Alok Choudhary

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/11675354/publications.pdf

Version: 2024-02-01

87	5,095	430874	345221
papers	citations	18 h-index	36 g-index

88	88	88	4435
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Recent advances and applications of deep learning methods in materials science. Npj Computational Materials, 2022, 8, .	8.7	207
2	Heterogeneous Feature Fusion Based Machine Learning on Shallow-Wide and Heterogeneous-Sparse Industrial Datasets. Lecture Notes in Computer Science, 2021, , 566-577.	1.3	1
3	Enabling deeper learning on big data for materials informatics applications. Scientific Reports, 2021, 11, 4244.	3.3	29
4	SIGRNN: Synthetic Minority Instances Generation in Imbalanced Datasets using a Recurrent Neural Network. , 2021, , .		1
5	Enhancing Phase Mapping for High-throughput X-ray Diffraction Experiments using Fuzzy Clustering. , 2021, , .		1
6	Cross-property deep transfer learning framework for enhanced predictive analytics on small materials data. Nature Communications, 2021, 12, 6595.	12.8	55
7	Improving MPI Collective I/O for High Volume Non-Contiguous Requests With Intra-Node Aggregation. IEEE Transactions on Parallel and Distributed Systems, 2020, 31, 2682-2695.	5.6	8
8	Improving All-to-Many Personalized Communication in Two-Phase I/O. , 2020, , .		5
9	Deep materials informatics: Applications of deep learning in materials science. MRS Communications, 2019, 9, 779-792.	1.8	137
10	Property Prediction of Organic Donor Molecules for Photovoltaic Applications Using Extremely Randomized Trees. Molecular Informatics, 2019, 38, e1900038.	2.5	31
11	Deep learning based domain knowledge integration for small datasets: Illustrative applications in materials informatics. , 2019, , .		9
12	Martensite Start Temperature Predictor for Steels Using Ensemble Data Mining. , 2019, , .		4
13	Data-Driven Insights from Predictive Analytics on Heterogeneous Experimental Data of Industrial Magnetic Materials. , 2019, , .		2
14	Transfer Learning Using Ensemble Neural Networks for Organic Solar Cell Screening. , 2019, , .		11
15	Enhancing materials property prediction by leveraging computational and experimental data using deep transfer learning. Nature Communications, 2019, 10, 5316.	12.8	160
16	An online tool for predicting fatigue strength of steel alloys based on ensemble data mining. International Journal of Fatigue, 2018, 113, 389-400.	5.7	60
17	Prediction of seebeck coefficient for compounds without restriction to fixed stoichiometry: A machine learning approach. Journal of Computational Chemistry, 2018, 39, 191-202.	3.3	65
18	ElemNet: Deep Learning the Chemistry of Materials From Only Elemental Composition. Scientific Reports, 2018, 8, 17593.	3.3	242

#	Article	IF	Citations
19	Extracting Grain Orientations from EBSD Patterns of Polycrystalline Materials Using Convolutional Neural Networks. Microscopy and Microanalysis, 2018, 24, 497-502.	0.4	46
20	Reducing I/O variability using dynamic I/O path characterization in petascale storage systems. Journal of Supercomputing, 2017, 73, 2069-2097.	3.6	10
21	Improved Scaling of Molecular Network Calculations: The Emergence of Molecular Domains. Journal of Physical Chemistry Letters, 2017, 8, 415-421.	4.6	14
22	Deep Convolutional Neural Networks with transfer learning for computer vision-based data-driven pavement distress detection. Construction and Building Materials, 2017, 157, 322-330.	7.2	666
23	Including crystal structure attributes in machine learning models of formation energies via Voronoi tessellations. Physical Review B, 2017, 96, .	3.2	254
24	A flexible I/O arbitration framework for netCDFâ€based big data processing workflows on highâ€end supercomputers. Concurrency Computation Practice and Experience, 2017, 29, e4161.	2.2	10
25	SILVERBACK+: scalable association mining via fast list intersection for columnar social data. Knowledge and Information Systems, 2017, 50, 969-997.	3.2	3
26	Towards Identifying Informal Caregivers of Alzheimerâ€™s and Dementia Patients in Social Media. , 2017, , .		1
27	Parallel Deep Convolutional Neural Network Training by Exploiting the Overlapping of Computation and Communication. , 2017, , .		21
28	Analyzing Informal Caregiving Expression in Social Media. , 2017, , .		2
29	Parallel Implementation of Lossy Data Compression for Temporal Data Sets. , 2016, , .		3
30	PinterNet: A thematic label curation tool for large image datasets. , 2016, , .		1
31	A Formation Energy Predictor for Crystalline Materials Using Ensemble Data Mining. , 2016, , .		14
32	Materials discovery: Understanding polycrystals from large-scale electron patterns. , 2016, , .		17
33	Perspective: Materials informatics and big data: Realization of the â€œfourth paradigmâ€• of science in materials science. APL Materials, 2016, 4, 053208.	5.1	712
34	Predictive analytics for crystalline materials: bulk modulus. RSC Advances, 2016, 6, 95246-95251.	3.6	62
35	A general-purpose machine learning framework for predicting properties of inorganic materials. Npj Computational Materials, 2016, 2, .	8.7	922
36	Parallel DTFE Surface Density Field Reconstruction. , 2016, , .		6

#	Article	IF	Citations
37	IOPro: a parallel I/O profiling and visualization framework for high-performance storage systems. Journal of Supercomputing, 2015, 71, 840-870.	3.6	0
38	A New Parallel Algorithm for Two-Pass Connected Component Labeling. , 2014, , .		17
39	NUMARCK: Machine Learning Algorithm for Resiliency and Checkpointing. , 2014, , .		43
40	Excavating social circles via user interests. Social Network Analysis and Mining, 2014, 4, 1.	2.8	4
41	Lung transplant outcome prediction using UNOS data. , 2013, , .		7
42	GPU-accelerated Monte Carlo simulations of dense stellar systems. , 2012, , .		2
43	Dynamic Directories: A mechanism for reducing on-chip interconnect power in multicores. , 2012, , .		10
44	IOPin: Runtime Profiling of Parallel I/O in HPC Systems. , 2012, , .		15
45	Parallel hierarchical clustering on shared memory platforms. , 2012, , .		16
46	Delegation-Based I/O Mechanism for High Performance Computing Systems. IEEE Transactions on Parallel and Distributed Systems, 2012, 23, 271-279.	5.6	16
47	Twitter Trending Topic Classification. , 2011, , .		211
48	Community Dynamics and Analysis of Decadal Trends in Climate Data. , 2011, , .		6
49	Supporting computational data model representation with high-performance I/O in parallel netCDF. , 2011, , .		6
50	Poster: A lung cancer mortality risk calculator based on SEER data. , 2011, , .		6
51	High Performance Data Mining Using R on Heterogeneous Platforms. , 2011, , .		11
52	Parallel pairwise statistical significance estimation of local sequence alignment using Message Passing Interface library. Concurrency Computation Practice and Experience, 2011, 23, 2269-2279.	2.2	10
53	Identifying HotSpots in Lung Cancer Data Using Association Rule Mining. , 2011, , .		20
54	Efficient pairwise statistical significance estimation for local sequence alignment using GPU. , 2011, , .		13

#	Article	IF	Citations
55	Predicting Node Failure in High Performance Computing Systems from Failure and Usage Logs. , 2011, , .		28
56	Achieving Target MTTF by Duplicating Reliability-Critical Components in High Performance Computing Systems. , 2011, , .		0
57	Improving the Average Response Time in Collective I/O. Lecture Notes in Computer Science, 2011, , 71-80.	1.3	6
58	A Comprehensive Approach to Image Spam Detection: From Server to Client Solution. IEEE Transactions on Information Forensics and Security, 2010, 5, 826-836.	6.9	28
59	pFANGS: Parallel high speed sequence mapping for Next Generation 454-roche Sequencing reads. , 2010, , .		3
60	Enabling active storage on parallel I/O software stacks. , 2010, , .		36
61	Detecting/preventing information leakage on the memory bus due to malicious hardware. , 2010, , .		20
62	HIGH UTILITY ITEMSETS MINING. International Journal of Information Technology and Decision Making, 2010, 09, 905-934.	3.9	13
63	Sensing, Triggers and Mobile (Meta)Data. , 2010, , .		0
64	Uncertain Range Queries for Necklaces. , 2010, , .		32
65	Automated Tracing of I/O Stack. Lecture Notes in Computer Science, 2010, , 72-81.	1.3	7
66	Enzyme Function Classification Using Protein Sequence Features and Random Forest. , 2009, , .		5
67	Combining I/O operations for multiple array variables in parallel netCDF. , 2009, , .		13
68	Using Subfiling to Improve Programming Flexibility and Performance of Parallel Shared-file I/O. , 2009, , .		23
69	Microarchitectures for Managing Chip Revenues under Process Variations. IEEE Computer Architecture Letters, 2008, 7, 5-8.	1.5	8
70	Machine Learning Models to Predict Performance of Computer System Design Alternatives. , 2008, , .		16
71	Evaluating the effects of cache redundancy on profit. , 2008, , .		11
72	Dynamically adapting file domain partitioning methods for collective I/O based on underlying parallel file system locking protocols. , 2008, , .		56

#	Article	IF	Citations
73	Scaling parallel I/O performance through I/O delegate and caching system. , 2008, , .		45
74	An Efficient FPGA Implementation of Principle Component Analysis based Network Intrusion Detection System. , 2008, , .		4
75	Operating System Controlled Processor-Memory Bus Encryption. , 2008, , .		7
76	Improving MPI Independent Write Performance Using A Two-Stage Write-Behind Buffering Method. , 2007, , .		6
77	An Implementation and Evaluation of Client-Side File Caching for MPI-IO. , 2007, , .		33
78	Compiler-Directed Energy Optimization for Parallel Disk Based Systems. IEEE Transactions on Parallel and Distributed Systems, 2007, 18, 1241-1257.	5.6	9
79	Evaluating voltage islands in CMPs under process variations. , 2007, , .		14
80	MineBench: A Benchmark Suite for Data Mining Workloads. , 2006, , .		175
81	An Architectural Characterization Study of Data Mining and Bioinformatics Workloads. , 2006, , .		13
82	A New Flexible MPI Collective I/O Implementation. , 2006, , .		19
83	A distributed multi-storage I/O system for data intensive scientific computing. Parallel Computing, 2003, 29, 1623-1643.	2.1	1
84	A high-performance application data environment for large-scale scientific computations. IEEE Transactions on Parallel and Distributed Systems, 2003, 14, 1262-1274.	5.6	7
85	An Extended Two-Phase Method for Accessing Sections of Out-of-Core Arrays. Scientific Programming, 1996, 5, 301-317.	0.7	89
86	Large-scale file systems with the flexibility of databases. ACM Computing Surveys, 1996, 28, 207.	23.0	2
87	Improved parallel I/O via a two-phase run-time access strategy. Computer Architecture News, 1993, 21, 31-38.	2.5	159