

# Vassili V Toropov

## List of Publications by Year in descending order

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Version: 2024-02-01

81  
papers

2,269  
citations

236612

25  
h-index

243296

44  
g-index

81  
all docs

81  
docs citations

81  
times ranked

1583  
citing authors

#	ARTICLE	IF	CITATIONS
1	Special Section on Multidisciplinary Design Optimization: Metamodeling in Multidisciplinary Design Optimization: How Far Have We Really Come?. AIAA Journal, 2014, 52, 670-690.	1.5	314
2	Multiparameter structural optimization using FEM and multipoint explicit approximations. Structural Optimization, 1993, 6, 7-14.	0.7	185
3	Identification of material parameters in constitutive model for sheet metals from cyclic bending tests. International Journal of Mechanical Sciences, 1998, 40, 237-249.	3.6	112
4	Cost optimisation of reinforced concrete flat slab buildings. Engineering Structures, 2005, 27, 313-322.	2.6	108
5	Simulation approach to structural optimization. Structural Optimization, 1989, 1, 37-46.	0.7	105
6	Empirical modelling of shear strength of RC deep beams by genetic programming. Computers and Structures, 2003, 81, 331-338.	2.4	90
7	Computational fluid dynamic analysis and design optimization of jet pumps. Computers and Fluids, 2011, 46, 212-217.	1.3	76
8	Formulation of the Optimal Latin Hypercube Design of Experiments Using a Permutation Genetic Algorithm. , 2004, . .		75
9	Metamodel-based collaborative optimization framework. Structural and Multidisciplinary Optimization, 2009, 38, 103-115.	1.7	74
10	Bilevel Optimization of Blended Composite Wing Panels. Journal of Aircraft, 2011, 48, 107-118.	1.7	69
11	Application of structural topology optimisation to perforated steel beams. Computers and Structures, 2015, 158, 108-123.	2.4	63
12	Inverse approach to identification of material parameters of cyclic elasto-plasticity for component layers of a bimetallic sheet. International Journal of Plasticity, 2003, 19, 2149-2170.	4.1	56
13	Computational fluid dynamics (CFD) investigation of air flow and temperature distribution in a small scale bread-baking oven. Applied Energy, 2012, 89, 89-96.	5.1	55
14	Identification of parameters for air permeability of shotcrete tunnel lining using a genetic algorithm. Computers and Geotechnics, 1999, 25, 1-24.	2.3	44
15	A hybrid genetic algorithm for reinforced concrete flat slab buildings. Computers and Structures, 2005, 83, 551-559.	2.4	43
16	Optimum blank design for sheet metal forming based on the interaction of high- and low-fidelity FE models. Archive of Applied Mechanics, 2006, 75, 679-691.	1.2	37
17	Thermal energy management in the bread baking industry using a system modelling approach. Applied Thermal Engineering, 2013, 53, 340-347.	3.0	37
18	A lamination parameter-based strategy for solving an integer-continuous problem arising in composite optimization. Computers and Structures, 2013, 128, 170-174.	2.4	35

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19	Weight and mechanical performance optimization of blended composite wing panels using lamination parameters. <i>Structural and Multidisciplinary Optimization</i> , 2015, 52, 549-562.	1.7	35
20	Optimisation of the energy efficiency of bread-baking ovens using a combined experimental and computational approach. <i>Applied Energy</i> , 2013, 112, 918-927.	5.1	33
21	Dealing with numerical noise in CFD-based design optimization. <i>Computers and Fluids</i> , 2014, 94, 84-97.	1.3	33
22	Simultaneous model building and validation with uniform designs of experiments. <i>Engineering Optimization</i> , 2007, 39, 497-512.	1.5	32
23	Multi-objective Computational Fluid Dynamics (CFD) design optimisation in commercial bread-baking. <i>Applied Thermal Engineering</i> , 2013, 60, 480-486.	3.0	29
24	A semi-analytical model for the combined aeroelastic behaviour and gust response of a flexible aerofoil. <i>Journal of Fluids and Structures</i> , 2013, 38, 3-21.	1.5	29
25	The use of simplified numerical models as mid-range approximations. , 1996, , .		28
26	Multidisciplinary multifidelity optimisation of a flexible wing aerofoil with reference to a small UAV. <i>Structural and Multidisciplinary Optimization</i> , 2014, 50, 683-699.	1.7	28
27	NEW DEVELOPMENTS IN STRUCTURAL OPTIMIZATION USING ADAPTIVE MESH REFINEMENT AND MULTIPOINT APPROXIMATIONS. <i>Engineering Optimization</i> , 1997, 29, 217-234.	1.5	26
28	A new algorithm for reduction of number of press-forming stages in forging processes using numerical optimization and FE simulation. <i>International Journal of Mechanical Sciences</i> , 2008, 50, 974-983.	3.6	26
29	Gradient based hyper-parameter optimisation for well conditioned kriging metamodels. <i>Structural and Multidisciplinary Optimization</i> , 2017, 55, 2029-2044.	1.7	26
30	Mid-range metamodel assembly building based on linear regression for large scale optimization problems. <i>Structural and Multidisciplinary Optimization</i> , 2012, 45, 515-527.	1.7	25
31	Design optimization of structural steelwork using a genetic algorithm, FEM and a system of design rules. <i>Engineering Computations</i> , 2001, 18, 437-460.	0.7	24
32	Energy thermal management in commercial bread-baking using a multi-objective optimisation framework. <i>Applied Thermal Engineering</i> , 2015, 80, 141-149.	3.0	22
33	Multifidelity metamodel building as a route to aeroelastic optimization of flexible wings. <i>Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science</i> , 2011, 225, 2115-2137.	1.1	20
34	Two-scale EHL: Three-dimensional topography in tilted-pad bearings. <i>Tribology International</i> , 2014, 79, 111-125.	3.0	19
35	Large Scale Optimization of Transonic Axial Compressor Rotor Blades. , 2008, , .		17
36	Optimization of geometrically nonlinear thin-walled structures using the multipoint approximation method. <i>Structural Optimization</i> , 1995, 9, 105-116.	0.7	15

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37	Multi-Fidelity Multidisciplinary Design Optimization Based on Collaborative Optimization Framework. , 2002, , .		15
38	Optimization of Blended Composite Wing Panels Using Smeared Stiffness Technique and Lamination Parameters. , 2010, , .		15
39	Parameter Identification for Nonlinear Constitutive Models: Finite Element Simulation " Optimization " Nontrivial Experiments. , 1993, , 113-130.		13
40	A multiscale method for optimising surface topography in elasto-hydrodynamic lubrication (EHL) using metamodels. Structural and Multidisciplinary Optimization, 2016, 54, 483-497.	1.7	12
41	Detailed design of a lattice composite fuselage structure by a mixed optimization method. Engineering Optimization, 2016, 48, 1707-1720.	1.5	12
42	Design optimization of supersonic jet pumps using high fidelity flow analysis. Structural and Multidisciplinary Optimization, 2012, 45, 739-745.	1.7	11
43	Optimization of geometrically non-linear structures based on a multi-point approximation method and adaptivity. Engineering Computations, 1996, 13, 76-97.	0.7	9
44	Dynamic Response of Typical Section Using Variable-Fidelity Fluid Dynamics and Gust-Modeling Approaches " With Correction Methods. Journal of Aerospace Engineering, 2014, 27, 04014026.	0.8	9
45	Adaptive and Parallel Capabilities in the Multipoint Approximation Method. , 2008, , .		8
46	Implementation of Discrete Capability into the Enhanced Multipoint Approximation Method for Solving Mixed Integer-Continuous Optimization Problems. International Journal for Computational Methods in Engineering Science and Mechanics, 2016, 17, 22-35.	1.4	8
47	Development of a numerical optimization approach to ventilation system design to control airborne contaminant dispersion and occupant comfort. Building Simulation, 2012, 5, 39-50.	3.0	7
48	Multi-objective aerodynamic shape optimization of small livestock trailers. Engineering Optimization, 2013, 45, 1309-1330.	1.5	7
49	Mid-Range Approximations in Sub-Spaces for MDO Problems with Disparate Discipline Attributes. , 2014, , .		7
50	Sub-space approximations for MDO problems with disparate disciplinary variable dependence. Structural and Multidisciplinary Optimization, 2017, 55, 279-288.	1.7	7
51	Application of genetic programming and response surface methodology to optimization and inverse problems. , 1998, , 551-560.		7
52	Approximation model building for design optimization using genetic programming methodology. , 1998, , .		6
53	The Multi-Point Approximation Method in a Parallel Computing Environment. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 1999, 79, 67-70.	0.9	6
54	Large-scale CFD Optimization based on the FFD Parametrization using the Multipoint Approximation Method in an HPC Environment. , 2015, , .		6

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55	The use of glycerol and cooking oil in masonry unit production. Proceedings of Institution of Civil Engineers: Construction Materials, 2017, 170, 77-90.	0.7	6
56	Multi-Disciplinary Design Optimisation of the Cooled Squealer Tip for High Pressure Turbines. Aerospace, 2018, 5, 116.	1.1	6
57	Multipoint Approximation Method for Structural Optimization Problems with Noisy Function Values. Lecture Notes in Economics and Mathematical Systems, 1995, , 109-122.	0.3	6
58	MULTILEVEL OPTIMIZATION OF THE DYNAMIC BEHAVIOUR OF A LINEAR MECHANICAL SYSTEM WITH MULTIPOINT APPROXIMATION. Engineering Optimization, 1996, 25, 295-307.	1.5	4
59	Stiffness Improvement of Stamping Die by Means of Topology Optimization. Advanced Materials Research, 0, 939, 266-273.	0.3	4
60	The use of optimisation for enhancing the development of a novel sustainable masonry unit. Applied Mathematical Modelling, 2014, 38, 853-863.	2.2	4
61	Aerodynamic CFD Based Optimization of Police Car Using Bezier Curves. SAE International Journal of Materials and Manufacturing, 0, 10, 85-93.	0.3	4
62	Application of Advanced Optimization Techniques to Parameter and Damage Identification Problems. , 2005, , 177-263.		4
63	Use of Global Approximations in the Collaborative Optimization Framework. , 2004, , .		3
64	Aircraft Wing Optimization based on Computationally Efficient Gradient-Enhanced Ordinary Kriging Metamodel Building. , 2016, , .		3
65	SHAPE OPTIMIZATION WITH ADAPTIVE MESH REFINEMENT: TARGET ERROR SELECTION STRATEGIES. Engineering Optimization, 1997, 28, 95-125.	1.5	2
66	Multiple Mid-Range and Global Metamodel Building Based on Linear Regression. , 2009, , .		2
67	Reliable Tension Leveling Process Design Using Stochastic Optimization. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2009, 95, 740-746.	0.1	2
68	Application of a genetic algorithm and derivative-based techniques to identification of damage in steel structures. , 1998, , 571-580.		2
69	OPTIMIZATION OF MECHANISMS USING DIRECT DIFFERENTIATION AND A MULTIPOINT APPROXIMATION METHOD. Engineering Optimization, 1998, 31, 141-160.	1.5	1
70	Multipoint Approximation Method for Design Optimization with Discrete Variables. , 2012, , .		1
71	Automatic Optimizer vs Human Optimizer for Low-Order Jet Noise Modelling. , 2015, , .		1
72	Adaptive Sub-Space Approximations in Trust-Regions for Large Scale MDO problems. , 2015, , .		1

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73	Parallel Multipoint Approximation Method for Large-Scale Optimization Problems. Communications in Computer and Information Science, 2018, , 174-185.	0.4	1
74	Multidisciplinary Optimisation of an Automotive Body-in-White Structure Using Crushable Frame Springs and Sub Space Metamodels in Trust-Regions. , 2018, , 1572-1584.		1
75	HPC Implementation of the Multipoint Approximation Method for Large Scale Design Optimization Problems Under Uncertainty. , 2019, , 296-306.		1
76	Reduction of Stages in Multi-Stage Metal Forming Process Based on Numerical Optimization in Conjunction with FE Simulation. Key Engineering Materials, 2007, 340-341, 767-772.	0.4	0
77	A neuro-fuzzy approach to the weight estimation of aircraft structural components. Aeronautical Journal, 2011, 115, 739-748.	1.1	0
78	Sub-space Metamodel-based Multidisciplinary Optimization of an Aircraft Wing subjected to Bird Strike. , 2017, , .		0
79	NUMERICAL OPTIMIZATION OF SHEET METAL FORMING PROCESS USING NEW FRACTURE CRITERION. , 2009, , .		0
80	Metamodel-based Design Optimization and Its Industrial Application. Journal of the Japan Society for Technology of Plasticity, 2012, 53, 312-316.	0.0	0
81	Identification of mechanical properties of component layers in a bimetallic sheet by mixed experimental-numerical approach. , 1998, , 243-252.		0