

# Benjamin Peherstorfer

## List of Publications by Year in descending order

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39  
papers

2,472  
citations

331670

21  
h-index

377865

34  
g-index

40  
all docs

40  
docs citations

40  
times ranked

1483  
citing authors

#	ARTICLE	IF	CITATIONS
1	Data-driven low-fidelity models for multi-fidelity Monte Carlo sampling in plasma micro-turbulence analysis. <i>Journal of Computational Physics</i> , 2022, 451, 110898.	3.8	9
2	Accelerating the estimation of collisionless energetic particle confinement statistics in stellarators using multifidelity Monte Carlo. <i>Nuclear Fusion</i> , 2022, 62, 076019.	3.5	8
3	Learning Low-Dimensional Dynamical-System Models from Noisy Frequency-Response Data with Loewner Rational Interpolation. , 2022, , 39-57.		5
4	Probabilistic error estimation for non-intrusive reduced models learned from data of systems governed by linear parabolic partial differential equations. <i>ESAIM: Mathematical Modelling and Numerical Analysis</i> , 2021, 55, 735-761.	1.9	8
5	Operator Inference of Non-Markovian Terms for Learning Reduced Models from Partially Observed State Trajectories. <i>Journal of Scientific Computing</i> , 2021, 88, 1.	2.3	7
6	Model Reduction for Transport-Dominated Problems via Online Adaptive Bases and Adaptive Sampling. <i>SIAM Journal of Scientific Computing</i> , 2020, 42, A2803-A2836.	2.8	56
7	Multifidelity Cross-Entropy Estimation of Conditional Value-at-Risk for Risk-Averse Design Optimization. , 2020, , .		3
8	Sampling Low-Dimensional Markovian Dynamics for Preasymptotically Recovering Reduced Models from Data with Operator Inference. <i>SIAM Journal of Scientific Computing</i> , 2020, 42, A3489-A3515.	2.8	29
9	Stability of Discrete Empirical Interpolation and Gappy Proper Orthogonal Decomposition with Randomized and Deterministic Sampling Points. <i>SIAM Journal of Scientific Computing</i> , 2020, 42, A2837-A2864.	2.8	37
10	Quasi-Optimal Sampling to Learn Basis Updates for Online Adaptive Model Reduction with Adaptive Empirical Interpolation. , 2020, , .		2
11	Operator inference for non-intrusive model reduction of systems with non-polynomial nonlinear terms. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2020, 372, 113433.	6.6	58
12	Lift & Learn: Physics-informed machine learning for large-scale nonlinear dynamical systems. <i>Physica D: Nonlinear Phenomena</i> , 2020, 406, 132401.	2.8	139
13	Projection-based model reduction: Formulations for physics-based machine learning. <i>Computers and Fluids</i> , 2019, 179, 704-717.	2.5	210
14	A transport-based multifidelity preconditioner for Markov chain Monte Carlo. <i>Advances in Computational Mathematics</i> , 2019, 45, 2321-2348.	1.6	8
15	Multifidelity Monte Carlo Estimation with Adaptive Low-Fidelity Models. <i>SIAM-ASA Journal on Uncertainty Quantification</i> , 2019, 7, 579-603.	2.0	23
16	Multifidelity probability estimation via fusion of estimators. <i>Journal of Computational Physics</i> , 2019, 392, 385-402.	3.8	17
17	Geometric Subspace Updates with Applications to Online Adaptive Nonlinear Model Reduction. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2018, 39, 234-261.	1.4	46
18	Multifidelity Monte Carlo estimation for large-scale uncertainty propagation. , 2018, , .		22

#	ARTICLE	IF	CITATIONS
19	Convergence analysis of multifidelity Monte Carlo estimation. <i>Numerische Mathematik</i> , 2018, 139, 683-707.	1.9	14
20	Multifidelity Preconditioning of the Cross-Entropy Method for Rare Event Simulation and Failure Probability Estimation. <i>SIAM-ASA Journal on Uncertainty Quantification</i> , 2018, 6, 737-761.	2.0	31
21	Survey of Multifidelity Methods in Uncertainty Propagation, Inference, and Optimization. <i>SIAM Review</i> , 2018, 60, 550-591.	9.5	513
22	Combining multiple surrogate models to accelerate failure probability estimation with expensive high-fidelity models. <i>Journal of Computational Physics</i> , 2017, 341, 61-75.	3.8	34
23	Feedback Control for Systems with Uncertain Parameters Using Online-Adaptive Reduced Models. <i>SIAM Journal on Applied Dynamical Systems</i> , 2017, 16, 1563-1586.	1.6	16
24	Data-Driven Reduced Model Construction with Time-Domain Loewner Models. <i>SIAM Journal of Scientific Computing</i> , 2017, 39, A2152-A2178.	2.8	47
25	Data-driven operator inference for nonintrusive projection-based model reduction. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2016, 306, 196-215.	6.6	222
26	Optimal Model Management for Multifidelity Monte Carlo Estimation. <i>SIAM Journal of Scientific Computing</i> , 2016, 38, A3163-A3194.	2.8	144
27	Dynamic data-driven model reduction: adapting reduced models from incomplete data. <i>Advanced Modeling and Simulation in Engineering Sciences</i> , 2016, 3, .	1.7	21
28	Multifidelity importance sampling. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2016, 300, 490-509.	6.6	91
29	Detecting and Adapting to Parameter Changes for Reduced Models of Dynamic Data-driven Application Systems. <i>Procedia Computer Science</i> , 2015, 51, 2553-2562.	2.0	32
30	Online Adaptive Model Reduction for Nonlinear Systems via Low-Rank Updates. <i>SIAM Journal of Scientific Computing</i> , 2015, 37, A2123-A2150.	2.8	140
31	Dynamic data-driven reduced-order models. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2015, 291, 21-41.	6.6	143
32	Selected Recent Applications of Sparse Grids. <i>Numerical Mathematics</i> , 2015, 8, 47-77.	1.3	12
33	A Multigrid Method for Adaptive Sparse Grids. <i>SIAM Journal of Scientific Computing</i> , 2015, 37, S51-S70.	2.8	5
34	Localized Discrete Empirical Interpolation Method. <i>SIAM Journal of Scientific Computing</i> , 2014, 36, A168-A192.	2.8	168
35	Classification with Probability Density Estimation on Sparse Grids. <i>Lecture Notes in Computational Science and Engineering</i> , 2014, , 255-270.	0.3	0
36	Analysis of Car Crash Simulation Data with Nonlinear Machine Learning Methods. <i>Procedia Computer Science</i> , 2013, 18, 621-630.	2.0	47

#	ARTICLE	IF	CITATIONS
37	Fast Insight into High-Dimensional Parametrized Simulation Data. , 2012, , .		4
38	A Sparse-Grid-Based Out-of-Sample Extension for Dimensionality Reduction and Clustering with Laplacian Eigenmaps. Lecture Notes in Computer Science, 2011, , 112-121.	1.3	7
39	Spatially adaptive sparse grids for high-dimensional data-driven problems. Journal of Complexity, 2010, 26, 508-522.	1.3	91