Colin N Jones

List of Publications by Citations

177 papers	3,964 citations	29 h-index	58 g-index
190 ext. papers	4,901 ext. citations	4.1 avg, IF	5.79 L-index

#	Paper	IF	Citations
177	Use of model predictive control and weather forecasts for energy efficient building climate control. *Energy and Buildings*, **2012**, 45, 15-27	7	712
176	Multi-Parametric Toolbox 3.0 **2013**,		409
175	Energy efficient building climate control using Stochastic Model Predictive Control and weather predictions **2010**,		198
174	Efficient interior point methods for multistage problems arising in receding horizon control **2012**,		185
173	. *IEEE Transactions on Automatic Control*, **2011**, 56, 1524-1534	5.9	111
172	Distributed synthesis and stability of cooperative distributed model predictive control for linear systems. *Automatica*, **2016**, 69, 117-125	5.7	82
171	A tractable approximation of chance constrained stochastic MPC based on affine disturbance feedback **2008**,		81
170	Real-time input-constrained MPC using fast gradient methods **2009**,		71
169	. *IEEE Transactions on Control Systems Technology*, **2014**, 22, 1198-1205	4.8	68
168	On real-time robust model predictive control. *Automatica*, **2014**, 50, 683-694	5.7	68
167	MPC fault-tolerant flight control case study: flight 1862. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2003**, 36, 119-124		65
166	Polytopic Approximation of Explicit Model Predictive Controllers. *IEEE Transactions on Automatic Control*, **2010**, 55, 2542-2553	5.9	62
165	On turnpike and dissipativity properties of continuous-time optimal control problems. *Automatica*, **2017**, 81, 297-304	5.7	61
164	On the facet-to-facet property of solutions to convex parametric quadratic programs. *Automatica*, **2006**, 42, 2209-2214	5.7	61
163	Convex Computation of the Maximum Controlled Invariant Set For Polynomial Control Systems. *SIAM Journal on Control and Optimization*, **2014**, 52, 2944-2969	1.9	59
162	Soft Constrained Model Predictive Control With Robust Stability Guarantees. *IEEE Transactions on Automatic Control*, **2014**, 59, 1190-1202	5.9	56
161	A logarithmic-time solution to the point location problem for parametric linear programming. *Automatica*, **2006**, 42, 2215-2218	5.7	53

160	Towards computational complexity certification for constrained MPC based on Lagrange Relaxation and the fast gradient method **2011**,		48
159	A two-stage stochastic programming approach to employee scheduling in retail outlets with uncertain demand. *Omega*, **2015**, 53, 97-103	7.2	46
158	Multiparametric Linear Programming with Applications to Control. *European Journal of Control*, **2007**, 13, 152-170	2.5	43
157	Distributed synthesis and control of constrained linear systems **2012**,		39
156	Lexicographic perturbation for multiparametric linear programming with applications to control. *Automatica*, **2007**, 43, 1808-1816	5.7	37
155	. *IEEE Transactions on Automatic Control*, **2011**, 56, 2530-2541	5.9	35
154	On Polyhedral Projection and Parametric Programming. *Journal of Optimization Theory and Applications*, **2008**, 138, 207-220	1.6	35
153	A Parametric Nonconvex Decomposition Algorithm for Real-Time and Distributed NMPC. *IEEE Transactions on Automatic Control*, **2016**, 61, 287-302	5.9	34
152	MPC for Tracking Periodic References. *IEEE Transactions on Automatic Control*, **2016**, 61, 1123-1128	5.9	34
151	Enumeration-based approach to solving parametric linear complementarity problems. *Automatica*, **2015**, 62, 243-248	5.7	31
150	Inner approximations of the region of attraction for polynomial dynamical systems. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2013**, 46, 534-539		31
149	Stochastic MPC Framework for Controlling the Average Constraint Violation. *IEEE Transactions on Automatic Control*, **2014**, 59, 1706-1721	5.9	29
148	Fault Tolerant Flight Control - A Survey. *Lecture Notes in Control and Information Sciences*, **2010**, 47-89	0.5	29
147	Data-driven methods for building control A review and promising future directions. *Control Engineering Practice*, **2020**, 95, 104211	3.9	28
146	Quantization Design for Distributed Optimization. *IEEE Transactions on Automatic Control*, **2017**, 62, 2107-2120	5.9	26
145	Trajectory-tracking and path-following controllers for constrained underactuated vehicles using Model Predictive Control **2013**,		26
144	**2014**,		25
143	Computational aspects of distributed optimization in model predictive control **2012**,		25

142	On convergence and performance certification of a continuous-time economic model predictive control scheme with time-varying performance index. *Automatica*, **2016**, 68, 305-313	5.7	24
141	Hierarchical control of building HVAC system for ancillary services provision. *Energy and Buildings*, **2018**, 169, 216-227	7	22
140	Experimental Implementation of Frequency Regulation Services Using Commercial Buildings. *IEEE Transactions on Smart Grid*, **2018**, 9, 1657-1666	10.7	22
139	Certification aspects of the fast gradient method for solving the dual of parametric convex programs. *Mathematical Methods of Operations Research*, **2013**, 77, 305-321	1	21
138	Multiparametric Linear Complementarity Problems **2006**,		21
137	Haptic interface control-design issues and experiments with a planar device		21
136	Multirate sliding mode disturbance compensation for model predictive control. *International Journal of Robust and Nonlinear Control*, **2015**, 25, 2984-3003	3.6	20
135	MPC of constrained discrete-time linear periodic systems [A framework for asynchronous control: Strong feasibility, stability and optimality via periodic invariance. *Automatica*, **2011**, 47, 326-333	5.7	20
134	OpenBuild : An integrated simulation environment for building control **2015**,		19
133	Learning decision rules for energy efficient building control. *Journal of Process Control*, **2014**, 24, 763-772.	3.9	19
132	Robust stability properties of soft constrained MPC **2010**,		19
131	Sensor Fault Diagnosis. *Foundations and Trends in Systems and Control*, **2016**, 3, 249-362	4	18
130	Least-restrictive robust periodic model predictive control applied to room temperature regulation. *Automatica*, **2013**, 49, 2760-2766	5.7	18
129	An Input-to-State-Stability Approach to Economic Optimization in Model Predictive Control. *IEEE Transactions on Automatic Control*, **2017**, 62, 6081-6093	5.9	17
128	Embedded Optimization Methods for Industrial Automatic Control. *IFAC-PapersOnLine*, **2017**, 50, 13194-13209	0.7	16
127	An optimization-based approach to extract faceted crystal shapes from stereoscopic images. *Computers and Chemical Engineering*, **2015**, 75, 171-183	4	16
126	System identification via nuclear norm regularization for simulated moving bed processes from incomplete data sets **2009**,		16
125	Learning a feasible and stabilizing explicit model predictive control law by robust optimization **2011**,		15

124	Controller design and value function approximation for nonlinear dynamical systems. *Automatica*, **2016**, 67, 54-66	5.7	14
123	Real-time suboptimal model predictive control using a combination of explicit MPC and online optimization **2008**,		14
122	Ancillary Services Provision Utilizing a Network of Fast-Charging Stations for Electrical Buses. *IEEE Transactions on Smart Grid*, **2020**, 11, 665-672	10.7	13
121	Robust Tracking Commitment. *IEEE Transactions on Automatic Control*, **2017**, 62, 4451-4466	5.9	12
120	Experimental demonstration of buildings providing frequency regulation services in the Swiss market. *Energy and Buildings*, **2017**, 144, 229-240	7	12
119	Distributed state estimation for discrete-time linear time invariant systems: A survey. *Annual Reviews in Control*, **2019**, 48, 36-56	10.3	12
118	Economic Advantages of Office Buildings Providing Ancillary Services With Intraday Participation. *IEEE Transactions on Smart Grid*, **2018**, 9, 3443-3452	10.7	12
117	Guaranteeing input tracking for constrained systems: Theory and application to demand response **2015**,		12
116	Real-time MPC - Stability through robust MPC design **2009**,		12
115	**2008**,		12
114	Complexity Certification of the Fast Alternating Minimization Algorithm for Linear MPC. *IEEE Transactions on Automatic Control*, **2017**, 62, 888-893	5.9	11
113	Fast Predictive Control: Real-time Computation and Certification. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2012**, 45, 94-98		11
112	Controller complexity reduction for piecewise affine systems through safe region elimination **2007**,		11
111	Real-Time optimization of Uncertain Process Systems via Modifier Adaptation and Gaussian Processes **2018**,		11
110	Stability and performance verification of optimization-based controllers. *Automatica*, **2017**, 78, 34-45	5.7	10
109	Dominant speed factors of active set methods for fast MPC. *Optimal Control Applications and Methods*, **2015**, 36, 608-627	1.7	10
108	Model Predictive Control for Market-Based Demand Response Participation. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2014**, 47, 11153-11158		10
107	Providing ancillary service with commercial buildings: the Swiss perspective. *IFAC-PapersOnLine*, **2015**, 48, 6-13	0.7	10

106	Cooperative distributed tracking MPC for constrained linear systems: Theory and synthesis **2013**,		10
105	Data-driven demand response modeling and control of buildings with Gaussian Processes **2017**,		10
104	Robust distributed model predictive control of linear systems **2013**,		10
103	Predictive power dispatch through negotiated locational pricing **2010**,		10
102	Fast explicit nonlinear model predictive control via multiresolution function approximation with guaranteed stability. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2010**, 43, 533-538		10
101	Convergence rates of moment-sum-of-squares hierarchies for optimal control problems. *Systems and Control Letters*, **2017**, 100, 1-5	2.4	9
100	Inexact fast alternating minimization algorithm for distributed model predictive control **2014**,		9
99	A multiscale approximation scheme for explicit model predictive control with stability, feasibility, and performance guarantees **2009**,		9
98	Online thermal control methods for multiprocessor systems. *ACM Transactions on Design Automation of Electronic Systems*, **2013**, 18, 1-26	1.5	8
97	VirtualArena: An object-oriented MATLAB toolkit for control system design and simulation **2017**,		8
96	System identification with missing data via nuclear norm regularization **2009**,		8
95	Blocking parameterizations for improving the computational tractability of affine disturbance feedback MPC problems **2009**,		8
94	Enhancing the dispatchability of distribution networks through utility-scale batteries and flexible demand. *Energy and Buildings*, **2018**, 172, 125-138	7	8
93	An Alternating Trust Region Algorithm for Distributed Linearly Constrained Nonlinear Programs, Application to the Optimal Power Flow Problem. *Journal of Optimization Theory and Applications*, **2017**, 173, 844-877	1.6	7
92	Constrained Spectrum Control. *IEEE Transactions on Automatic Control*, **2015**, 60, 1969-1974	5.9	7
91	Long horizon input parameterisations to enlarge the region of attraction of MPC. *Optimal Control Applications and Methods*, **2016**, 37, 139-153	1.7	7
90	. *IEEE Transactions on Automatic Control*, **2017**, 62, 1752-1767	5.9	7
89	A Model predictive control scheme with ultimate bound for economic optimization **2015**,		7

88	Quantization design for unconstrained distributed optimization **2015**,		7
87	**2014**,		7
86	Convex computation of the maximum controlled invariant set for discrete-time polynomial control systems **2013**,		7
85	A Model Predictive Control scheme with additional performance index for transient behavior **2013**,		7
84	Model predictive control of linear periodic systems - a unified framework including control of multirate and multiplexed systems **2009**,		7
83	A Neural Network Architecture to Learn Explicit MPC Controllers from Data. *IFAC-PapersOnLine*, **2020**, 53, 11362-11367	0.7	7
82	Multi-time scale coordination of complementary resources for the provision of ancillary services. *Applied Energy*, **2018**, 229, 1164-1180	10.7	7
81	Fast Alternating Minimization Algorithm for Model Predictive Control. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2014**, 47, 11980-11986		6
80	An economic model predictive control scheme with terminal penalty for continuous-time systems **2014**,		6
79	Temperature sensor placement in thermal management systems for MPSoCs **2010**,		6
78	Efficient point location via subdivision walking with application to explicit MPC **2007**,		6
77	Optimization Based Control for Target Estimation and Tracking via Highly Observable Trajectories. *Lecture Notes in Electrical Engineering*, **2015**, 495-504	0.2	6
76	A Set-Theoretic Method for Verifying Feasibility of a Fast Explicit Nonlinear Model Predictive Controller. *Lecture Notes in Control and Information Sciences*, **2012**, 289-311	0.5	6
75	Sensor fault tolerance in output feedback nonlinear model predictive control **2016**,		5
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73	An augmented Lagrangian coordination-decomposition algorithm for solving distributed non-convex programs **2014**,		5
72	Controller design and region of attraction estimation for nonlinear dynamical systems. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2014**, 47, 2310-2316		5
71	A design method for distributed luenberger observers **2017**,		5

70	Improved path following for kites with input delay compensation **2015**,		5
69	**2014**,		5
68	Stochastic model predictive control: Controlling the average number of constraint violations **2012**,		5
67	An Inertial Parallel and Asynchronous Forward–Backward Iteration for Distributed Convex Optimization. *Journal of Optimization Theory and Applications*, **2019**, 182, 1088-1119	1.6	4
66	Software and Hardware Code Generation for Predictive Control Using Splitting Methods * *This work has received funding from the People Programme (Marie Curie Actions) of the European Union's Seventh Framework Programme (FP7/2007-2013) under REA grant agreement no 607957 (TEMPO).. *IFAC-PapersOnLine*, **2017**, 50, 14386-14391	0.7	4
65	Control of nonlinear systems with explicit-MPC-like controllers **2017**,		4
64	An energy efficient trajectory tracking controller for car-like vehicles using Model Predictive Control **2015**,		4
63	A parametric multi-convex splitting technique with application to real-time NMPC **2014**,		4
62	Splitting methods in control **2014**,		4
61	Least-restrictive robust MPC of periodic affine systems with application to building climate control **2010**,		4
60	Constrained spectrum control using MPC **2011**,		4
59	Learning near-optimal decision rules for energy efficient building control **2012**,		4
58	A Cost-Effective Atomic Force Microscope for Undergraduate Control Laboratories. *IEEE Transactions on Education*, **2010**, 53, 328-334	2.1	4
57	Reverse Search for Parametric Linear Programming **2006**,		4
56	Parametric Analysis of Controllers for Constrained Linear Systems **2006**,		4
55	Cooperative path-following control with logic-based communications: theory and practice **2019**, 187-224		4
54	On the design of discrete-time Economic Model Predictive Controllers **2016**,		4
53	Design of a distributed quantized luenberger filter for bounded noise **2016**,		4

52	Parametric polytope reconstruction, an application to crystal shape estimation. *IEEE Transactions on Image Processing*, **2014**, 23, 4474-85	8.7	3
51	Solving the infinite-horizon constrained LQR problem using splitting techniques. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2014**, 47, 2285-2290		3
50	Interior Point Decomposition for Multi-Agent Optimization. *IFAC-PapersOnLine*, **2017**, 50, 233-238	0.7	3
49	A consensus algorithm for networks with process noise and quantization error **2015**,		3
48	Quantization design for distributed optimization with time-varying parameters **2015**,		3
47	Multicore thermal management using approximate explicit model predictive control **2010**,		3
46	Spectrogram-MPC: Enforcing hard constraints on systems' output spectra **2012**,		3
45	PolyMPC: An efficient and extensible tool for real-time nonlinear model predictive tracking and path following for fast mechatronic systems. *Optimal Control Applications and Methods*, **2020**, 41, 709-727	1.7	3
44	Exergy-based model predictive control for design and control of a seasonal thermal energy storage system. *Journal of Physics: Conference Series*, **2019**, 1343, 012066	0.3	3
43	An ADMM-Based Coordination and Control Strategy for PV and Storage to Dispatch Stochastic Prosumers: Theory and Experimental Validation **2018**,		3
42	Dispatching active distribution networks through electrochemical storage systems and demand side management **2017**,		2
41	Flexible triangular formation keeping of marine robotic vehicles using range measurements 1. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2014**, 47, 5145-5150		2
40	On coordinated primal-dual interior-point methods for multi-agent optimization **2017**,		2
39	Optimization of an Airborne Wind Energy system using constrained Gaussian Processes **2014**,		2
38	A Nonlinear Model Predictive Control Scheme with Multirate Integral Sliding Mode *. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2010**, 43, 232-237		2
37	A Resource-Aware Approach to Self-Triggered Model Predictive Control. *IFAC-PapersOnLine*, **2020**, 53, 2733-2738	0.7	2
36	On Gaussian Process Based Koopman Operators. *IFAC-PapersOnLine*, **2020**, 53, 449-455	0.7	2
35	Reference tracking stochastic model predictive control over unreliable channels and bounded control actions. *Automatica*, **2021**, 127, 109512	5.7	2

34	Learning Feature Maps of the Koopman Operator: A Subspace Viewpoint **2019**,		2
33	A Demand Response-Based Solution to Overloading in Underdeveloped Distribution Networks. *IEEE Transactions on Smart Grid*, **2021**, 12, 4059-4067	10.7	2
32	Incipient Actuator Fault Handling in Nonlinear Model Predictive Control. *IFAC-PapersOnLine*, **2017**, 50, 15922-15927	0.7	1
31	Experimental Verification of Sum-Of-Squares-Based Controller Tuning Technique with Extension to Parallel Multimodel Uncertainty Processing **2019**,		1
30	Constrained bundle methods with inexact minimization applied to the energy regulation provision problem. *IFAC-PapersOnLine*, **2017**, 50, 12471-12476	0.7	1
29	Model Predictive Path-Following Control for Airborne Wind Energy Systems * *This work is funded by the Sinergia project Autonomous Airborne Wind Energy (A2WE) of the Swiss National Science Foundation (SNSF).. *IFAC-PapersOnLine*, **2017**, 50, 13270-13275	0.7	1
28	Bilevel programming for analysis of low-complexity control of linear systems with constraints **2009**,		1
27	Multiparametric linear programming for control **2008**,		1
26	Distributed model predictive control of buildings and energy hubs. *Energy and Buildings*, **2022**, 259, 111806		1
25	Distributionally Robust Joint Chance-Constrained Dispatch for Integrated Transmission-Distribution Systems via Distributed Optimization. *IEEE Transactions on Smart Grid*, **2022**, 1-1	10.7	1
24	Joint Energy Management for Distributed Energy Harvesting Systems **2021**,		1
23	Resource-Aware Asynchronous Multi-Agent Coordination via Self-Triggered MPC **2020**,		1
22	Regularized economic model predictive control with barrier functions. *Optimal Control Applications and Methods*, **2020**, 41, 3-24	1.7	1
21	A nonlinear adaptive controller for airborne wind energy systems **2016**,		1
20	Real-Time Implementation of Explicit Model Predictive Control. *Control Engineering*, **2019**, 387-412	1	1
19	Towards global optimal control via Koopman lifts. *Automatica*, **2021**, 132, 109610	5.7	1
18	Resource-Aware Stochastic Self-Triggered Model Predictive Control **2022**, 6, 1262-1267		1
17	Primal-Dual Enumeration for Multiparametric Linear Programming. *Lecture Notes in Computer Science*, **2006**, 248-259	0.9	1

10

LIST OF PUBLICATIONS

16	Distributed Optimal Power Flow for VSC-MTDC Meshed AC/DC Grids Using ALADIN. *IEEE Transactions on Power Systems*, **2022**, 1-1	7	1
15	Robust Resource-Aware Self-Triggered Model Predictive Control **2022**, 6, 1724-1729		0
14	On the Optimality and Convergence Properties of the Iterative Learning Model Predictive Controller. *IEEE Transactions on Automatic Control*, **2022**, 1-1	5.9	0
13	Learning Non-Parametric Models with Guarantees: A Smooth Lipschitz Regression Approach. *IFAC-PapersOnLine*, **2020**, 53, 965-970	0.7	0
12	A nonlinear model predictive control scheme for sensor fault tolerance in observation processes. *International Journal of Robust and Nonlinear Control*, **2020**, 30, 5657-5677	3.6	0
11	Evaluation of advanced control strategies of electric thermal storage systems in residential building stock. *Utilities Policy*, **2021**, 69, 101178	3.3	0
10	A Distributed Luenberger Observer for Linear State Feedback Systems With Quantized and Rate-Limited Communications. *IEEE Transactions on Automatic Control*, **2021**, 66, 3922-3937	5.9	0
9	Embedded PWM Predictive Control of DC-DC Power Converters Via Piecewise-Affine Neural Networks. *IEEE Open Journal of the Industrial Electronics Society*, **2021**, 2, 199-206	3.6	0
8	Deterministic error bounds for kernel-based learning techniques under bounded noise. *Automatica*, **2021**, 134, 109896	5.7	0
7	SVR-AMA: An Asynchronous Alternating Minimization Algorithm With Variance Reduction for Model Predictive Control Applications. *IEEE Transactions on Automatic Control*, **2019**, 64, 1800-1815	5.9	
6	A Demand Response Framework to Overcome Network Overloading in Power Distribution Networks. *IFAC-PapersOnLine*, **2020**, 53, 13339-13344	0.7	
5	NSM Converges to a k-NN Regressor Under Loose Lipschitz Estimates **2020**, 4, 880-885		
4	Distributed Multi-Building Coordination for Demand Response. *IFAC-PapersOnLine*, **2020**, 53, 17113-17118		7
3	High-Speed Model Predictive Control: An Approximate Explicit Approach **2010**, 233-248		
2	Guest Editorial Model Predictive Control in Energy Conversion Systems. *IEEE Transactions on Energy Conversion*, **2021**, 36, 1311-1312	5.4	
1	Scalable MPC Design. *Control Engineering*, **2019**, 259-283	1	