Christopher L E Swartz

List of Publications by Year
in descending order

62 papers	864 citations	471509 17 h-index	526287 27 g-index
62 all docs	62 docs citations	62 times ranked	507 citing authors

#	Article	IF	Citations
1	Dynamic real-time optimization for nonlinear systems with Lyapunov stabilizing MPC. Journal of Process Control, 2022, 114, 1-15.	3.3	7
2	Optimization of a multiperiod refinery planning problem under uncertainty. AICHE Journal, 2022, 68, .	3.6	2
3	Multiperiod refinery optimization for mitigating the impact of process unit shutdowns. Computers and Chemical Engineering, 2022, 164, 107873.	3.8	4
4	Robust Multi-Scenario Dynamic Real-Time Optimization with Embedded Closed-Loop Model Predictive Control. IFAC-PapersOnLine, 2021, 54, 481-486.	0.9	1
5	Robust online scheduling for optimal short-term operation of cascaded hydropower systems under uncertainty. Journal of Process Control, 2021, 98, 52-65.	3.3	16
6	Robust model predictive control via multi-scenario reference trajectory optimization with closed-loop prediction. Journal of Process Control, 2021, 100, 80-92.	3.3	2
7	Robust model predictive control with embedded multi-scenario closed-loop prediction. Computers and Chemical Engineering, 2021, 149, 107283.	3.8	3
8	Closed‐loop dynamic real‐time optimization with stabilizing model predictive control. AICHE Journal, 2021, 67, e17308.	3.6	7
9	A dynamic optimization framework for basic oxygen furnace operation. Chemical Engineering Science, 2021, 241, 116653.	3.8	8
10	Uncertainty management via online scheduling for optimal short-term operation of cascaded hydropower systems. Computers and Chemical Engineering, 2020, 134, 106677.	3.8	13
11	Supply Chain Monitoring Using Principal Component Analysis. Industrial & Engineering Chemistry Research, 2020, 59, 12487-12503.	3.7	6
12	Production scheduling in dynamic real-time optimization with closed-loop prediction. Journal of Process Control, 2020, 89, 95-107.	3.3	21
13	Dynamic Modeling and Simulation of Basic Oxygen Furnace (BOF) Operation. Processes, 2020, 8, 483.	2.8	20
14	Handling sensor faults in economic model predictive control of batch processes. AICHE Journal, 2019, 65, 617-628.	3.6	11
15	Dynamic real-time optimization of distributed MPC systems using rigorous closed-loop prediction. Computers and Chemical Engineering, 2019, 122, 356-371.	3.8	20
16	Supply chain design with time-limited transportation contracts. Computers and Chemical Engineering, 2019, 131, 106579.	3.8	5
17	Design for dynamic operation - A review and new perspectives for an increasingly dynamic plant operating environment. Computers and Chemical Engineering, 2019, 128, 329-339.	3.8	24
18	Real-time energy management for electric arc furnace operation. Journal of Process Control, 2019, 74, 50-62.	3.3	25

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19	Economic Coordination of Distributed Nonlinear MPC Systems using Closed-loop Prediction of a Nonlinear Dynamic Plant. IFAC-PapersOnLine, 2018, 51, 35-40.	0.9	0
20	Design for dynamic operation â€" A review and new perspectives for a dynamic manufacturing environment. Computer Aided Chemical Engineering, 2018, 44, 43-52.	0.5	0
21	Real-Time Dynamic Optimization-Based Advisory System for Electric Arc Furnace Operation. Industrial & Engineering Chemistry Research, 2018, 57, 13177-13190.	3.7	7
22	Coordination of distributed MPC systems using a nonlinear dynamic plant model with closed-loop prediction. Computer Aided Chemical Engineering, 2018, 44, 571-576.	0.5	1
23	Approximation techniques for dynamic real-time optimization (DRTO) of distributed MPC systems. Computers and Chemical Engineering, 2018, 118, 195-209.	3.8	13
24	The Optimal Design of a Distillation System for the Flexible Polygeneration of Dimethyl Ether and Methanol Under Uncertainty. Frontiers in Energy Research, 2018, 6, .	2.3	11
25	An optimization framework for scheduling of converter aisle operation in a nickel smelting plant. Computers and Chemical Engineering, 2018, 119, 195-214.	3.8	3
26	Approximation of closed-loop prediction for dynamic real-time optimization calculations. Computers and Chemical Engineering, 2017, 103, 23-38.	3.8	22
27	A parallel structure exploiting nonlinear programming algorithm for multiperiod dynamic optimization. Computers and Chemical Engineering, 2017, 103, 151-164.	3.8	4
28	Preemptive dynamic operation of cryogenic air separation units. AICHE Journal, 2017, 63, 3845-3859.	3.6	15
29	Dynamic realâ€time optimization with closedâ€loop prediction. AICHE Journal, 2017, 63, 3896-3911.	3.6	29
30	Handling multiâ€rate and missing data in variable duration economic model predictive control of batch processes. AICHE Journal, 2017, 63, 2705-2718.	3.6	16
31	Handling multi-rate and missing data in system identification. , 2017, , .		0
32	The utilization of closedâ€loop prediction for dynamic realâ€time optimization. Canadian Journal of Chemical Engineering, 2017, 95, 1968-1978.	1.7	9
33	Coordination of Distributed MPC Systems via Dynamic Real-time Optimization * *This work is sponsored by the McMaster Advanced Control Consortium (MACC) and the Ministry of Higher Education (MOHE), Malaysia. IFAC-PapersOnLine, 2017, 50, 6184-6189.	0.9	2
34	Optimization-based Online Decision Support Tool for Electric Arc Furnace Operation * *This work is supported by the McMaster Steel Research Center (SRC) and the McMaster Advanced Control Consortium (MACC).. IFAC-PapersOnLine, 2017, 50, 10784-10789.	0.9	4
35	Coordination of distributed MPC systems through dynamic real-time optimization with closed-loop prediction. Computer Aided Chemical Engineering, 2017, 40, 1603-1608.	0.5	2
36	Optimal Dynamic Operation of a High-Purity Air Separation Plant under Varying Market Conditions. Industrial & Engineering Chemistry Research, 2016, 55, 9956-9970.	3.7	41

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37	Economic model predictive control of the electric arc furnace using data-driven multi-rate models. , 2016, , .		0
38	Closed-loop Formulation for Nonlinear Dynamic Real-time Optimization**This work is sponsored by the McMaster Advanced Control Consortium (MACC) and the Ministry of Higher Education (MOHE), Malaysia. IFAC-PapersOnLine, 2016, 49, 406-411.	0.9	8
39	A Multi-rate Moving Horizon Estimation Framework for Electric Arc Furnace Operation**This work is supported by the McMaster Steel Research Center (SRC) and the McMaster Advanced Control Consortium (MACC).. IFAC-PapersOnLine, 2016, 49, 1175-1180.	0.9	7
40	Dynamic modeling and collocationâ€"based model reduction of cryogenic air separation units. AICHE Journal, 2016, 62, 1602-1615.	3.6	48
41	Multi-rate modeling and economic model predictive control of the electric arc furnace. Journal of Process Control, 2016, 40, 50-61.	3.3	34
42	Optimal response under partial plant shutdown with discontinuous dynamic models. Computers and Chemical Engineering, 2016, 86, 120-135.	3.8	7
43	Flexibility analysis of process supply chain networks. Computers and Chemical Engineering, 2016, 84, 409-421.	3.8	26
44	Multi-Period Dynamic Optimization for Large-Scale Differential-Algebraic Process Models under Uncertainty. Processes, 2015, 3, 541-567.	2.8	1
45	Optimization-based assessment of design limitations to air separation plant agility in demand response scenarios. Journal of Process Control, 2015, 33, 37-48.	3.3	62
46	A Bilevel Programming Formulation for Dynamic Real-time Optimizationâˆ'âˆ'This work is sponsored by the McMaster Advanced Control Consortium (MACC) and the Ministry of Higher Education (MOHE), Malaysia. IFAC-PapersOnLine, 2015, 48, 906-911.	0.9	11
47	Robust decision making for hybrid process supply chain systems via model predictive control. Computers and Chemical Engineering, 2014, 62, 37-55.	3.8	28
48	Dynamic Operability Analysis of Process Supply Chains for Forest Industry Transformation. Industrial & Engineering Chemistry Research, 2014, 53, 9825-9840.	3.7	6
49	Design under uncertainty using parallel multiperiod dynamic optimization. AICHE Journal, 2014, 60, 3151-3168.	3.6	24
50	Optimization of Primary Steelmaking Purchasing and Operation under Raw Material Uncertainty. Industrial & Engineering Chemistry Research, 2013, 52, 12383-12398.	3.7	11
51	Optimal operation of process plants under partial shutdown conditions. AICHE Journal, 2013, 59, 4151-4168.	3.6	16
52	Design for dynamic performance: Application to an air separation unit. , 2011, , .		4
53	Model-based control of multi-unit systems under partial shutdown conditions. , 2009, , .		1
54	Sensitivity analysis of LP-MPC cascade control systems. Journal of Process Control, 2009, 19, 16-24.	3.3	36

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55	A mixed-integer formulation for back-off under constrained predictive control. Computers and Chemical Engineering, 2008, 32, 2409-2419.	3.8	21
56	NONLINEAR PREDICTIVE CONTROL OF AN ELECTRIC ARC FURNACE. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2007, 40, 285-290.	0.4	6
57	Dynamic optimization of electric arc furnace operation. AICHE Journal, 2007, 53, 640-653.	3.6	39
58	Reference Trajectory Optimization Under Constrained Predictive Control. Canadian Journal of Chemical Engineering, 2007, 85, 454-464.	1.7	4
59	Dynamic Modeling of an Industrial Electric Arc Furnace. Industrial & Engineering Chemistry Research, 2005, 44, 8067-8083.	3.7	68
60	Simultaneous Solution Strategies for Inclusion of Input Saturation in the Optimal Design of Dynamically Operable Plants. Optimization and Engineering, 2004, 5, 5-24.	2.4	10
61	Input saturation effects in optimizing control—inclusion within a simultaneous optimization framework. Computers and Chemical Engineering, 2004, 28, 1347-1360.	3.8	5
62	The use of controller parametrization in the integration of design control. Computer Aided Chemical Engineering, 2004, 17, 239-263.	0.5	7