

Prodromos Daoutidis

List of Publications by Year in descending order

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77
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2,448
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201575

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docs citations

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times ranked

2067
citing authors

#	ARTICLE	IF	CITATIONS
1	Renewable hydrogen and ammonia for combined heat and power systems in remote locations: Optimal design and scheduling. <i>Optimal Control Applications and Methods</i> , 2023, 44, 719-738.	1.3	11
2	Fast and stable nonconvex constrained distributed optimization: the ELLADA algorithm. <i>Optimization and Engineering</i> , 2022, 23, 259-301.	1.3	10
3	Stochastic blockmodeling for learning the structure of optimization problems. <i>AICHE Journal</i> , 2022, 68, e17415.	1.8	8
4	A multicut generalized benders decomposition approach for the integration of process operations and dynamic optimization for continuous systems. <i>Computers and Chemical Engineering</i> , 2022, 164, 107859.	2.0	3
5	Dissipativity learning control (DLC): Theoretical foundations of input-output data-driven model-free control. <i>Systems and Control Letters</i> , 2021, 147, 104831.	1.3	12
6	Optimal Design of Sustainable Ammonia-Based Food-Energy-Water Systems with Nitrogen Management. <i>ACS Sustainable Chemistry and Engineering</i> , 2021, 9, 2816-2834.	3.2	11
7	Mathematical modeling and parameter estimation of MFI membranes for para/ortho-xylene separation. <i>AICHE Journal</i> , 2021, 67, e17232.	1.8	6
8	Renewable ammonia for sustainable energy and agriculture: vision and systems engineering opportunities. <i>Current Opinion in Chemical Engineering</i> , 2021, 31, 100667.	3.8	63
9	Nonlinear state and parameter estimation using derivative information: A Lie-Sobolev approach. <i>Computers and Chemical Engineering</i> , 2021, 151, 107369.	2.0	3
10	Harnessing the Wind Power of the Ocean with Green Offshore Ammonia. <i>ACS Sustainable Chemistry and Engineering</i> , 2021, 9, 14605-14617.	3.2	20
11	Efficient Solution of Enterprise-Wide Optimization Problems Using Nested Stochastic Blockmodeling. <i>Industrial & Engineering Chemistry Research</i> , 2021, 60, 14476-14494.	1.8	5
12	Optimal Feature Selection for Distributed Data-Driven Process Monitoring. <i>Industrial & Engineering Chemistry Research</i> , 2020, 59, 2307-2317.	1.8	7
13	Application of graph theory and filter based variable selection methods in the design of a distributed data-driven monitoring system. <i>Computers and Chemical Engineering</i> , 2020, 143, 107098.	2.0	3
14	Decomposition of integrated scheduling and dynamic optimization problems using community detection. <i>Journal of Process Control</i> , 2020, 90, 63-74.	1.7	11
15	Using hydrogen and ammonia for renewable energy storage: A geographically comprehensive techno-economic study. <i>Computers and Chemical Engineering</i> , 2020, 136, 106785.	2.0	96
16	Multiple Hotelling's T^2 tests for distributed fault detection of large-scale systems. <i>Computers and Chemical Engineering</i> , 2020, 136, 106807.	2.0	4
17	Smart manufacturing: A sustainable energy perspective. , 2020, , 423-454.		0
18	Decomposition of control and optimization problems by network structure: Concepts, methods, and inspirations from biology. <i>AICHE Journal</i> , 2019, 65, e16708.	1.8	26

#	ARTICLE	IF	CITATIONS
19	DeCODE: a community-based algorithm for generating high-quality decompositions of optimization problems. <i>Optimization and Engineering</i> , 2019, 20, 1067-1084.	1.3	17
20	Model-Driven Engineering of N-Linked Glycosylation in Chinese Hamster Ovary Cells. <i>ACS Synthetic Biology</i> , 2019, 8, 2524-2535.	1.9	15
21	Efficient Water Pollution Abatement. <i>Industrial & Engineering Chemistry Research</i> , 2019, 58, 22483-22487.	1.8	7
22	Dissipativity learning control (DLC): A framework of input-output data-driven control. <i>Computers and Chemical Engineering</i> , 2019, 130, 106576.	2.0	21
23	A Bilevel Programming Approach to the Convergence Analysis of Control-Lyapunov Functions. <i>IEEE Transactions on Automatic Control</i> , 2019, 64, 4174-4179.	3.6	6
24	Generating optimal overlapping subsystems for distributed statistical fault detection subject to constraints. <i>Journal of Process Control</i> , 2019, 80, 143-151.	1.7	9
25	Distributed Estimation and Nonlinear Model Predictive Control Using Community Detection. <i>Industrial & Engineering Chemistry Research</i> , 2019, 58, 13495-13507.	1.8	28
26	A novel system for ammonia-based sustainable energy and agriculture: Concept and design optimization. <i>Chemical Engineering and Processing: Process Intensification</i> , 2019, 140, 11-21.	1.8	38
27	Graph representation and distributed control of diffusion-convection-reaction system networks. <i>Chemical Engineering Science</i> , 2019, 204, 128-139.	1.9	6
28	An integrated platform for mucin-type O-glycosylation network generation and visualization. <i>Biotechnology and Bioengineering</i> , 2019, 116, 1341-1354.	1.7	6
29	Distributed nonlinear model predictive control through accelerated parallel ADMM. , 2019, , .		8
30	Concept and Design Optimization of a Novel Ammonia-Based System for Food-Energy-Water Sustainability. <i>Computer Aided Chemical Engineering</i> , 2019, , 65-70.	0.3	2
31	Exploring the Benefits of Modular Renewable-Powered Ammonia Production: A Supply Chain Optimization Study. <i>Industrial & Engineering Chemistry Research</i> , 2019, 58, 5898-5908.	1.8	49
32	Distributed decision making for intensified process systems. <i>Current Opinion in Chemical Engineering</i> , 2019, 25, 75-81.	3.8	16
33	Scheduling-informed optimal design of systems with time-varying operation: A wind-powered ammonia case study. <i>AIChE Journal</i> , 2019, 65, e16434.	1.8	49
34	Distributed control and optimization of process system networks: A review and perspective. <i>Chinese Journal of Chemical Engineering</i> , 2019, 27, 1461-1473.	1.7	14
35	Scheduling and supervisory control for cost effective load shaping of microgrids with flexible demands. <i>Journal of Process Control</i> , 2019, 74, 202-214.	1.7	14
36	Network decomposition for distributed control through community detection in input-output bipartite graphs. <i>Journal of Process Control</i> , 2018, 64, 7-14.	1.7	33

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37	Relative time-averaged gain array (RTAGA) for distributed control-oriented network decomposition. <i>AIChE Journal</i> , 2018, 64, 1682-1690.	1.8	21
38	Integrating operations and control: A perspective and roadmap for future research. <i>Computers and Chemical Engineering</i> , 2018, 115, 179-184.	2.0	50
39	Energy management and load shaping for commercial microgrids coupled with flexible building environment control. <i>Journal of Energy Storage</i> , 2018, 16, 61-75.	3.9	39
40	Optimal decomposition for distributed optimization in nonlinear model predictive control through community detection. <i>Computers and Chemical Engineering</i> , 2018, 111, 43-54.	2.0	48
41	Decomposing complex plants for distributed control: Perspectives from network theory. <i>Computers and Chemical Engineering</i> , 2018, 114, 43-51.	2.0	36
42	Optimal scheduling for wind-powered ammonia generation: Effects of key design parameters. <i>Chemical Engineering Research and Design</i> , 2018, 131, 5-15.	2.7	47
43	Decomposition and Distributed Control of Integrated Lumped and Distributed Parameter Process Networks. , 2018, , .		1
44	Reprint of: Optimal decomposition for distributed optimization in nonlinear model predictive control through community detection. <i>Computers and Chemical Engineering</i> , 2018, 116, 144-155.	2.0	2
45	Towards a Generic Algorithm for Identifying High-Quality Decompositions of Optimization Problems. <i>Computer Aided Chemical Engineering</i> , 2018, 44, 943-948.	0.3	7
46	The role of community structures in sparse feedback control. , 2018, , .		7
47	Modeling and Optimal Design of Absorbent Enhanced Ammonia Synthesis. <i>Processes</i> , 2018, 6, 91.	1.3	57
48	Distributed adaptive dynamic programming for data-driven optimal control. <i>Systems and Control Letters</i> , 2018, 120, 36-43.	1.3	26
49	Zeolitic imidazolate framework membranes made by ligand-induced permselectivation. <i>Science</i> , 2018, 361, 1008-1011.	6.0	324
50	System Decomposition for Distributed Multivariate Statistical Process Monitoring by Performance Driven Agglomerative Clustering. <i>Industrial & Engineering Chemistry Research</i> , 2018, 57, 8283-8298.	1.8	20
51	Comprehensive study of decomposition effects on distributed output tracking of an integrated process over a wide operating range. <i>Chemical Engineering Research and Design</i> , 2018, 134, 553-563.	2.7	20
52	Automated network generation and analysis of biochemical reaction pathways using RING. <i>Metabolic Engineering</i> , 2018, 49, 84-93.	3.6	14
53	Distributed Model Predictive Control of an Amine Gas Sweetening Plant. <i>Industrial & Engineering Chemistry Research</i> , 2018, 57, 13103-13115.	1.8	21
54	Graph representation and decomposition of ODE/hyperbolic PDE systems. <i>Computers and Chemical Engineering</i> , 2017, 106, 532-543.	2.0	19

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55	Impact of Decomposition on Distributed Model Predictive Control: A Process Network Case Study. Industrial & Engineering Chemistry Research, 2017, 56, 9606-9616.	1.8	53
56	A framework for ammonia supply chain optimization incorporating conventional and renewable generation. AIChE Journal, 2017, 63, 4390-4402.	1.8	38
57	Community-based synthesis of distributed control architectures for integrated process networks. Chemical Engineering Science, 2017, 172, 434-443.	1.9	44
58	Bioethanol enrichment using zeolite membranes: Molecular modeling, conceptual process design and techno-economic analysis. Journal of Membrane Science, 2017, 540, 464-476.	4.1	18
59	Microgrid/Macrogrid Energy Exchange: A Novel Market Structure and Stochastic Scheduling. IEEE Transactions on Smart Grid, 2017, 8, 178-189.	6.2	55
60	Distributed model predictive control of process networks: Impact of control architecture * *Financial support from the Petroleum Institute, Abu Dhabi, UAE is gratefully acknowledged.. IFAC-PapersOnLine, 2017, 50, 12452-12457.	0.5	20
61	Distributed/Hierarchical Control Architecture Design * *Financial support from NSF-CBET is gratefully acknowledged.. IFAC-PapersOnLine, 2017, 50, 12015-12020.	0.5	7
62	Control-relevant decomposition of process networks via optimization-based hierarchical clustering. AIChE Journal, 2016, 62, 3177-3188.	1.8	35
63	A mathematical model for zeolite membrane module performance and its use for techno-economic evaluation of improved energy efficiency hybrid membrane-distillation processes for butane isomer separations. Journal of Membrane Science, 2016, 520, 434-449.	4.1	30
64	Optimization of Adsorption-Based Natural Gas Dryers. Industrial & Engineering Chemistry Research, 2016, 55, 4658-4667.	1.8	10
65	Control configuration synthesis using agglomerative hierarchical clustering: A graph-theoretic approach. Journal of Process Control, 2016, 46, 43-54.	1.7	31
66	Process design and optimization for etherification of glycerol with isobutene. Chemical Engineering Science, 2016, 144, 326-335.	1.9	16
67	Economic assessment of Temperature Swing Adsorption systems as Claus Tail Gas Clean Up Units. Chemical Engineering Science, 2015, 126, 186-195.	1.9	19
68	Automated synthesis of control configurations for process networks based on structural coupling. Chemical Engineering Science, 2015, 136, 76-87.	1.9	35
69	Process design and supply chain optimization of supercritical biodiesel synthesis from waste cooking oils. Chemical Engineering Research and Design, 2013, 91, 1456-1466.	2.7	24
70	Biorefinery Location and Technology Selection Through Supply Chain Optimization. Industrial & Engineering Chemistry Research, 2013, 52, 3192-3208.	1.8	94
71	Language-oriented rule-based reaction network generation and analysis: Description of RING. Computers and Chemical Engineering, 2012, 45, 114-123.	2.0	86
72	Language-oriented rule-based reaction network generation and analysis: Applications of RING. Computers and Chemical Engineering, 2012, 46, 141-152.	2.0	33

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73	Networks with large solvent recycle: Dynamics, hierarchical control, and a biorefinery application. AICHE Journal, 2012, 58, 1764-1777.	1.8	11
74	Economic Optimization of a Lignocellulosic Biomass-to-Ethanol Supply Chain. Chemical Engineering Science, 2012, 67, 68-79.	1.9	195
75	Dynamics and Control of Process Networks with Large Energy Recycle. Industrial & Engineering Chemistry Research, 2009, 48, 6087-6097.	1.8	63
76	Structural evaluation of control configurations for multivariable nonlinear processes. Chemical Engineering Science, 1992, 47, 1091-1107.	1.9	85
77	High-Capacity Regenerable H ₂ S Sorbent for Reducing Sulfur Emissions. Industrial & Engineering Chemistry Research, 0, , .	1.8	6