Stefan Streif

List of Publications by Year
in descending order

92	1,121	623734	552781
papers	citations	14	26
		h-index	g-index

93	93	93	999
all docs	docs citations	times ranked	citing authors

#	ARTICLE	IF	CITATIONS
1	Stochastic nonlinear model predictive control with probabilistic constraints. , 2014, , .		138
2	Response to IL-6 trans- and IL-6 classic signalling is determined by the ratio of the IL-6 receptor α to gp130 expression: fusing experimental insights and dynamic modelling. Cell Communication and Signaling, 2019, 17, 46.	6.5	89
3	Flagellar Rotation in the Archaeon Halobacterium salinarum Depends on ATP. Journal of Molecular Biology, 2008, 384, 1-8.	4.2	76
4	Identification of Archaea-specific chemotaxis proteins which interact with the flagellar apparatus. BMC Microbiology, 2009, 9, 56.	3.3	76
5	Photonic Crystal Light Collectors in Fish Retina Improve Vision in Turbid Water. Science, 2012, 336, 1700-1703.	12.6	71
6	Active Fault Diagnosis for Nonlinear Systems with Probabilistic Uncertainties. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 7079-7084.	0.4	38
7	Fast stochastic model predictive control of high-dimensional systems. , 2014, , .		36
8	ADMIT: a toolbox for guaranteed model invalidation, estimation and qualitative–quantitative modeling. Bioinformatics, 2012, 28, 1290-1291.	4.1	35
9	A Probabilistic Approach to Robust Optimal Experiment Design with Chance Constraints. IFAC-PapersOnLine, 2015, 48, 100-105.	0.9	30
10	Robustness analysis, prediction, and estimation for uncertain biochemical networks: An overview. Journal of Process Control, 2016, 42, 14-34.	3.3	29
11	Combining qualitative information and semi–quantitative data for guaranteed invalidation of biochemical network models. International Journal of Robust and Nonlinear Control, 2012, 22, 1157-1173.	3.7	21
12	Stability for receding-horizon stochastic model predictive control. , 2015, , .		21
13	Optimal traction control for heavy-duty vehicles. Control Engineering Practice, 2017, 69, 99-111.	5.5	20
14	Detection and isolation of parametric faults in hydraulic pumps using a set-based approach and quantitative–qualitative fault specifications. Control Engineering Practice, 2015, 40, 61-70.	5.5	19
15	Recursive Feasibility of Continuous-Time Model Predictive Control Without Stabilising Constraints. , 2021, 5, 265-270.		19
16	Optimal Experimental Design for Probabilistic Model Discrimination Using Polynomial Chaos. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 4103-4109.	0.4	18
17	Robust Nonlinear Model Predictive Control with Constraint Satisfaction: A Relaxation-based Approach. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 11073-11079.	0.4	18
18	A comprehensive dynamic growth and development model of Hermetia illucens larvae. PLoS ONE, 2020, 15, e0239084.	2.5	16

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19	Application of non-destructive sensors and big data analysis to predict physiological storage disorders and fruit firmness in â€˜Braeburnâ€™ apples. Computers and Electronics in Agriculture, 2021, 183, 106015.	7.7	15
20	Guaranteed active fault diagnosis for uncertain nonlinear systems. , 2014, , .		12
21	Design and Validation of a Low Cost Programmable Controlled Environment for Study and Production of Plants, Mushroom, and Insect Larvae. Applied Sciences (Switzerland), 2019, 9, 5166.	2.5	12
22	On maximal robust positively invariant sets in constrained nonlinear systems. Automatica, 2020, 119, 109044.	5.0	12
23	A predictive computational model of the kinetic mechanism of stimulus-induced transducer methylation and feedback regulation through CheY in archaeal phototaxis and chemotaxis. BMC Systems Biology, 2010, 4, 27.	3.0	11
24	Identification of Growth Phases and Influencing Factors in Cultivations with AGE1.HN Cells Using Set-Based Methods. PLoS ONE, 2013, 8, e68124.	2.5	11
25	Addressing infinite-horizon optimization in MPC via Q-learning. IFAC-PapersOnLine, 2018, 51, 60-65.	0.9	11
26	A comparative study of stochastic analysis techniques. , 2010, , .		10
27	Complete Diagnosability of Abrupt Faults Using Set-based Sensitivities. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 860-865.	0.4	10
28	Robustness Analysis, Prediction and Estimation for Uncertain Biochemical Networks. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 1-20.	0.4	10
29	The Effect of Rearing Scale and Density on the Growth and Nutrient Composition of Hermetia illucens (L.) (Diptera: Stratiomyidae) Larvae. Sustainability, 2022, 14, 1772.	3.2	9
30	Practical Sample-and-Hold Stabilization of Nonlinear Systems Under Approximate Optimizers. , 2018, 2, 569-574.		8
31	A Q-learning predictive control scheme with guaranteed stability. European Journal of Control, 2020, 56, 167-178.	2.6	8
32	Epidemic management with admissible and robust invariant sets. PLoS ONE, 2021, 16, e0257598.	2.5	8
33	A reinforcement learning method with closed-loop stability guarantee. IFAC-PapersOnLine, 2020, 53, 8043-8048.	0.9	8
34	Nonlinear observability and identifiability of single cells in battery packs. , 2013, , .		7
35	Inner Approximations of Consistent Parameter Sets by Constraint Inversion and Mixed-Integer Programming. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 321-326.	0.4	7
36	Controller Verification and Parametrization Subject to Quantitative and Qualitative Requirements. IFAC-PapersOnLine, 2015, 48, 1174-1179.	0.9	7

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37	Comparison of Different Calibration Methods in a Non-invasive ICP Assessment Model. Acta Neurochirurgica Supplementum, 2018, 126, 79-84.	1.0	7
38	Quantitative analysis of signal transduction in motile and phototactic cells by computerized light stimulation and model based tracking. Review of Scientific Instruments, 2009, 80, 023709.	1.3	6
39	Certifying Robustness of Separating Inputs and Outputs in Active Fault Diagnosis for Uncertain Nonlinear Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 837-842.	0.4	6
40	Set-based state of charge estimation for lithium-ion batteries. , 2014, , .		6
41	Probabilistic and Set-based Model Invalidation and Estimation Using LMIs. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 4110-4115.	0.4	6
42	Experimental results of slip control with a fuzzy-logic-assisted unscented Kalman filter for state estimation. , 2016, , .		6
43	Stacked adaptive dynamic programming with unknown system model. IFAC-PapersOnLine, 2017, 50, 4150-4155.	0.9	6
44	A Multirate Hierarchical MPC Scheme for Ensemble Systems. , 2018, , .		6
45	Constrained and Stabilizing Stacked Adaptive Dynamic Programming and a Comparison with Model Predictive Control. , 2018, , .		6
46	Adaptive Dynamic Programming Using Lyapunov Function Constraints. , 2019, 3, 901-906.		6
47	Maintaining Hard Infection Caps in Epidemics via the Theory of Barriers. IFAC-PapersOnLine, 2020, 53, 16100-16105.	0.9	6
48	Half-Gain Tuning for Active Disturbance Rejection Control. IFAC-PapersOnLine, 2020, 53, 1319-1324.	0.9	6
49	PoCET: a Polynomial Chaos Expansion Toolbox for Matlab. IFAC-PapersOnLine, 2020, 53, 7256-7261.	0.9	6
50	Estimation of consistent parameter sets for continuous-time nonlinear systems using occupation measures and LMI relaxations. , 2013, , .		5
51	Fast stochastic model predictive control of end-to-end continuous pharmaceutical manufacturing 1 1Financial support from Novartis is acknowledged.. Computer Aided Chemical Engineering, 2018, , 353-378.	0.5	5
52	Commutativity of Immersion and Linearization. IEEE Transactions on Automatic Control, 2009, 54, 826-829.	5.7	4
53	Outlier analysis in set-based estimation for nonlinear systems using convex relaxations. , 2013, , .		4
54	Guaranteed Set-based Controller Parameter Estimation for Nonlinear Systems â€" Magnetic Levitation Platform as a Case Study. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 4650-4655.	0.4	4

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55	Design of an active noise controller for reduction of tire/road interaction noise in environmentally friendly vehicles. , 2017, , .		4
56	A Hierarchical Architecture for the Coordination of an Ensemble of Steam Generators. IFAC-PapersOnLine, 2020, 53, 11557-11562.	0.9	4
57	Model Predictive Control of a Food Production Unit: A Case Study for Lettuce Production. IFAC-PapersOnLine, 2020, 53, 15771-15776.	0.9	4
58	A Two-level Approach for Fusing Early Signaling Events and Long Term Cellular Responses. IFAC-PapersOnLine, 2015, 48, 1228-1233.	0.9	3
59	Constructive analysis of control system stability. IFAC-PapersOnLine, 2017, 50, 7467-7474.	0.9	3
60	Hierarchical Control with Guaranteed Fault Diagnosability. IFAC-PapersOnLine, 2018, 51, 1105-1110.	0.9	3
61	Analysis of the Caratheodory s theorem on dynamical system trajectories under numerical uncertainty. IEEE/CAA Journal of Automatica Sinica, 2018, 5, 787-793.	13.1	3
62	Adaptive actor-critic structure for parametrized controllers. IFAC-PapersOnLine, 2019, 52, 652-657.	0.9	3
63	Experimental verification of an online traction parameter identification method. Control Engineering Practice, 2021, 113, 104837.	5.5	3
64	On Inf-Convolution-Based Robust Practical Stabilization Under Computational Uncertainty. IEEE Transactions on Automatic Control, 2021, 66, 5530-5537.	5.7	3
65	A method of online traction parameter identification and mapping. IFAC-PapersOnLine, 2020, 53, 13933-13938.	0.9	3
66	Transient stability analysis of power grids with admissible and maximal robust positively invariant sets. Automatisierungstechnik, 2020, 68, 1011-1021.	0.8	3
67	On closed-loop stability of model predictive controllers with learning costs. , 2020, , .		3
68	Reserve Balancing in a Microgrid System for Safety Analysis. IFAC-PapersOnLine, 2020, 53, 13581-13586.	0.9	3
69	Structural Problem Reduction for Set-based Fault Diagnosis. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 595-600.	0.4	2
70	Analysis of extremum value theorems for function spaces in optimal control under numerical uncertainty. IMA Journal of Mathematical Control and Information, 2019, 36, 1015-1032.	1.7	2
71	Model predictive control with stage cost shaping inspired by reinforcement learning. , 2019, , .		2
72	Practical stability analysis of sliding†mode control with explicit computation of sampling time. Asian Journal of Control, 2020, 22, 1692-1699.	3.0	2

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73	Constructive Analysis of Eigenvalue Problems in Control under Numerical Uncertainty. International Journal of Control, Automation and Systems, 2020, 18, 2177-2185.	2.7	2
74	On MPC without terminal conditions for dynamic non-holonomic robots. IFAC-PapersOnLine, 2021, 54, 133-138.	0.9	2
75	A constructive version of the extremum value theorem for spaces of vector-valued functions. Journal of Logic and Analysis, 0, , .	0.5	2
76	Optimal control of centrifugal spreader. IFAC-PapersOnLine, 2020, 53, 15841-15846.	0.9	2
77	Guaranteed diagnosability of parametric faults in nonlinear systems. , 2013, , .		1
78	Modellbasierte Zustandsschätzung für Lithium-Ionen-Batterien. Automatisierungstechnik, 2014, 62, 296-311.	0.8	1
79	Set-based Experiment Design for Model Discrimination Using Bilevel Optimization. IFAC-PapersOnLine, 2016, 49, 295-299.	0.9	1
80	Converse Optimality for Discrete-Time Systems. IEEE Transactions on Automatic Control, 2020, 65, 2257-2264.	5.7	1
81	On Constructive Extractability of Measurable Selectors of Set-Valued Maps. IEEE Transactions on Automatic Control, 2021, 66, 3757-3764.	5.7	1
82	Hierarchical Control of a Quadcopter under Stuck Actuator Fault. IFAC-PapersOnLine, 2020, 53, 4258-4263.	0.9	1
83	Nonsmooth stabilization and its computational aspects. IFAC-PapersOnLine, 2020, 53, 6370-6377.	0.9	1
84	A reinforcement learning method with closed-loop stability guarantee for systems with unknown parameters. IFAC-PapersOnLine, 2020, 53, 8157-8162.	0.9	1
85	Sustainability Analysis of Interconnected Food Production Systems via Theory of Barriers. IFAC-PapersOnLine, 2020, 53, 15765-15770.	0.9	1
86	Tracking of stabilizing, optimal control in fixed-time based on time-varying objective function. , 2021, , .		1
87	Performance bounds of adaptive MPC with bounded parameter uncertainties. European Journal of Control, 2022, 68, 100688.	2.6	1
88	Commutativity of immersion and linearization. , 2007, , .		0
89	Integer-Free Optimal Scheduling of Smart Appliances. , 2018, , .		0
90	Prototypical Description and Controller Design for a Set of Systems Using ν-gap Based Clustering. IFAC-PapersOnLine, 2020, 53, 4623-4628.	0.9	0

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91	A Hierarchical MPC Scheme for Ensembles of Hammerstein Systems. IFAC-PapersOnLine, 2020, 53, 6951-6956.	0.9	0
92	Synthesis of interconnected control systems under reachability specifications. , 2021, , .		0