

# Melanie N Zeilinger

## List of Publications by Year in descending order

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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	A System Level Approach to Tube-Based Model Predictive Control. , 2022, 6, 776-781.		15
2	Probabilistic Model Predictive Safety Certification for Learning-Based Control. IEEE Transactions on Automatic Control, 2022, 67, 176-188.	5.7	41
3	A Soft Constrained MPC Formulation Enabling Learning From Trajectories With Constraint Violations. , 2022, 6, 980-985.		3
4	Recursively Feasible Stochastic Predictive Control Using an Interpolating Initial State Constraint. , 2022, 6, 2743-2748.		10
5	A System Level Approach to Regret Optimal Control. , 2022, 6, 2792-2797.		16
6	System level disturbance reachable sets and their application to tube-based MPC. European Journal of Control, 2022, 68, 100680.	2.6	4
7	Inverse Learning for Data-Driven Calibration of Model-Based Statistical Path Planning. IEEE Transactions on Intelligent Vehicles, 2021, 6, 131-145.	12.7	16
8	Constrained Inverse Optimal Control With Application to a Human Manipulation Task. IEEE Transactions on Control Systems Technology, 2021, 29, 826-834.	5.2	24
9	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
10	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
11	Scalable Model Predictive Control for Autonomous Mobility-on-Demand Systems. IEEE Transactions on Control Systems Technology, 2021, 29, 635-644.	5.2	21
12	Nonlinear learning-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
13	A predictive safety filter for learning-based control of constrained nonlinear dynamical systems. Automatica, 2021, 129, 109597.	5.0	63
14	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
15	A Predictive Safety Filter for Learning-Based Racing Control. IEEE Robotics and Automation Letters, 2021, 6, 7635-7642.	5.1	18
16	Distributed Safe Learning using an Invariance-based Safety Framework. IFAC-PapersOnLine, 2021, 54, 95-102.	0.9	0
17	Data-Driven Distributed Stochastic Model Predictive Control with Closed-Loop Chance Constraint Satisfaction. , 2021, , .		4
18	Insights of posture dependent pressure characteristics in five rats. Current Directions in Biomedical Engineering, 2021, 7, 799-802.	0.4	1

#	ARTICLE	IF	CITATIONS
19	Bayesian multi-task learning using finite-dimensional models: A comparative study. , 2021, , .		2
20	Scenario-Based Probabilistic Reachable Sets for Recursively Feasible Stochastic Model Predictive Control. , 2020, 4, 450-455.		34
21	Cautious Model Predictive Control Using Gaussian Process Regression. IEEE Transactions on Control Systems Technology, 2020, 28, 2736-2743.	5.2	278
22	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
23	Performance comparison of prediction filters for respiratory motion tracking in radiotherapy. Medical Physics, 2020, 47, 643-650.	3.0	20
24	Recursively feasible stochastic model predictive control using indirect feedback. Automatica, 2020, 119, 109095.	5.0	43
25	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
26	An Approximate Dynamic Programming Approach for Dual Stochastic Model Predictive Control. IFAC-PapersOnLine, 2020, 53, 8105-8111.	0.9	7
27	Performance Analysis of Stochastic Model Predictive Control with Direct and Indirect Feedback. , 2020, , .		4
28	Maximum Likelihood Methods for Inverse Learning of Optimal Controllers. IFAC-PapersOnLine, 2020, 53, 5266-5272.	0.9	9
29	Model Predictive Coverage Control. IFAC-PapersOnLine, 2020, 53, 6107-6112.	0.9	9
30	Distributed Model Predictive Safety Certification for Learning-based Control. IFAC-PapersOnLine, 2020, 53, 5258-5265.	0.9	11
31	Data-Driven Model Predictive Control for Trajectory Tracking With a Robotic Arm. IEEE Robotics and Automation Letters, 2019, 4, 3758-3765.	5.1	115
32	Learning-Based Model Predictive Control for Autonomous Racing. IEEE Robotics and Automation Letters, 2019, 4, 3363-3370.	5.1	206
33	The ideal couch tracking systemâ€™Requirements and evaluation of current systems. Journal of Applied Clinical Medical Physics, 2019, 20, 152-159.	1.9	5
34	Bayesian Optimization for Policy Search in High-Dimensional Systems via Automatic Domain Selection. , 2019, , .		5
35	Inverse Learning for Human-Adaptive Motion Planning. , 2019, , .		7
36	A General Safety Framework for Learning-Based Control in Uncertain Robotic Systems. IEEE Transactions on Automatic Control, 2019, 64, 2737-2752.	5.7	202

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37	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
38	Stochastic Model Predictive Control for Linear Systems Using Probabilistic Reachable Sets. , 2018, , .		42
39	On a Correspondence between Probabilistic and Robust Invariant Sets for Linear Systems. , 2018, , .		11
40	Cautious NMPC with Gaussian Process Dynamics for Autonomous Miniature Race Cars. , 2018, , .		68
41	Linear Model Predictive Safety Certification for Learning-Based Control. , 2018, , .		76
42	Scalable synthesis of safety certificates from data with application to learning-based control. , 2018, , .		17
43	Convex Formulations and Algebraic Solutions for Linear Quadratic Inverse Optimal Control Problems. , 2018, , .		14
44	Performance behavior of prediction filters for respiratory motion compensation in radiotherapy. Current Directions in Biomedical Engineering, 2017, 3, 429-432.	0.4	1
45	Quantization Design for Distributed Optimization. IEEE Transactions on Automatic Control, 2017, 62, 2107-2120.	5.7	49
46	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
47	Unconscious physiological response of healthy volunteers to dynamic respiration-synchronized couch motion. Radiation Oncology, 2017, 12, 189.	2.7	2
48	Distributed synthesis and stability of cooperative distributed model predictive control for linear systems. Automatica, 2016, 69, 117-125.	5.0	122
49	Gaussian Process-Based Predictive Control for Periodic Error Correction. IEEE Transactions on Control Systems Technology, 2016, 24, 110-121.	5.2	70
50	Inexact fast alternating minimization algorithm for distributed model predictive control. , 2014, , .		15
51	Reachability-based safe learning with Gaussian processes. , 2014, , .		153
52	Plug-and-play model predictive control for electric vehicle charging and voltage control in smart grids. , 2014, , .		29
53	On real-time robust model predictive control. Automatica, 2014, 50, 683-694.	5.0	88
54	Soft Constrained Model Predictive Control With Robust Stability Guarantees. IEEE Transactions on Automatic Control, 2014, 59, 1190-1202.	5.7	88

#	ARTICLE	IF	CITATIONS
55	Nonparametric dynamics estimation for time periodic systems. , 2013, , .		10
56	Robust distributed model predictive control of linear systems. , 2013, , .		19
57	Efficient interior point methods for multistage problems arising in receding horizon control. , 2012, , .		243
58	Computational aspects of distributed optimization in model predictive control. , 2012, , .		40