Angela P Schoellig

List of Publications by Year
in descending order

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	Bayesian optimization with safety constraints: safe and automatic parameter tuning in robotics. Machine Learning, 2023, 112, 3713-3747.	5.4	44
2	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
3	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
4	Bridging the Model-Reality Gap With Lipschitz Network Adaptation. IEEE Robotics and Automation Letters, 2022, 7, 642-649.	5.1	4
5	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
6	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
7	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
8	To Share or Not to Share? Performance Guarantees and the Asymmetric Nature of Cross-Robot Experience Transfer. , 2021, 5, 923-928.		4
9	Exploiting Differential Flatness for Robust Learning-Based Tracking Control Using Gaussian Processes. , 2021, 5, 1121-1126.		19
10	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
11	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
12	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
13	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
14	A deep learning approach for rock fragmentation analysis. International Journal of Rock Mechanics and Minings Sciences, 2021, 145, 104839.	5.8	24
15	RLO-MPC: Robust Learning-Based Output Feedback MPC for Improving the Performance of Uncertain Systems in Iterative Tasks. , 2021, , .		4
16	Learning a Stability Filter for Uncertain Differentially Flat Systems using Gaussian Processes. , 2021, , .		1
17	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
18	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

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19	Visual Localization with Google Earth Images for Robust Global Pose Estimation of UAVs. , 2020, , .		28
20	Variational Inference With Parameter Learning Applied to Vehicle Trajectory Estimation. IEEE Robotics and Automation Letters, 2020, 5, 5291-5298.	5.1	10
21	Experience Selection Using Dynamics Similarity for Efficient Multi-Source Transfer Learning Between Robots. , 2020, , .		10
22	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
23	A Data-Driven Motion Prior for Continuous-Time Trajectory Estimation on <i>SE(3)</i>. IEEE Robotics and Automation Letters, 2020, 5, 1429-1436.	5.1	13
24	Optimal Geometry for Ultra-wideband Localization using Bayesian Optimization. IFAC-PapersOnLine, 2020, 53, 15481-15488.	0.9	2
25	A Perception-Aware Flatness-Based Model Predictive Controller for Fast Vision-Based Multirotor Flight. IFAC-PapersOnLine, 2020, 53, 9412-9419.	0.9	3
26	Catch the Ball: Accurate High-Speed Motions for Mobile Manipulators via Inverse Dynamics Learning. , 2020, , .		10
27	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
28	Knowledge Transfer Between Robots with Similar Dynamics for High-Accuracy Impromptu Trajectory Tracking. , 2019, , .		8
29	Learning Probabilistic Models for Safe Predictive Control in Unknown Environments. , 2019, , .		13
30	A Modular Framework for Motion Planning Using Safe-by-Design Motion Primitives. IEEE Transactions on Robotics, 2019, 35, 1233-1252.	10.3	7
31	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
32	Distributed iterative learning control for multi-agent systems. Autonomous Robots, 2019, 43, 1989-2010.	4.8	24
33	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
34	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
35	Active Training Trajectory Generation for Inverse Dynamics Model Learning with Deep Neural Networks. , 2019, , .		1
36	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

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37	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
38	Data-Efficient Multirobot, Multitask Transfer Learning for Trajectory Tracking. IEEE Robotics and Automation Letters, 2018, 3, 1260-1267.	5.1	22
39	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
40	Flatness-Based Model Predictive Control for Quadrotor Trajectory Tracking. , 2018, , .		32
41	Experience-Based Model Selection to Enable Long-Term, Safe Control for Repetitive Tasks Under Changing Conditions. , 2018, , .		15
42	Adaptive Model Predictive Control for High-Accuracy Trajectory Tracking in Changing Conditions. , 2018, , .		25
43	On the construction of safe controllable regions for affine systems with applications to robotics. Automatica, 2018, 98, 323-330.	5.0	5
44	Optimizing a Drone Network to Deliver Automated External Defibrillators. Circulation, 2017, 135, 2454-2465.	1.6	196
45	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
46	Deep neural networks for improved, impromptu trajectory tracking of quadrotors. , 2017, , .		53
47	A framework for multi-vehicle navigation using feedback-based motion primitives. , 2017, , .		5
48	Virtual vs. real: Trading off simulations and physical experiments in reinforcement learning with Bayesian optimization. , 2017, , .		55
49	Design of deep neural networks as add-on blocks for improving impromptu trajectory tracking. , 2017, , .		28
50	Learning multimodal models for robot dynamics online with a mixture of Gaussian process experts. , 2017, , .		14
51	High-precision trajectory tracking in changing environments through L<inf>1</inf> adaptive feedback and iterative learning. , 2017, , .		7
52	Multi-robot transfer learning: A dynamical system perspective. , 2017, , .		19
53	Safe and robust robot maneuvers based on reach control. , 2016, , .		9
54	On the construction of safe controllable regions for affine systems with applications to robotics. , 2016, , .		5

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55	Safe learning of regions of attraction for uncertain, nonlinear systems with Gaussian processes. , 2016, , .		109
56	Unscented external force and torque estimation for quadrotors. , 2016, , .		33
57	Distributed iterative learning control for a team of quadrotors. , 2016, , .		13
58	Robust Constrained Learning-based NMPC enabling reliable mobile robot path tracking. International Journal of Robotics Research, 2016, 35, 1547-1563.	8.5	148
59	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
60	Safe controller optimization for quadrotors with Gaussian processes. , 2016, , .		151
61	Safe and robust learning control with Gaussian processes. , 2015, , .		81
62	An upper bound on the error of alignment-based Transfer Learning between two linear, time-invariant, scalar systems. , 2015, , .		5
63	Conservative to confident: Treating uncertainty robustly within Learning-Based Control. , 2015, , .		10
64	Learning-based nonlinear model predictive control to improve vision-based mobile robot path-tracking in challenging outdoor environments. , 2014, , .		67
65	Application-driven design of aerial communication networks. , 2014, 52, 129-137.		123
66	A platform for aerial robotics research and demonstration: The Flying Machine Arena. Mechatronics, 2014, 24, 41-54.	3.3	190
67	Speed Daemon: Experience-Based Mobile Robot Speed Scheduling. , 2014, , .		14
68	A Proof-of-Concept Demonstration of Visual Teach and Repeat on a Quadrocopter Using an Altitude Sensor and a Monocular Camera. , 2014, , .		15
69	Design of norm-optimal iterative learning controllers: The effect of an iteration-domain Kalman filter for disturbance estimation. , 2014, , .		4
70	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
71	Visual teach and repeat, repeat, repeat: Iterative Learning Control to improve mobile robot path tracking in challenging outdoor environments. , 2013, , .		36
72	Feed-forward parameter identification for precise periodic quadrocopter motions. , 2012, , .		16

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73	Iterative learning of feed-forward corrections for high-performance tracking. , 2012, , .		34
74	Generation of collision-free trajectories for a quadrocopter fleet: A sequential convex programming approach. , 2012, , .		194
75	Limited benefit of joint estimation in multiâ€agent iterative learning. Asian Journal of Control, 2012, 14, 613-623.	3.0	8
76	Optimization-based iterative learning for precise quadrocopter trajectory tracking. Autonomous Robots, 2012, 33, 103-127.	4.8	115