

Soumik Sarkar

List of Publications by Year in descending order

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Version: 2024-02-01

68
papers

3,205
citations

236925

25
h-index

233421

45
g-index

70
all docs

70
docs citations

70
times ranked

3074
citing authors

#	ARTICLE	IF	CITATIONS
1	Machine Learning for High-Throughput Stress Phenotyping in Plants. Trends in Plant Science, 2016, 21, 110-124.	8.8	670
2	Deep Learning for Plant Stress Phenotyping: Trends and Future Perspectives. Trends in Plant Science, 2018, 23, 883-898.	8.8	391
3	An explainable deep machine vision framework for plant stress phenotyping. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 4613-4618.	7.1	353
4	Plant disease identification using explainable 3D deep learning on hyperspectral images. Plant Methods, 2019, 15, 98.	4.3	202
5	A real-time phenotyping framework using machine learning for plant stress severity rating in soybean. Plant Methods, 2017, 13, 23.	4.3	124
6	A Weakly Supervised Deep Learning Framework for Sorghum Head Detection and Counting. Plant Phenomics, 2019, 2019, 1525874.	5.9	114
7	Hyperspectral band selection using genetic algorithm and support vector machines for early identification of charcoal rot disease in soybean stems. Plant Methods, 2018, 14, 86.	4.3	105
8	Challenges and Opportunities in Machine-Augmented Plant Stress Phenotyping. Trends in Plant Science, 2021, 26, 53-69.	8.8	92
9	Traffic Congestion Detection from Camera Images using Deep Convolution Neural Networks. Transportation Research Record, 2018, 2672, 222-231.	1.9	78
10	Crop yield prediction integrating genotype and weather variables using deep learning. PLoS ONE, 2021, 16, e0252402.	2.5	74
11	Computer vision and machine learning enabled soybean root phenotyping pipeline. Plant Methods, 2020, 16, 5.	4.3	71
12	Computer vision and machine learning for robust phenotyping in genome-wide studies. Scientific Reports, 2017, 7, 44048.	3.3	68
13	Occupancy sensing in buildings: A review of data analytics approaches. Energy and Buildings, 2019, 188-189, 278-285.	6.7	64
14	A deep learning framework to discern and count microscopic nematode eggs. Scientific Reports, 2018, 8, 9145.	3.3	59
15	Machine Learning Approach for Prescriptive Plant Breeding. Scientific Reports, 2019, 9, 17132.	3.3	55
16	Development of Optimized Phenomic Predictors for Efficient Plant Breeding Decisions Using Phenomic-Assisted Selection in Soybean. Plant Phenomics, 2019, 2019, 5809404.	5.9	50
17	Interpretable deep learning for guided microstructure-property explorations in photovoltaics. Npj Computational Materials, 2019, 5, .	8.7	44
18	UAS-Based Plant Phenotyping for Research and Breeding Applications. Plant Phenomics, 2021, 2021, 9840192.	5.9	44

#	ARTICLE	IF	CITATIONS
19	A Case Study of Deep Reinforcement Learning for Engineering Design: Application to Microfluidic Devices for Flow Sculpting. <i>Journal of Mechanical Design, Transactions of the ASME</i> , 2019, 141, .	2.9	41
20	Soybean Root System Architecture Trait Study through Genotypic, Phenotypic, and Shape-Based Clusters. <i>Plant Phenomics</i> , 2020, 2020, 1925495.	5.9	40
21	A Deep Learning Framework for Design and Analysis of Surgical Bioprosthetic Heart Valves. <i>Scientific Reports</i> , 2019, 9, 18560.	3.3	37
22	Fault-tolerant optimal control of a building HVAC system. <i>Science and Technology for the Built Environment</i> , 2015, 21, 734-751.	1.7	33
23	Linked read technology for assembling large complex and polyploid genomes. <i>BMC Genomics</i> , 2018, 19, 651.	2.8	31
24	Predicting county-scale maize yields with publicly available data. <i>Scientific Reports</i> , 2020, 10, 14957.	3.3	28
25	Deep Multiview Image Fusion for Soybean Yield Estimation in Breeding Applications. <i>Plant Phenomics</i> , 2021, 2021, 9846470.	5.9	28
26	An unsupervised anomaly detection approach using energy-based spatiotemporal graphical modeling. <i>Cyber-Physical Systems</i> , 2017, 3, 66-102.	2.0	25
27	A Novel Multirobot System for Plant Phenotyping. <i>Robotics</i> , 2018, 7, 61.	3.5	24
28	Fast inverse design of microstructures via generative invariance networks. <i>Nature Computational Science</i> , 2021, 1, 229-238.	8.0	23
29	How useful is active learning for image-based plant phenotyping?. <i>The Plant Phenome Journal</i> , 2021, 4, e20020.	2.0	21
30	Optimization of symbolic feature extraction for pattern classification. <i>Signal Processing</i> , 2012, 92, 625-635.	3.7	18
31	Using Machine Learning to Develop a Fully Automated Soybean Nodule Acquisition Pipeline (SNAP). <i>Plant Phenomics</i> , 2021, 2021, 9834746.	5.9	18
32	A deep learning framework for causal shape transformation. <i>Neural Networks</i> , 2018, 98, 305-317.	5.9	16
33	Deploying Fourier Coefficients to Unravel Soybean Canopy Diversity. <i>Frontiers in Plant Science</i> , 2016, 7, 2066.	3.6	15
34	Robustifying Reinforcement Learning Agents via Action Space Adversarial Training. , 2020, , .		15
35	Battery-Free Camera Occupancy Detection System. , 2021, , .		12
36	A high-fidelity residential building occupancy detection dataset. <i>Scientific Data</i> , 2021, 8, 280.	5.3	12

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37	Traffic Dynamics Exploration and Incident Detection Using Spatiotemporal Graphical Modeling. Journal of Big Data Analytics in Transportation, 2019, 1, 37-55.	3.0	11
38	Robust Deep Reinforcement Learning for Traffic Signal Control. Journal of Big Data Analytics in Transportation, 2020, 2, 263-274.	3.0	11
39	Path planning in GPS-denied environments via collective intelligence of distributed sensor networks. International Journal of Control, 2016, 89, 984-999.	1.9	9
40	Data-driven root-cause analysis for distributed system anomalies. , 2017, , .		8
41	Statistical Mechanics-Inspired Modeling of Heterogeneous Packet Transmission in Communication Networks. IEEE Transactions on Systems, Man, and Cybernetics, 2012, 42, 1083-1094.	5.0	7
42	On distributed optimization using generalized gossip. , 2015, , .		7
43	Data driven exploration of traffic network system dynamics using high resolution probe data. , 2016, , .		6
44	Understanding phase transition in communication networks to enable robust and resilient control. , 2009, , .		5
45	Semantic sensor fusion for fault diagnosis in aircraft gas turbine engines. , 2011, , .		4
46	A Symbolic Dynamic Filtering approach to unsupervised hierarchical feature extraction from time-series data. , 2015, , .		4
47	Scalable supervisory control of building energy systems using generalized gossip. , 2016, , .		4
48	On Consensus-Disagreement Tradeoff in Distributed Optimization. , 2018, , .		4
49	For publication in 2019 ACC A flexible framework for building occupancy detection using spatiotemporal pattern networks. , 2019, , .		4
50	Two Photon lithography additive manufacturing: Video dataset of parameter sweep of light dosages, photo-curable resins, and structures. Data in Brief, 2020, 32, 106119.	1.0	4
51	WHISPER: Wireless Home Identification and Sensing Platform for Energy Reduction. Journal of Sensor and Actuator Networks, 2021, 10, 71.	3.9	4
52	Granger Causality Based Hierarchical Time Series Clustering for State Estimation. IFAC-PapersOnLine, 2020, 53, 524-529.	0.9	3
53	Distributed decision propagation in mobile agent networks. , 2010, , .		2
54	Spatiotemporal information fusion for fault detection in shipboard auxiliary systems. , 2013, , .		2

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55	Exploring Granger causality in dynamical systems modeling and performance monitoring. , 2018, , .		2
56	Supervisory Control and Distributed Optimization of Building Energy Systems. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2020, 142, .	1.6	2
57	Symbolic analysis of time series signals using generalized Hilbert transform. , 2009, , .		1
58	Convergence and noise effect analysis for generalized gossip-based distributed optimization. , 2017, , .		1
59	Building Energy Disaggregation using Spatiotemporal Pattern Network. , 2018, , .		1
60	Generalised gossip-based subgradient method for distributed optimisation. International Journal of Control, 2019, 92, 1209-1225.	1.9	1
61	An Examination of Indian State in the Post-planning Period. Dynamics of Asian Development, 2019, , 57-79.	0.1	1
62	Learning State Switching for Multi-sensor Integration. , 2019, , .		1
63	Rethinking the Formation of Public Distribution System: A Class-Focused Approach. Review of Radical Political Economics, 2022, 54, 26-43.	0.6	1
64	Optimal partitioning of ultrasonic data for fatigue damage detection?. , 2011, , .		0
65	Distributed decision propagation in mobile agent networks. , 2012, , .		0
66	Topology control in mobile sensor networks using information space feedback. , 2016, , .		0
67	Hierarchical Optimization for Building Energy Systems. , 2018, , .		0
68	Data-Driven Performance Monitoring of Dynamical Systems Using Granger Causal Graphical Models. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2020, 142, .	1.6	0