Control Systems by Implicit Model Following. IEEE Transactions on Neural Networks, 2009, 20, 406-419.	4.8	10
49	A Geometric Transversals Approach to Sensor Motion Planning for Tracking Maneuvering Targets. IEEE Transactions on Automatic Control, 2015, 60, 2773-2778.	3.6	10
50	Information value in nonparametric Dirichlet-process Gaussian-process (DPGP) mixture models. Automatica, 2016, 74, 360-368.	3.0	10
51	Anti-heparan sulfate antibodies in neurological disease. Muscle and Nerve, 2002, 26, 713-715.	1.0	9
52	A cell decomposition approach to cooperative path planning and collision avoidance via disjunctive programming. , 2010, , .		9
53	Probabilistic inference under time pressure leads to a cortical-to-subcortical shift in decision evidence integration. NeuroImage, 2017, 162, 138-150.	2.1	9
54	Full Flight Envelope and Trim Map of Flapping-Wing Micro Aerial Vehicles. Journal of Guidance, Control, and Dynamics, 2020, 43, 2218-2236.	1.6	9

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55	A DISJUNCTIVE PROGRAMMING APPROACH FOR MOTION PLANNING OF MOBILE ROUTER NETWORKS. International Journal of Robotics and Automation, 2011, 26, .	0.1	9
56	A constrained-optimization approach to training neural networks for smooth function approximation and system identification. , 2008, , .		8
57	Fugitive gas emission rate estimation using multiple heterogeneous mobile sensors. , 2017, , .		8
58	Biologically realizable reward-modulated hebbian training for spiking neural networks. , 2008, , .		7
59	Indirect training of a spiking neural network for flight control via spike-timing-dependent synaptic plasticity. , 2010, , .		7
60	FoveaCam: A MEMS Mirror-Enabled Foveating Camera. , 2020, , .		7
61	Probabilistic deployment for multiple sensor systems. , 2005, , .		7
62	Classical/neural synthesis of nonlinear control systems. , 2000, , .		6
63	An information potential approach for tracking and surveilling multiple moving targets using mobile sensor agents. , 2011, , .		6
64	Cooperative navigation for heterogeneous autonomous vehicles via approximate dynamic programming. , 2011, , .		6
65	A Q-learning approach to automated unmanned air vehicle demining. Journal of Defense Modeling and Simulation, 2012, 9, 83-92.	1.2	6
66	A Geometric Transversals Approach to Analyzing the Probability of Track Detection for Maneuvering Targets. IEEE Transactions on Computers, 2014, 63, 2633-2646.	2.4	6
67	Camera control for learning nonlinear target dynamics via Bayesian nonparametric Dirichlet-process Gaussian-process (DP-GP) models. , 2014, , .		6
68	A Model-Based Approach to Optimizing <italic>Ms. Pac-Man</italic> Game Strategies in Real Time. IEEE Transactions on Games, 2017, 9, 153-165.	1.7	6
69	Scalable Gas Sensing, Mapping, and Path Planning via Decentralized Hilbert Maps. Sensors, 2019, 19, 1524.	2.1	6
70	Cooperative multi-target tracking via hybrid modeling and geometric optimization. , 2009, , .		5
71	A randomized hybrid system approach to coordinated robotic sensor planning. , 2010, , .		5
72	A model-based approximate Î»-policy iteration approach to online evasive path planning and the video game Ms. Pac-Man. Journal of Control Theory and Applications, 2011, 9, 391-399.	0.8	5

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73	An approximate dynamic programming approach for model-free control of switched systems. , 2013, , .		5
74	A blade element approach to modeling aerodynamic flight of an insect-scale robot. , 2017, , .		5
75	The Role of Bounded Fields-of-View and Negative Information in Finite Set Statistics (FISST). , 2020, , .		5
76	Maintaining robust connectivity in heterogeneous robotic networks. Proceedings of SPIE, 2013, , .	0.8	4
77	A Random Finite Set Sensor Control Approach for Vision-based Multi-object Search-While-Tracking. , 2021, , .		4
78	A Q-Learning approach to developing an automated neural computer player for the board game of CLUE®. , 2008, , .		3
79	Modeling of human driver behavior via receding horizon and artificial neural network controllers. , 2013, , .		3
80	Optimal root profiles in water-limited ecosystems. Advances in Water Resources, 2014, 71, 16-22.	1.7	3
81	Multi-kernel probability distribution regressions. , 2015, , .		3
82	An adaptive spiking neural controller for flapping insect-scale robots. , 2017, , .		3
83	Integrated Mapping and Path Planning for Very Large-Scale Robotic (VLSR) Systems. , 2019, , .		3
84	Adaptive Online Distributed Optimal Control of Very-Large-Scale Robotic Systems. IEEE Transactions on Control of Network Systems, 2021, 8, 678-689.	2.4	3
85	Informative Multiview Planning for Underwater Sensors. IEEE Journal of Oceanic Engineering, 2022, 47, 780-798.	2.1	3
86	A Holistic Approach for Role Inference and Action Anticipation in Human Teams. ACM Transactions on Intelligent Systems and Technology, 2022, 13, 1-24.	2.9	3
87	Modified maximum likelihood estimation in one-parameter exponential family models. Communications in Statistics - Theory and Methods, 1999, 28, 157-178.	0.6	2
88	Robust and Reconfigurable Flight Control by Neural Networks. , 2005, , .		2
89	A probability density function approach to distributed sensors' path planning. , 2010, , .		2
90	Q -learning approach to automated unmanned air vehicle (UAV) demining. , 2010, , .		2

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91	A cell decomposition approach to online evasive path planning and the video game Ms. Pac-Man. , 2011, , .		2
92	Special issue on approximate dynamic programming and reinforcement learning. Journal of Control Theory and Applications, 2011, 9, 309-309.	0.8	2
93	On the duality of robot and sensor path planning. , 2013, , .		2
94	Value function approximation for the control of multiscale dynamical systems. , 2016, , .		2
95	Learning Recursive Bayesian Nonparametric Modeling of Moving Targets via Mobile Decentralized Sensors. , 2019, , .		2
96	Vision-guided Planning and Control for Autonomous Taxiing via Convolutional Neural Networks. , 2019, , .		2
97	Oriented Pedestrian Social Interaction Modeling and Inference. , 2020, , .		2
98	Random Finite Set Theory and Centralized Control of Large Collaborative Swarms. Journal of Guidance, Control, and Dynamics, 2021, 44, 505-521.	1.6	2
99	Rumor-robust Decentralized Gaussian Process Learning, Fusion, and Planning for Modeling Multiple Moving Targets. , 2020, , .		2
100	An information-driven framework for motion planning in robotic sensor networks: Complexity and experiments. , 2008, , .		1
101	A penalty function method for exploratory adaptive-critic neural network control. , 2009, , .		1
102	A geometric transversals approach to analyzing track coverage of omnidirectional sensor networks for maneuvering targets. , 2010, , .		1
103	Approximate dynamic programming recurrence relations for a hybrid optimal control problem. Proceedings of SPIE, 2012, , .	0.8	1
104	ML2VR: providing MATLAB users an easy transition to virtual reality and immersive interactivity. , 2013, , .		1
105	Robust Flight Control via Minimum Hâˆž Entropy Principle. , 2018, , .		1
106	Probabilistic inferential decision-making under time pressure in rhesus macaques (Macaca mulatta).. Journal of Comparative Psychology (Washington, D C: 1983), 2019, 133, 380-396.	0.3	1
107	A constrained backpropagation approach to solving Partial Differential Equations in non-stationary environments. , 2009, , .		0
108	Real-Time Communication Control in Decentralized Autonomous Sensor Networks. Journal of Aerospace Information Systems, 0, , 1-12.	1.0	0