

Sergey Utyuzhnikov

List of Publications by Year in descending order

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86
papers

1,304
citations

361413

20
h-index

414414

32
g-index

87
all docs

87
docs citations

87
times ranked

679
citing authors

#	ARTICLE	IF	CITATIONS
1	Directed search domain: a method for even generation of the Pareto frontier in multiobjective optimization. <i>Engineering Optimization</i> , 2011, 43, 467-484.	2.6	104
2	Stabilization of a Hypersonic Boundary Layer Using a Wavy Surface. <i>AIAA Journal</i> , 2013, 51, 1203-1210.	2.6	82
3	Construction and comparison of parallel implicit kinetic solvers in three spatial dimensions. <i>Journal of Computational Physics</i> , 2014, 256, 17-33.	3.8	62
4	A method for generating a well-distributed Pareto set in nonlinear multiobjective optimization. <i>Journal of Computational and Applied Mathematics</i> , 2009, 223, 820-841.	2.0	59
5	Optimisation of multiple encapsulated electrode plasma actuator. <i>Aerospace Science and Technology</i> , 2013, 26, 120-127.	4.8	47
6	A Fuzzy Trade-Off Ranking Method for Multi-Criteria Decision-Making. <i>Axioms</i> , 2018, 7, 1.	1.9	43
7	Proper orthogonal decomposition and dynamic mode decomposition of jet in channel crossflow. <i>Nuclear Engineering and Design</i> , 2019, 344, 54-68.	1.7	41
8	Robin-type wall functions and their numerical implementation. <i>Applied Numerical Mathematics</i> , 2008, 58, 1521-1533.	2.1	40
9	Receptivity of a high-speed boundary layer to temperature spottiness. <i>Journal of Fluid Mechanics</i> , 2013, 722, 533-553.	3.4	38
10	Variational method for untangling and optimization of spatial meshes. <i>Journal of Computational and Applied Mathematics</i> , 2014, 269, 24-41.	2.0	34
11	Inverse source problem and active shielding for composite domains. <i>Applied Mathematics Letters</i> , 2007, 20, 511-515.	2.7	33
12	Control of robust design in multiobjective optimization under uncertainties. <i>Structural and Multidisciplinary Optimization</i> , 2012, 45, 247-256.	3.5	31
13	The method of boundary condition transfer in application to modeling near-wall turbulent flows. <i>Computers and Fluids</i> , 2006, 35, 1193-1204.	2.5	29
14	Experimental Validation of the Active Noise Control Methodology Based on Difference Potentials. <i>AIAA Journal</i> , 2009, 47, 874-884.	2.6	26
15	Analysis of gas-surface scattering models based on computational molecular dynamics. <i>Chemical Physics Letters</i> , 2012, 554, 225-230.	2.6	26
16	Some new approaches to building and implementation of wall-functions for modeling of near-wall turbulent flows. <i>Computers and Fluids</i> , 2005, 34, 771-784.	2.5	23
17	High-order accurate monotone compact running scheme for multidimensional hyperbolic equations. <i>Applied Numerical Mathematics</i> , 2015, 93, 150-163.	2.1	23
18	Rarefied gas flow through a diverging conical pipe into vacuum. <i>Vacuum</i> , 2014, 101, 10-17.	3.5	22

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19	Domain decomposition for near-wall turbulent flows. <i>Computers and Fluids</i> , 2009, 38, 1710-1717.	2.5	21
20	Interface boundary conditions in near-wall turbulence modeling. <i>Computers and Fluids</i> , 2012, 68, 186-191.	2.5	20
21	Experimental study of the laminar-turbulent transition on a blunt cone. <i>Journal of Applied Mechanics and Technical Physics</i> , 2014, 55, 375-385.	0.5	20
22	Effect of bulk viscosity in supersonic flow past spacecraft. <i>Applied Numerical Mathematics</i> , 2015, 93, 47-60.	2.1	20
23	A modified directed search domain algorithm for multiobjective engineering and design optimization. <i>Structural and Multidisciplinary Optimization</i> , 2013, 48, 1129-1141.	3.5	19
24	Active shielding model for hyperbolic equations. <i>IMA Journal of Applied Mathematics</i> , 2006, 71, 924-939.	1.6	18
25	Numerical Modeling of Combustion of Fuel-Droplet-Vapour Releases in the Atmosphere. <i>Flow, Turbulence and Combustion</i> , 2002, 68, 137-152.	2.6	17
26	Differential and finite-difference problems of active shielding. <i>Applied Numerical Mathematics</i> , 2007, 57, 374-382.	2.1	17
27	Active control of sound with variable degree of cancellation. <i>Applied Mathematics Letters</i> , 2009, 22, 1846-1851.	2.7	17
28	OpenMP + MPI parallel implementation of a numerical method for solving a kinetic equation. <i>Computational Mathematics and Mathematical Physics</i> , 2016, 56, 1919-1928.	0.8	17
29	FlowModellium Software Package for Calculating High-Speed Flows of Compressible Fluid. <i>Computational Mathematics and Mathematical Physics</i> , 2018, 58, 1865-1886.	0.8	16
30	Simulation of Subsonic and Supersonic Flows in Inductive Plasmatrons. <i>AIAA Journal</i> , 2004, 42, 1871-1877.	2.6	14
31	On the application of difference potential theory to active noise control. <i>Advances in Applied Mathematics</i> , 2008, 40, 194-211.	0.7	14
32	Multi-domain active sound control and noise shielding. <i>Journal of the Acoustical Society of America</i> , 2011, 129, 717-725.	1.1	14
33	Nonlinear problem of active sound control. <i>Journal of Computational and Applied Mathematics</i> , 2010, 234, 215-223.	2.0	13
34	Rarefied gas flow through a pipe of variable square cross section into vacuum. <i>Computational Mathematics and Mathematical Physics</i> , 2013, 53, 1221-1230.	0.8	13
35	Application of a near-wall domain decomposition method to turbulent flows with heat transfer. <i>Computers and Fluids</i> , 2015, 119, 87-100.	2.5	13
36	Active wave control and generalized surface potentials. <i>Advances in Applied Mathematics</i> , 2009, 43, 101-112.	0.7	12

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37	Non-stationary problem of active sound control in bounded domains. Journal of Computational and Applied Mathematics, 2010, 234, 1725-1731.	2.0	12
38	A near-wall domain decomposition approach in application to turbulent flow in a diffuser. Applied Mathematical Modelling, 2016, 40, 329-342.	4.2	12
39	Application of higher order dynamic mode decomposition to modal analysis and prediction of power systems with renewable sources of energy. International Journal of Electrical Power and Energy Systems, 2022, 138, 107925.	5.5	12
40	Efficient numerical method for simulation of supersonic viscous flow past a blunted body at a small angle of attack. Computers and Fluids, 1994, 23, 103-114.	2.5	11
41	Numerical investigation of thermal and chemical nonequilibrium flows past slender blunted cones. Journal of Thermophysics and Heat Transfer, 1996, 10, 137-147.	1.6	11
42	Potential-based methodology for active sound control in three dimensional settings. Journal of the Acoustical Society of America, 2014, 136, 1101-1111.	1.1	11
43	Implementation of near-wall boundary conditions for modeling boundary layers with free-stream turbulence. Applied Mathematical Modelling, 2014, 38, 3591-3606.	4.2	11
44	Towards development of unsteady near-wall interface boundary conditions for turbulence modeling. Computer Physics Communications, 2014, 185, 2879-2884.	7.5	11
45	Efficient computation of turbulent flow in ribbed passages using a non-overlapping near-wall domain decomposition method. Computer Physics Communications, 2017, 217, 1-10.	7.5	11
46	A multithreaded OpenMP implementation of the LU-SGS method using the multilevel decomposition of the unstructured computational mesh. Computational Mathematics and Mathematical Physics, 2017, 57, 1856-1865.	0.8	11
47	Parallel Versions of Implicit LU-SGS Method. Lobachevskii Journal of Mathematics, 2018, 39, 503-512.	0.9	11
48	Trade-off ranking method for multi-criteria decision analysis. Journal of Multi-Criteria Decision Analysis, 2017, 24, e1600.	1.9	10
49	Local Pareto approximation for multi-objective optimization. Engineering Optimization, 2008, 40, 821-847.	2.6	8
50	Active sound control in 3D bounded regions. Wave Motion, 2014, 51, 284-295.	2.0	8
51	A numerical method for solving the equations of a viscous shock layer. USSR Computational Mathematics and Mathematical Physics, 1987, 27, 64-71.	0.0	6
52	The problem of active noise shielding in composite domains. Doklady Mathematics, 2006, 74, 812-814.	0.6	5
53	Real-time active wave control with preservation of wanted field. IMA Journal of Applied Mathematics, 2014, 79, 1126-1138.	1.6	5
54	Active sound control in composite regions. Applied Numerical Mathematics, 2015, 93, 242-253.	2.1	5

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55	A practical algorithm for real-time active sound control with preservation of interior sound. Computers and Fluids, 2017, 157, 175-181.	2.5	5
56	On extension of near-wall domain decomposition to turbulent compressible flows. Computers and Fluids, 2020, 210, 104629.	2.5	5
57	Numerical simulation of the flow over a body flying through a thermal in a stratified atmosphere. Computers and Fluids, 1994, 23, 295-304.	2.5	4
58	On the application of the method of difference potentials to linear elastic fracture mechanics. International Journal for Numerical Methods in Engineering, 2015, 103, 703-736.	2.8	4
59	An algorithm of the method of difference potentials for domains with cuts. Applied Numerical Mathematics, 2015, 93, 254-261.	2.1	4
60	Unsteady interface boundary conditions for near-wall turbulence modeling. Computers and Mathematics With Applications, 2020, 79, 1483-1502.	2.7	4
61	Non-overlapping domain decomposition for modeling essentially unsteady near-wall turbulent flows. Computers and Fluids, 2020, 202, 104506.	2.5	4
62	Difference problem of noise suppression and other problems of active control of single-frequency sound on a composite domain. Doklady Mathematics, 2009, 79, 240-242.	0.6	3
63	Implicit multiblock method for solving a kinetic equation on unstructured meshes. Computational Mathematics and Mathematical Physics, 2013, 53, 601-615.	0.8	3
64	A comparative analysis of approaches for investigating hypersonic flow over blunt bodies in a transitional regime. Prikladnaya Matematika I Mekhanika, 2013, 77, 9-16.	0.4	3
65	Modeling the influence of the Chelyabinsk meteorite's bow shock wave on the Earth's surface. Mathematical Models and Computer Simulations, 2017, 9, 133-141.	0.5	3
66	On Extension of Near-Wall Non-overlapping Domain Decomposition to Essentially Unsteady Turbulent Flows. Smart Innovation, Systems and Technologies, 2019, , 199-209.	0.6	3
67	Exact non-overlapping domain decomposition for near-wall turbulence modeling. Computers and Fluids, 2019, 181, 283-291.	2.5	3
68	Numerical simulation of the effect of local volume energy supply on high-speed boundary layer stability. Computers and Fluids, 2014, 100, 130-137.	2.5	2
69	Real-time active noise control with preservation of desired sound. Applied Acoustics, 2020, 157, 106971.	3.3	2
70	Comparison of gas-dynamic models for hypersonic flow past bodies. Prikladnaya Matematika I Mekhanika, 1992, 56, 939-944.	0.4	1
71	A thermally non-equilibrium viscous shock layer past slender blunted cones. Prikladnaya Matematika I Mekhanika, 1994, 58, 493-505.	0.4	1
72	The motion of a body through a large-scale inhomogeneity in a stratified atmosphere. Prikladnaya Matematika I Mekhanika, 1995, 59, 409-414.	0.4	1

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73	Numerical and laboratory prediction of smoke lofting in the atmosphere over large area fires. Applied Mathematical Modelling, 2013, 37, 876-887.	4.2	1
74	An extension of the directed search domain algorithm to bilevel optimization. Engineering Optimization, 2017, 49, 1420-1440.	2.6	1
75	Developments of the method of difference potentials for linear elastic fracture mechanics problems. International Journal for Numerical Methods in Engineering, 2018, 115, 75-98.	2.8	1
76	A modified rotation strategy for directed search domain algorithm in multiobjective engineering optimization. Structural and Multidisciplinary Optimization, 2018, 57, 877-890.	3.5	1
77	Study of the nonlocal active sound control with preservation of desired field in time domain. Journal of the Acoustical Society of America, 2020, 148, 3886-3899.	1.1	1
78	Spatial supersonic motion of a body through a large-scale inhomogeneity in a stratified atmosphere. Prikladnaya Matematika I Mekhanika, 1996, 60, 607-613.	0.4	0
79	Motion of a Body Through Large-Scale Inhomogeneity in the Stratified Atmosphere. AIAA Journal, 1997, 35, 1224-1226.	2.6	0
80	The differential problem of active noise shielding. Doklady Mathematics, 2006, 73, 357-359.	0.6	0
81	Non-overlapping domain decomposition for near-wall turbulence modeling. AIP Conference Proceedings, 2016, , .	0.4	0
82	Towards the development of analytical tornado-like models. AIP Advances, 2018, 8, 125106.	1.3	0
83	Reprint of: A practical algorithm for real-time active sound control with preservation of interior sound. Computers and Fluids, 2018, 169, 373-379.	2.5	0
84	Numerical Algorithms on Moving Adaptive Grids for Modelling of Penetration in to the Atmosphere of a Planet. , 1995, , 1810-1815.		0
85	Near-Wall Domain Decomposition for Modelling Turbulent Flows: Opportunities and Challenges. , 2020, , 367-373.		0
86	Optimized nonlocal active sound control in frequency domain. Applied Acoustics, 2022, 187, 108506.	3.3	0