

Astrid Layton

List of Publications by Year in descending order

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Version: 2024-02-01

39
papers

407
citations

840776

11
h-index

794594

19
g-index

39
all docs

39
docs citations

39
times ranked

160
citing authors

#	ARTICLE	IF	CITATIONS
1	Designing Industrial Networks Using Ecological Food Web Metrics. Environmental Science & Technology, 2016, 50, 11243-11252.	10.0	45
2	Industrial Ecosystems and Food Webs: An Expansion and Update of Existing Data for Eco-Industrial Parks and Understanding the Ecological Food Webs They Wish to Mimic. Journal of Industrial Ecology, 2016, 20, 85-98.	5.5	39
3	Bio-inspired design for robust power grid networks. Applied Energy, 2019, 251, 113349.	10.1	35
4	Ecological Principles and Metrics for Improving Material Cycling Structures in Manufacturing Networks. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2016, 138, .	2.2	32
5	Mimicking nature for resilient resource and infrastructure network design. Reliability Engineering and System Safety, 2020, 204, 107142.	8.9	32
6	Designing ecologically-inspired robustness into a water distribution network. Journal of Cleaner Production, 2020, 254, 120057.	9.3	29
7	Correlation between Thermodynamic Efficiency and Ecological Cyclicity for Thermodynamic Power Cycles. PLoS ONE, 2012, 7, e51841.	2.5	26
8	Improving performance of eco-industrial parks. International Journal of Sustainable Engineering, 2017, 10, 250-259.	3.5	21
9	Ecology-inspired resilient and affordable system of systems using degree of system order. Systems Engineering, 2022, 25, 3-18.	2.7	14
10	Exploring System of Systems Resilience Versus Affordability Trade-Space Using a Bio-Inspired Metric. Journal of Computing and Information Science in Engineering, 2021, 21, .	2.7	13
11	Bio-inspired design for resilient water distribution networks. Procedia CIRP, 2019, 80, 275-280.	1.9	12
12	Bio-inspired Design for Sustainable and Resilient Supply Chains. Procedia CIRP, 2020, 90, 695-699.	1.9	12
13	Evaluating benefits of ecologically-inspired nested architectures for industrial symbiosis. Resources, Conservation and Recycling, 2021, 167, 105423.	10.8	12
14	Bio-Inspired Design for Robust Power Networks. , 2019, , .		10
15	Ecological Robustness as a Design Principle for Sustainable Industrial Systems. , 2015, , .		9
16	An ecosystem perspective for the design of sustainable power systems. Procedia CIRP, 2019, 80, 269-274.	1.9	8
17	Designing eco-industrial parks in a nested structure to mimic mutualistic ecological networks. Procedia CIRP, 2019, 80, 590-595.	1.9	7
18	Nestedness of eco-industrial networks: Exploring linkage distribution to promote sustainable industrial growth. Journal of Industrial Ecology, 2021, 25, 205-218.	5.5	5

#	ARTICLE	IF	CITATIONS
19	Matrix Trays: From waste to opportunities. <i>Journal of Cleaner Production</i> , 2021, 300, 126813.	9.3	5
20	A quantitative engineering study of ecosystem robustness using thermodynamic power cycles as case studies. <i>PLoS ONE</i> , 2019, 14, e0226993.	2.5	4
21	Mixed-Integer Optimization for Bio-Inspired Robust Power Network Design. , 2021, , .		4
22	Bio-Inspired Human Network Design: A Multi-Currency Robustness Metric Inspired by Ecological Network Analysis. , 2019, , .		4
23	A Multigraph Modeling Approach to Enable Ecological Network Analysis of Cyber Physical Power Networks. , 2021, , .		4
24	A Bioinspired Framework for Analyzing and Predicting the Trade-off Between System of Systems Attributes. , 2022, , 503-513.		4
25	An Ecological Robustness Oriented Optimal Power Flow for Power Systems's™ Survivability. <i>IEEE Transactions on Power Systems</i> , 2023, 38, 447-462.	6.5	4
26	Biologically Inspired Closed Loop Manufacturing Networks. , 2013, , .		3
27	Designing Sustainable Manufacturing Networks: The Role of Exclusive Species in Achieving Ecosystem-Type Cycling. , 2017, , .		3
28	Understanding Ecological Efficiency and Robustness for Network Design Using Thermodynamic Power Cycles. , 2018, , .		3
29	Mimicking the nested structures of ecosystems in the design of industrial water networks. <i>Procedia CIRP</i> , 2020, 90, 361-365.	1.9	2
30	Extending the Use of Bio-Inspiration for Water Distribution Networks to Urban Settings. , 2020, , .		2
31	A Correlation Between Thermal Efficiency and Biological Network Cyclicity. , 2011, , .		1
32	Bio-Inspired Modeling Approaches for Human Networks With Link Dissipation. , 2019, , .		1
33	Improving Performance of Eco-Industrial Parks. <i>Smart Innovation, Systems and Technologies</i> , 2016, , 227-240.	0.6	1
34	Ecosystem guidance for the incorporation of renewable utilities in a multi-use campus network. <i>PLoS ONE</i> , 2022, 17, e0267431.	2.5	1
35	Ecological Uniqueness for Understanding Line Importance in Power Grids. , 2021, , .		0
36	Waste Reduction: A Review of Common Options and Alternatives. , 2019, , .		0

#	ARTICLE	IF	CITATIONS
37	Using A Modularity Analysis to Determine Tool and Student Roles within Maker Spaces. , 0, , .		0
38	Resistance to Opportunities of Plastic Recycling. Enquiry, 2021, 18, 51-72.	0.5	0
39	An Analysis of Factors Impacting Design Self-Efficacy of Senior Design Students. , 0, , .		0