David HorÃ¡k

List of Publications by Year
in descending order

44 papers	455 citations	840776 11 h-index	713466 21 g-index
47 all docs	47 docs citations	47 times ranked	207 citing authors

#	Article	IF	Citations
1	Bounds on the spectra of Schur complements of large Hâ€TFETIâ€DP clusters for 2D Laplacian. Numerical Linear Algebra With Applications, 2021, 28, e2344.	1.6	5
2	Finding Geometry of Two Micrometers Using Affine Transformation. , 2021, , .		0
3	Non-Monotone Projected Gradient Method in Linear Elasticity Contact Problems with Given Friction. Sustainability, 2020, 12, 8674.	3.2	0
4	Comparison of active-set and gradient projection-based algorithms for box-constrained quadratic programming. Soft Computing, 2020, 24, 17761-17770.	3.6	3
5	Comparison of selected FETI coarse space projector implementation strategies. Parallel Computing, 2020, 93, 102608.	2.1	0
6	Analyzing l1-loss and l2-loss Support Vector Machines Implemented in PERMON Toolbox. Lecture Notes in Electrical Engineering, 2020, , 13-23.	0.4	8
7	Steps to increase practical applicability of PragTic software. Advances in Engineering Software, 2019, 129, 57-68.	3.8	3
8	The impact of enabling multiple subdomains per MPI process in the TFETI domain decomposition method. Applied Mathematics and Computation, 2018, 319, 586-597.	2.2	0
9	Notes on the preliminary results of a linear two-class classifier in the PERMON toolbox. AIP Conference Proceedings, 2018, , .	0.4	2
10	The fatigue damage software parallelization. AIP Conference Proceedings, 2018, , .	0.4	0
11	Investigating Convergence of Linear SVM Implemented in PermonSVM Employing MPRGP Algorithm. Lecture Notes in Computer Science, 2018, , 115-129.	1.3	3
12	The READEX formalism for automatic tuning for energy efficiency. Computing (Vienna/New York), 2017, 99, 727-745.	4.8	23
13	Efficient lifetime estimation techniques for general multiaxial loading. AIP Conference Proceedings, 2017, , .	0.4	2
14	The energy consumption optimization of the BLAS routines. AIP Conference Proceedings, 2017, , .	0.4	0
15	Energy consumption optimization of the total-FETI solver by changing the CPU frequency. AIP Conference Proceedings, 2017, , .	0.4	0
16	Advanced Approach of Material Region Detections on Fibre-Reinforced Concrete CT-Scans. Advances in Electrical and Electronic Engineering, 2017, 15, .	0.3	1
17	A Note on Massively Parallel Implementation of FETI for the Solution of Contact Problems. Advances in Electrical and Electronic Engineering, 2017, 15, .	0.3	1
18	On the Efficient Reconstruction of Displacements in FETI Methods for Contact Problems. Advances in Electrical and Electronic Engineering, 2017, 15, .	0.3	0

#	Article	IF	Citations
19	Energy consumption optimization of the Total-FETI solver and BLAS routines by changing the CPU frequency. , 2016, , .		2
20	PERMON software toolbox as solver of contact problems in mechanics. AIP Conference Proceedings, 2016, , .	0.4	0
21	Implementation of the efficient communication layer for the highly parallel total FETI and hybrid total FETI solvers. Parallel Computing, 2016, 57, 154-166.	2.1	4
22	Numerical libraries solving large-scale problems developed at IT4Innovations Research Programme Supercomputing for Industry. Perspectives in Science, 2016, 7, 140-150.	0.6	1
23	Total-FETI domain decomposition method for solution of elasto-plastic problems. Advances in Engineering Software, 2015, 84, 48-54.	3.8	11
24	FLLOP: A Massively Parallel Solver Combining FETI Domain Decomposition Method and Quadratic Programming. , 2014, , .		1
25	On R-linear convergence of semi-monotonic inexact augmented Lagrangians for saddle point problems. Computational Optimization and Applications, 2014, 58, 87-103.	1.6	1
26	On R-linear convergence of semi-monotonic inexact augmented Lagrangians for bound and equality constrained quadratic programming problems with application. Computers and Mathematics With Applications, 2014, 67, 515-526.	2.7	8
27	Parallel Implementation of Total-FETI DDM with Application to Medical Image Registration. Lecture Notes in Computational Science and Engineering, 2014, , 917-925.	0.3	3
28	Use of Direct Solvers in TFETI Massively Parallel Implementation. Lecture Notes in Computer Science, 2013, , 192-205.	1.3	13
29	A scalable FETIâ€“DP algorithm with non-penetration mortar conditions on contact interface. Journal of Computational and Applied Mathematics, 2009, 231, 577-591.	2.0	12
30	Scalable FETI Algorithms for Frictionless Contact Problems. Lecture Notes in Computational Science and Engineering, 2008, , 263-270.	0.3	8
31	Theoretically Supported Scalable FETI for Numerical Solution of Variational Inequalities. SIAM Journal on Numerical Analysis, 2007, 45, 500-513.	2.3	33
32	A scalable FETI-DP algorithm for a semi-coercive variational inequality. Computer Methods in Applied Mechanics and Engineering, 2007, 196, 1369-1379.	6.6	16
33	FETI-based algorithms for modelling of fibrous composite materials with debonding. Mathematics and Computers in Simulation, 2007, 76, 57-64.	4.4	2
34	An Overview of Scalable FETIâ€”DP Algorithms for Variational Inequalities. , 2007, , 223-230.		0
35	Total FETI-an easier implementable variant of the FETI method for numerical solution of elliptic PDE. Communications in Numerical Methods in Engineering, 2006, 22, 1155-1162.	1.3	123
36	DESCRIPTION OF SEISMIC EVENTS USING WAVELET TRANSFORM. International Journal of Wavelets, Multiresolution and Information Processing, 2006, 04, 405-414.	1.3	1

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37	Total FETIâ€"an easier implementable variant of the FETI method for numerical solution of elliptic PDE. , 2006, 22, 1155.		1
38	Quadratic Programming and Scalable Algorithms for Variational Inequalities. , 2006, , 62-78.		0
39	FETI based algorithms for contact problems: scalability, large displacements and 3D Coulomb friction. Computer Methods in Applied Mechanics and Engineering, 2005, 194, 395-409.	6.6	44
40	A scalable FETI-DP algorithm for a coercive variational inequality. Applied Numerical Mathematics, 2005, 54, 378-390.	2.1	21
41	On Scalable Algorithms for Numerical Solution of Variational Inequalities Based on FETI and Semi-monotonic Augmented Lagrangians. , 2005, , 487-494.		4
42	Scalable FETI with optimal dual penalty for a variational inequality. Numerical Linear Algebra With Applications, 2004, 11, 455-472.	1.6	35
43	Scalability and FETI based algorithm for large discretized variational inequalities. Mathematics and Computers in Simulation, 2003, 61, 347-357.	4.4	36
44	Highly scalable hybrid domain decomposition method for the solution of huge scalar variational inequalities. Numerical Algorithms, 0, , 1.	1.9	3