Angela P Schoellig

List of Publications by Year
in descending order

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76 papers	2,886 citations	361413 20 h-index	315739 38 g-index
77 all docs	77 docs citations	77 times ranked	2149 citing authors

#	Article	IF	Citations
1	Optimizing a Drone Network to Deliver Automated External Defibrillators. Circulation, 2017, 135, 2454-2465.	1.6	196
2	Generation of collision-free trajectories for a quadrocopter fleet: A sequential convex programming approach. , 2012, , .		194
3	A platform for aerial robotics research and demonstration: The Flying Machine Arena. Mechatronics, 2014, 24, 41-54.	3.3	190
4	Safe Learning in Robotics: From Learning-Based Control to Safe Reinforcement Learning. Annual Review of Control, Robotics, and Autonomous Systems, 2022, 5, 411-444.	11.8	156
5	Safe controller optimization for quadrotors with Gaussian processes. , 2016, , .		151
6	Robust Constrained Learning-based NMPC enabling reliable mobile robot path tracking. International Journal of Robotics Research, 2016, 35, 1547-1563.	8.5	148
7	Application-driven design of aerial communication networks. , 2014, 52, 129-137.		123
8	Learning-based Nonlinear Model Predictive Control to Improve Vision-based Mobile Robot Path Tracking. Journal of Field Robotics, 2016, 33, 133-152.	6.0	119
9	Optimization-based iterative learning for precise quadrocopter trajectory tracking. Autonomous Robots, 2012, 33, 103-127.	4.8	115
10	Online Trajectory Generation With Distributed Model Predictive Control for Multi-Robot Motion Planning. IEEE Robotics and Automation Letters, 2020, 5, 604-611.	5.1	110
11	Safe learning of regions of attraction for uncertain, nonlinear systems with Gaussian processes. , 2016, , .		109
12	Safe and robust learning control with Gaussian processes. , 2015, , .		81
13	Learning-based nonlinear model predictive control to improve vision-based mobile robot path-tracking in challenging outdoor environments. , 2014, , .		67
14	Trajectory Generation for Multiagent Point-To-Point Transitions via Distributed Model Predictive Control. IEEE Robotics and Automation Letters, 2019, 4, 375-382.	5.1	66
15	Virtual vs. real: Trading off simulations and physical experiments in reinforcement learning with Bayesian optimization. , 2017, , .		55
16	Deep neural networks for improved, impromptu trajectory tracking of quadrotors. , 2017, , .		53
17	Bayesian optimization with safety constraints: safe and automatic parameter tuning in robotics. Machine Learning, 2023, 112, 3713-3747.	5.4	44
18	Do We Need to Compensate for Motion Distortion and Doppler Effects in Spinning Radar Navigation?. IEEE Robotics and Automation Letters, 2021, 6, 771-778.	5.1	39

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19	Visual teach and repeat, repeat, repeat: Iterative Learning Control to improve mobile robot path tracking in challenging outdoor environments. , 2013, , .		36
20	Provably Robust Learning-Based Approach for High-Accuracy Tracking Control of Lagrangian Systems. IEEE Robotics and Automation Letters, 2019, 4, 1587-1594.	5.1	36
21	Iterative learning of feed-forward corrections for high-performance tracking. , 2012, , .		34
22	Unscented external force and torque estimation for quadrotors. , 2016, , .		33
23	There's No Place Like Home: Visual Teach and Repeat for Emergency Return of Multirotor UAVs During GPS Failure. IEEE Robotics and Automation Letters, 2019, 4, 161-168.	5.1	33
24	Flatness-Based Model Predictive Control for Quadrotor Trajectory Tracking. , 2018, , .		32
25	A real-time analysis of post-blast rock fragmentation using UAV technology. International Journal of Mining, Reclamation and Environment, 2017, 31, 439-456.	2.8	31
26	Learn Fast, Forget Slow: Safe Predictive Learning Control for Systems With Unknown and Changing Dynamics Performing Repetitive Tasks. IEEE Robotics and Automation Letters, 2019, 4, 2180-2187.	5.1	31
27	Design of deep neural networks as add-on blocks for improving impromptu trajectory tracking. , 2017, , .		28
28	Visual Localization with Google Earth Images for Robust Global Pose Estimation of UAVs. , 2020, , .		28
29	Learning-Based Bias Correction for Time Difference of Arrival Ultra-Wideband Localization of Resource-Constrained Mobile Robots. IEEE Robotics and Automation Letters, 2021, 6, 3639-3646.	5.1	28
30	Adaptive Model Predictive Control for High-Accuracy Trajectory Tracking in Changing Conditions. , 2018, , .		25
31	Distributed iterative learning control for multi-agent systems. Autonomous Robots, 2019, 43, 1989-2010.	4.8	24
32	A deep learning approach for rock fragmentation analysis. International Journal of Rock Mechanics and Minings Sciences, 2021, 145, 104839.	5.8	24
33	Dance of the Flying Machines: Methods for Designing and Executing an Aerial Dance Choreography. IEEE Robotics and Automation Magazine, 2013, 20, 96-104.	2.0	22
34	Data-Efficient Multirobot, Multitask Transfer Learning for Trajectory Tracking. IEEE Robotics and Automation Letters, 2018, 3, 1260-1267.	5.1	22
35	Estimating and reacting to forces and torques resulting from common aerodynamic disturbances acting on quadrotors. Robotics and Autonomous Systems, 2020, 123, 103314.	5.1	22
36	Finding the Right Place: Sensor Placement for UWB Time Difference of Arrival Localization in Cluttered Indoor Environments. IEEE Robotics and Automation Letters, 2022, 7, 6075-6082.	5.1	22

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37	Tag-based visual-inertial localization of unmanned aerial vehicles in indoor construction environments using an on-manifold extended Kalman filter. Automation in Construction, 2022, 135, 104112.	9.8	21
38	Multi-robot transfer learning: A dynamical system perspective. , 2017, , .		19
39	Exploiting Differential Flatness for Robust Learning-Based Tracking Control Using Gaussian Processes. , 2021, 5, 1121-1126.		19
40	Feed-forward parameter identification for precise periodic quadrocopter motions. , 2012, , .		16
41	A Proof-of-Concept Demonstration of Visual Teach and Repeat on a Quadrocopter Using an Altitude Sensor and a Monocular Camera. , 2014, , .		15
42	Experience-Based Model Selection to Enable Long-Term, Safe Control for Repetitive Tasks Under Changing Conditions. , 2018, , .		15
43	Speed Daemon: Experience-Based Mobile Robot Speed Scheduling. , 2014, , .		14
44	Learning multimodal models for robot dynamics online with a mixture of Gaussian process experts. , 2017, , .		14
45	Distributed iterative learning control for a team of quadrotors. , 2016, , .		13
46	Transfer learning for highâ€precision trajectory tracking through adaptive feedback and iterative learning. International Journal of Adaptive Control and Signal Processing, 2019, 33, 388-409.	4.1	13
47	Learning Probabilistic Models for Safe Predictive Control in Unknown Environments. , 2019, , .		13
48	A Data-Driven Motion Prior for Continuous-Time Trajectory Estimation on SE(3). IEEE Robotics and Automation Letters, 2020, 5, 1429-1436.	5.1	13
49	An Inversion-Based Learning Approach for Improving Impromptu Trajectory Tracking of Robots With Non-Minimum Phase Dynamics. IEEE Robotics and Automation Letters, 2018, 3, 1663-1670.	5.1	12
50	Conservative to confident: Treating uncertainty robustly within Learning-Based Control. , 2015, , .		10
51	Variational Inference With Parameter Learning Applied to Vehicle Trajectory Estimation. IEEE Robotics and Automation Letters, 2020, 5, 5291-5298.	5.1	10
52	Experience Selection Using Dynamics Similarity for Efficient Multi-Source Transfer Learning Between Robots. , 2020, , .		10
53	Catch the Ball: Accurate High-Speed Motions for Mobile Manipulators via Inverse Dynamics Learning. , 2020, , .		10
54	Safe and robust robot maneuvers based on reach control. , 2016, , .		9

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55	Limited benefit of joint estimation in multiâ€agent iterative learning. Asian Journal of Control, 2012, 14, 613-623.	3.0	8
56	Knowledge Transfer Between Robots with Similar Dynamics for High-Accuracy Impromptu Trajectory Tracking. , 2019, , .		8
57	Zeus: A system description of the twoâ€time winner of the collegiate SAE autodrive competition. Journal of Field Robotics, 2021, 38, 139-166.	6.0	8
58	High-precision trajectory tracking in changing environments through L<inf>1</inf> adaptive feedback and iterative learning. , 2017, , .		7
59	A Modular Framework for Motion Planning Using Safe-by-Design Motion Primitives. IEEE Transactions on Robotics, 2019, 35, 1233-1252.	10.3	7
60	Robust adaptive model predictive control for guaranteed fast and accurate stabilization in the presence of model errors. International Journal of Robust and Nonlinear Control, 2021, 31, 8750-8784.	3.7	7
61	Deep neural networks as add-on modules for enhancing robot performance in impromptu trajectory tracking. International Journal of Robotics Research, 2020, 39, 1397-1418.	8.5	6
62	An upper bound on the error of alignment-based Transfer Learning between two linear, time-invariant, scalar systems. , 2015, , .		5
63	On the construction of safe controllable regions for affine systems with applications to robotics. , 2016, , .		5
64	A framework for multi-vehicle navigation using feedback-based motion primitives. , 2017, , .		5
65	On the construction of safe controllable regions for affine systems with applications to robotics. Automatica, 2018, 98, 323-330.	5.0	5
66	Meta Learning With Paired Forward and Inverse Models for Efficient Receding Horizon Control. IEEE Robotics and Automation Letters, 2021, 6, 3240-3247.	5.1	5
67	Design of norm-optimal iterative learning controllers: The effect of an iteration-domain Kalman filter for disturbance estimation. , 2014, , .		4
68	To Share or Not to Share? Performance Guarantees and the Asymmetric Nature of Cross-Robot Experience Transfer. , 2021, 5, 923-928.		4
69	Bridging the Model-Reality Gap With Lipschitz Network Adaptation. IEEE Robotics and Automation Letters, 2022, 7, 642-649.	5.1	4
70	RLO-MPC: Robust Learning-Based Output Feedback MPC for Improving the Performance of Uncertain Systems in Iterative Tasks. , 2021, , .		4
71	A Perception-Aware Flatness-Based Model Predictive Controller for Fast Vision-Based Multirotor Flight. IFAC-PapersOnLine, 2020, 53, 9412-9419.	0.9	3
72	Fly Out the Window: Exploiting Discrete-Time Flatness for Fast Vision-Based Multirotor Flight. IEEE Robotics and Automation Letters, 2022, 7, 5023-5030.	5.1	3

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73	Optimal Geometry for Ultra-wideband Localization using Bayesian Optimization. IFAC-PapersOnLine, 2020, 53, 15481-15488.	0.9	2
74	Where Do We Go From Here? Debates on the Future of Robotics Research at ICRA 2019 [From the Field]. IEEE Robotics and Automation Magazine, 2019, 26, 7-10.	2.0	1
75	Active Training Trajectory Generation for Inverse Dynamics Model Learning with Deep Neural Networks. , 2019, , .		1
76	Learning a Stability Filter for Uncertain Differentially Flat Systems using Gaussian Processes. , 2021, , .		1