

# Tom Peterka

## List of Publications by Year in descending order

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27  
papers

373  
citations

1163117  
8  
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1281871  
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g-index

29  
all docs

29  
docs citations

29  
times ranked

399  
citing authors

#	ARTICLE	IF	CITATIONS
1	Learning in continuous action space for developing high dimensional potential energy models. Nature Communications, 2022, 13, 368.	12.8	21
2	Shared-Memory Communication for Containerized Workflows. , 2021, , .		3
3	Exact Analytical Parallel Vectors. , 2021, , .		0
4	Dynamic Heterogeneous Task Specification and Execution for In Situ Workflows. , 2021, , .		2
5	Priority research directions for in situ data management: Enabling scientific discovery from diverse data sources. International Journal of High Performance Computing Applications, 2020, 34, 409-427.	3.7	11
6	Toward Feature-Preserving 2D and 3D Vector Field Compression. , 2020, , .		12
7	Toward High-Performance Computing and Big Data Analytics Convergence: The Case of Spark-DIY. IEEE Access, 2019, 7, 156929-156955.	4.2	8
8	Rational Approximation of Scientific Data. Lecture Notes in Computer Science, 2019, , 18-31.	1.3	7
9	The future of scientific workflows. International Journal of High Performance Computing Applications, 2018, 32, 159-175.	3.7	104
10	Foundations of Multivariate Functional Approximation for Scientific Data. , 2018, , .		12
11	Spark-DIY: A Framework for Interoperable Spark Operations with High Performance Block-Based Data Models. , 2018, , .		13
12	Dynamic Data Repartitioning for Load-Balanced Parallel Particle Tracing. , 2018, , .		4
13	Ultrafast Three-Dimensional X-ray Imaging of Deformation Modes in ZnO Nanocrystals. Nano Letters, 2017, 17, 1102-1108.	9.1	25
14	Ultrafast Three-Dimensional Integrated Imaging of Strain in Core/Shell Semiconductor/Metal Nanostructures. Nano Letters, 2017, 17, 7696-7701.	9.1	14
15	In Situ Workflows at Exascale. , 2017, , .		1
16	Automatic Data Filtering for In Situ Workflows. , 2017, , .		7
17	In situ magnetic flux vortex visualization in time-dependent Ginzburg-Landau superconductor simulations. , 2017, , .		7
18	CoSS. , 2017, , .		2

#	ARTICLE	IF	CITATIONS
19	Bredala: Semantic Data Redistribution for In Situ Applications. , 2016, , .		14
20	Tracking vortices in superconductors: Extracting singularities from a discretized complex scalar field evolving in time. Physical Review E, 2016, 93, 023305.	2.1	2
21	Damaris. ACM Transactions on Parallel Computing, 2016, 3, 1-43.	1.4	28
22	Towards Multiresolution Phase Retrieval using Electron Ptychography. Microscopy and Microanalysis, 2015, 21, 2151-2152.	0.4	0
23	Detecting vortices in superconductors: Extracting one-dimensional topological singularities from a discretized complex scalar field. Physical Review E, 2015, 91, 023311.	2.1	10
24	Scalable Computation of Stream Surfaces on Large Scale Vector Fields. , 2014, , .		14
25	Processing MPI Derived Datatypes on Noncontiguous GPU-Resident Data. IEEE Transactions on Parallel and Distributed Systems, 2014, 25, 2627-2637.	5.6	13
26	Parallel particle advection and FTLE computation for time-varying flow fields. , 2012, , .		19
27	The Parallel Computation of Morse-Smale Complexes. , 2012, , .		20