Melanie N Zeilinger

List of Publications by Year
in descending order

58 papers	2,781 citations	430874 18 h-index	377865 34 g-index
59 all docs	59 docs citations	59 times ranked	1668 citing authors

#	Article	IF	Citations
1	Learning-Based Model Predictive Control: Toward Safe Learning in Control. Annual Review of Control, Robotics, and Autonomous Systems, 2020, 3, 269-296.	11.8	335
2	Cautious Model Predictive Control Using Gaussian Process Regression. IEEE Transactions on Control Systems Technology, 2020, 28, 2736-2743.	5.2	278
3	Efficient interior point methods for multistage problems arising in receding horizon control. , 2012, , .		243
4	Learning-Based Model Predictive Control for Autonomous Racing. IEEE Robotics and Automation Letters, 2019, 4, 3363-3370.	5.1	206
5	A General Safety Framework for Learning-Based Control in Uncertain Robotic Systems. IEEE Transactions on Automatic Control, 2019, 64, 2737-2752.	5.7	202
6	Reachability-based safe learning with Gaussian processes. , 2014, , .		153
7	Distributed synthesis and stability of cooperative distributed model predictive control for linear systems. Automatica, 2016, 69, 117-125.	5.0	122
8	Data-Driven Model Predictive Control for Trajectory Tracking With a Robotic Arm. IEEE Robotics and Automation Letters, 2019, 4, 3758-3765.	5.1	115
9	On real-time robust model predictive control. Automatica, 2014, 50, 683-694.	5.0	88
10	Soft Constrained Model Predictive Control With Robust Stability Guarantees. IEEE Transactions on Automatic Control, 2014, 59, 1190-1202.	5.7	88
11	Linear Model Predictive Safety Certification for Learning-Based Control. , 2018, , .		76
12	Gaussian Process-Based Predictive Control for Periodic Error Correction. IEEE Transactions on Control Systems Technology, 2016, 24, 110-121.	5.2	70
13	Cautious NMPC with Gaussian Process Dynamics for Autonomous Miniature Race Cars. , 2018, , .		68
14	A predictive safety filter for learning-based control of constrained nonlinear dynamical systems. Automatica, 2021, 129, 109597.	5.0	63
15	Quantization Design for Distributed Optimization. IEEE Transactions on Automatic Control, 2017, 62, 2107-2120.	5.7	49
16	Recursively feasible stochastic model predictive control using indirect feedback. Automatica, 2020, 119, 109095.	5.0	43
17	Stochastic Model Predictive Control for Linear Systems Using Probabilistic Reachable Sets. , 2018, , .		42
18	Interaction-Aware Motion Prediction for Autonomous Driving: A Multiple Model Kalman Filtering Scheme. IEEE Robotics and Automation Letters, 2021, 6, 80-87.	5.1	41

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19	Probabilistic Model Predictive Safety Certification for Learning-Based Control. IEEE Transactions on Automatic Control, 2022, 67, 176-188.	5.7	41
20	Computational aspects of distributed optimization in model predictive control. , 2012, , .		40
21	Scenario-Based Probabilistic Reachable Sets for Recursively Feasible Stochastic Model Predictive Control. , 2020, 4, 450-455.		34
22	Plug-and-play model predictive control for electric vehicle charging and voltage control in smart grids. , 2014, , .		29
23	Constrained Inverse Optimal Control With Application to a Human Manipulation Task. IEEE Transactions on Control Systems Technology, 2021, 29, 826-834.	5.2	24
24	Scalable Model Predictive Control for Autonomous Mobility-on-Demand Systems. IEEE Transactions on Control Systems Technology, 2021, 29, 635-644.	5.2	21
25	Plug-and-Play Model Predictive Control for Load Shaping and Voltage Control in Smart Grids. IEEE Transactions on Smart Grid, 2019, 10, 2334-2344.	9.0	20
26	Performance comparison of prediction filters for respiratory motion tracking in radiotherapy. Medical Physics, 2020, 47, 643-650.	3.0	20
27	Robust distributed model predictive control of linear systems. , 2013, , .		19
28	A Predictive Safety Filter for Learning-Based Racing Control. IEEE Robotics and Automation Letters, 2021, 6, 7635-7642.	5.1	18
29	Scalable synthesis of safety certificates from data with application to learning-based control. , 2018, , .		17
30	Inverse Learning for Data-Driven Calibration of Model-Based Statistical Path Planning. IEEE Transactions on Intelligent Vehicles, 2021, 6, 131-145.	12.7	16
31	A System Level Approach to Regret Optimal Control. , 2022, 6, 2792-2797.		16
32	Inexact fast alternating minimization algorithm for distributed model predictive control. , 2014, , .		15
33	A System Level Approach to Tube-Based Model Predictive Control. , 2022, 6, 776-781.		15
34	Convex Formulations and Algebraic Solutions for Linear Quadratic Inverse Optimal Control Problems. , 2018, , .		14
35	On a Correspondence between Probabilistic and Robust Invariant Sets for Linear Systems. , 2018, , .		11
36	Distributed Model Predictive Safety Certification for Learning-based Control. IFAC-PapersOnLine, 2020, 53, 5258-5265.	0.9	11

#	Article	IF	Citations
37	Nonparametric dynamics estimation for time periodic systems. , 2013, , .		10
38	Nonlinear learningâ€based model predictive control supporting state and input dependent model uncertainty estimates. International Journal of Robust and Nonlinear Control, 2021, 31, 8897-8915.	3.7	10
39	Recursively Feasible Stochastic Predictive Control Using an Interpolating Initial State Constraint. , 2022, 6, 2743-2748.		10
40	Safe Learning for Distributed Systems with Bounded Uncertainties * *This work was supported by the Swiss National Science Foundation under grant no. PP00P2_157601 / 1 and by the Swiss National Centre of Competence in Research NCCR Digital Fabrication.. IFAC-PapersOnLine, 2017, 50, 2536-2542.	0.9	9
41	Maximum Likelihood Methods for Inverse Learning of Optimal Controllers. IFAC-PapersOnLine, 2020, 53, 5266-5272.	0.9	9
42	Model Predictive Coverage Control. IFAC-PapersOnLine, 2020, 53, 6107-6112.	0.9	9
43	Inverse Learning for Human-Adaptive Motion Planning. , 2019, , .		7
44	Using Human Ratings for Feedback Control: A Supervised Learning Approach With Application to Rehabilitation Robotics. IEEE Transactions on Robotics, 2020, 36, 789-801.	10.3	7
45	An Approximate Dynamic Programming Approach for Dual Stochastic Model Predictive Control. IFAC-PapersOnLine, 2020, 53, 8105-8111.	0.9	7
46	Knee Compliance Reduces Peak Swing Phase Collision Forces in a Lower-Limb Exoskeleton Leg: A Test Bench Evaluation. IEEE Transactions on Biomedical Engineering, 2021, 68, 535-544.	4.2	6
47	The ideal couch tracking systemâ€"Requirements and evaluation of current systems. Journal of Applied Clinical Medical Physics, 2019, 20, 152-159.	1.9	5
48	Bayesian Optimization for Policy Search in High-Dimensional Systems via Automatic Domain Selection. , 2019, , .		5
49	Performance Analysis of Stochastic Model Predictive Control with Direct and Indirect Feedback. , 2020, , .		4
50	Data-Driven Distributed Stochastic Model Predictive Control with Closed-Loop Chance Constraint Satisfaction. , 2021, , .		4
51	System level disturbance reachable sets and their application to tube-based MPC. European Journal of Control, 2022, 68, 100680.	2.6	4
52	Plug-and-Play Distributed Safety Verification for Linear Control Systems With Bounded Uncertainties. IEEE Transactions on Control of Network Systems, 2021, 8, 1501-1512.	3.7	3
53	A Soft Constrained MPC Formulation Enabling Learning From Trajectories With Constraint Violations. , 2022, 6, 980-985.		3
54	Unconscious physiological response of healthy volunteers to dynamic respiration-synchronized couch motion. Radiation Oncology, 2017, 12, 189.	2.7	2

#	Article	IF	Citations
55	Bayesian multi-task learning using finite-dimensional models: A comparative study. , 2021, , .		2
56	Performance behavior of prediction filters for respiratory motion compensation in radiotherapy. Current Directions in Biomedical Engineering, 2017, 3, 429-432.	0.4	1
57	Insights of posture dependent pressure characteristics in five rats. Current Directions in Biomedical Engineering, 2021, 7, 799-802.	0.4	1
58	Distributed Safe Learning using an Invariance-based Safety Framework. IFAC-PapersOnLine, 2021, 54, 95-102.	0.9	0