

Xiaoping Qian

List of Publications by Year in descending order

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Version: 2024-02-01

102
papers

2,274
citations

218592

26
h-index

223716

46
g-index

105
all docs

105
docs citations

105
times ranked

1459
citing authors

#	ARTICLE	IF	CITATIONS
1	Density gradient-based adaptive refinement of analysis mesh for efficient multiresolution topology optimization. <i>International Journal for Numerical Methods in Engineering</i> , 2022, 123, 465-504.	1.5	2
2	Topology optimization of thermophotonic problem for daytime passive radiative cooling. <i>International Journal of Heat and Mass Transfer</i> , 2022, 183, 122097.	2.5	4
3	On-the-fly dual reduction for time-dependent topology optimization. <i>Journal of Computational Physics</i> , 2022, 452, 110917.	1.9	2
4	Statistical shape modelling to analyse the talus in paediatric clubfoot. <i>Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine</i> , 2021, 235, 849-860.	1.0	5
5	Simultaneous topology and machine orientation optimization for multiaxis machining. <i>International Journal for Numerical Methods in Engineering</i> , 2021, 122, 7504-7535.	1.5	6
6	Parameter-free Shape Optimization of Heat Sinks. , 2020, , .		0
7	Fracture resistance design through biomimicry and topology optimization. <i>Extreme Mechanics Letters</i> , 2020, 40, 100890.	2.0	28
8	Simultaneous optimization of build orientation and topology for additive manufacturing. <i>Additive Manufacturing</i> , 2020, 34, 101246.	1.7	34
9	3D topology optimization of heat sinks for liquid cooling. <i>Applied Thermal Engineering</i> , 2020, 178, 115540.	3.0	46
10	A second-order measure of boundary oscillations for overhang control in topology optimization. <i>Journal of Computational Physics</i> , 2020, 410, 109365.	1.9	16
11	A density gradient approach to topology optimization under design-dependent boundary loading. <i>Journal of Computational Physics</i> , 2020, 411, 109398.	1.9	14
12	Controlling the minimal feature sizes in adjoint optimization of nanophotonic devices using b-spline surfaces. <i>Optics Express</i> , 2020, 28, 7060.	1.7	22
13	Triangulation-based isogeometric analysis of the Cahn-Hilliard phase-field model. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2019, 357, 112569.	3.4	6
14	Large Scale 3D Topology Optimization of Conjugate Heat Transfer. , 2019, , .		8
15	Contributions to additive manufacturing. <i>IJSE Transactions</i> , 2019, 51, 107-108.	1.6	0
16	Kirchhoff's Love shell formulation based on triangular isogeometric analysis. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2019, 347, 853-873.	3.4	33
17	Boundary Slope Control in Topology Optimization for Additive Manufacturing: For Self-Support and Surface Roughness. <i>Journal of Manufacturing Science and Engineering, Transactions of the ASME</i> , 2019, 141, .	1.3	22
18	Heaviside projection-based aggregation in stress-constrained topology optimization. <i>International Journal for Numerical Methods in Engineering</i> , 2018, 115, 849-871.	1.5	37

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19	Topology optimization of self-supporting support structures for additive manufacturing. Additive Manufacturing, 2018, 21, 666-682.	1.7	69
20	Isogeometric shape optimization on triangulations. Computer Methods in Applied Mechanics and Engineering, 2018, 331, 585-622.	3.4	38
21	Generating high-quality high-order parameterization for isogeometric analysis on triangulations. Computer Methods in Applied Mechanics and Engineering, 2018, 338, 1-26.	3.4	13
22	Triangulation Based Isogeometric Analysis of the Cahn-Hilliard Phase-Field Model. , 2018, , .		0
23	A New Plate Formulation Based on Triangular Isogeometric Analysis. , 2018, , .		1
24	A Density Gradient Approach to Topology Optimization Under Design-Dependent Boundary Loading. , 2018, , .		1
25	Boundary Slope Control in Topology Optimization for Additive Manufacturing. , 2018, , .		1
26	Total variance based feature point selection and applications. CAD Computer Aided Design, 2018, 101, 37-56.	1.4	2
27	Statistical Shape Modelling to Analyse the Talus in Paediatric Clubfoot. Lecture Notes in Bioengineering, 2018, , 235-243.	0.3	3
28	Gaussian Process Model for Touch Probing. , 2018, , .		0
29	A Taylor Expansion Approach for Computing Structural Performance Variation From Population-Based Shape Data. Journal of Mechanical Design, Transactions of the ASME, 2017, 139, .	1.7	1
30	Undercut and overhang angle control in topology optimization: A density gradient based integral approach. International Journal for Numerical Methods in Engineering, 2017, 111, 247-272.	1.5	181
31	Isogeometric analysis with BÄ©zier tetrahedra. Computer Methods in Applied Mechanics and Engineering, 2017, 316, 782-816.	3.4	45
32	Undercut and overhang angle control in topology optimization: A density gradient based integral approach. , 2017, 111, 247.		1
33	Isogeometric Shape Optimization on Triangulations. , 2016, , .		0
34	A Taylor Expansion Approach for Computing Structural Performance Variation Over a Shape Population. , 2016, , .		0
35	Topology optimization of a coupled thermal-fluid system under a tangential thermal gradient constraint. Structural and Multidisciplinary Optimization, 2016, 54, 531-551.	1.7	34
36	A statistical atlas based approach to automated subject-specific FE modeling. CAD Computer Aided Design, 2016, 70, 67-77.	1.4	3

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37	Efficient Filtering in Topology Optimization via B-Splines ¹ . Journal of Mechanical Design, Transactions of the ASME, 2015, 137, .	1.7	12
38	B-Spline Based Robust Topology Optimization. , 2015, , .		2
39	Covariance matrix of a shape population: A tale on spline setting. Computers and Graphics, 2015, 47, 89-104.	1.4	0
40	Direct diffeomorphic reparameterization for correspondence optimization in statistical shape modeling. CAD Computer Aided Design, 2015, 64, 33-54.	1.4	5
41	Continuity and convergence in rational triangular B-spline based isogeometric analysis. Computer Methods in Applied Mechanics and Engineering, 2015, 297, 292-324.	3.4	35
42	Optimal shape for optical absorption in organic thin film solar cells. Structural and Multidisciplinary Optimization, 2014, 50, 437-451.	1.7	2
43	Isogeometric analysis on triangulations. CAD Computer Aided Design, 2014, 46, 45-57.	1.4	71
44	An optimization approach for constructing trivariate -spline solids. CAD Computer Aided Design, 2014, 46, 179-191.	1.4	69
45	Efficient Filtering in Topology Optimization via B-Splines. , 2014, , .		0
46	Topology optimization in B-spline space. Computer Methods in Applied Mechanics and Engineering, 2013, 265, 15-35.	3.4	157
47	Topological design of electromechanical actuators with robustness toward over- and under-etching. Computer Methods in Applied Mechanics and Engineering, 2013, 253, 237-251.	3.4	76
48	Controlled Manipulation of Flexible Carbon Nanotubes through Shape-Dependent Pushing by Atomic Force Microscopy. Langmuir, 2013, 29, 11793-11801.	1.6	6
49	Direct Geometry Processing for Telefabrication. Journal of Computing and Information Science in Engineering, 2013, 13, .	1.7	25
50	Integrating Computer-Aided Design and Nano-Indentation for Complex Lithograph. Journal of Micro and Nano-Manufacturing, 2013, 1, .	0.8	1
51	Efficient Construction of Statistical Shape Models for Patient-Specific Modeling. , 2013, , .		0
52	Integrating CAD and Nano-Indentation for Complex Lithography. , 2012, , .		0
53	Direct Numerical Control (NC) Path Generation: From Discrete Points to Continuous Spline Paths. Journal of Computing and Information Science in Engineering, 2012, 12, .	1.7	5
54	Recent Progress in Modeling, Simulation, and Optimization of Polymer Solar Cells. IEEE Journal of Photovoltaics, 2012, 2, 320-340.	1.5	60

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55	Efficient AFM-Based Nanoparticle Manipulation Via Sequential Parallel Pushing. IEEE Nanotechnology Magazine, 2012, 11, 666-675.	1.1	16
56	Direct Geometry Processing for Tele-Fabrication. , 2012, , .		3
57	Analysis of Affinity Maps of Membrane Proteins on Individual Human Embryonic Stem Cells. Langmuir, 2011, 27, 8294-8301.	1.6	7
58	Topologically Enhanced Slicing of MLS Surfaces. Journal of Computing and Information Science in Engineering, 2011, 11, .	1.7	6
59	Direct NC Path Generation: From Discrete Points to Continuous Spline Paths. , 2011, , .		3
60	Isogeometric analysis and shape optimization via boundary integral. CAD Computer Aided Design, 2011, 43, 1427-1437.	1.4	131
61	Direct slicing of cloud data with guaranteed topology for rapid prototyping. International Journal of Advanced Manufacturing Technology, 2011, 53, 255-265.	1.5	31
62	Computing point-set surfaces with controlled spatial variation of residuals. CAD Computer Aided Design, 2011, 43, 957-970.	1.4	3
63	Isogeometric shape optimization of photonic crystals via Coons patches. Computer Methods in Applied Mechanics and Engineering, 2011, 200, 2237-2255.	3.4	64
64	Tip Based Nano Manipulation Through Successive Directional Push. , 2010, , .		1
65	Full analytical sensitivities in NURBS based isogeometric shape optimization. Computer Methods in Applied Mechanics and Engineering, 2010, 199, 2059-2071.	3.4	220
66	Topologically Enhanced Slicing of MLS Surfaces. , 2010, , .		1
67	Tip Based Nanomanipulation Through Successive Directional Push. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2010, 132, .	1.3	10
68	Spatially Resolved Quantification of E-Cadherin on Target hES Cells. Journal of Physical Chemistry B, 2010, 114, 2894-2900.	1.2	21
69	Scanning in atomic force microscopy. , 2009, , .		0
70	Adaptive NC Path Generation From Massive Point Data With Bounded Error. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2009, 131, .	1.3	24
71	Mathematical Morphology in Multi-Dexel Representation. , 2009, , .		1
72	NURBS based molecular force calculation. , 2009, , .		0

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73	A general, accurate procedure for calculating molecular interaction force. Journal of Colloid and Interface Science, 2009, 337, 594-605.	5.0	16
74	Multi-sensor calibration through iterative registration and fusion. CAD Computer Aided Design, 2009, 41, 240-255.	1.4	22
75	Direct boolean intersection between acquired and designed geometry. CAD Computer Aided Design, 2009, 41, 81-94.	1.4	14
76	Direct Digital Design and Manufacturing from Massive Point-Cloud Data. Computer-Aided Design and Applications, 2009, 6, 685-699.	0.4	6
77	Blind estimation of general tip shape in AFM imaging. Ultramicroscopy, 2008, 109, 44-53.	0.8	47
78	Adaptive Slicing of Moving Least Squares Surfaces: Toward Direct Manufacturing of Point Set Surfaces. Journal of Computing and Information Science in Engineering, 2008, 8, .	1.7	42
79	Integrated Design and Analysis for Heterogeneous Objects. AIP Conference Proceedings, 2008, , .	0.3	0
80	An Efficient Sensing Localization Algorithm for Free-Form Surface Digitization. Journal of Computing and Information Science in Engineering, 2008, 8, .	1.7	9
81	Adaptive NC Path Generation From Massive Point Data With Bounded Error. , 2008, , .		0
82	A Dynamic Sensing-and-Modeling Approach to Three-Dimensional Point- and Area-Sensor Integration. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2007, 129, 623-635.	1.3	22
83	Blind Estimation of General Tip Shape in Atomic Force Microscopy. , 2007, , 809.		1
84	Image simulation and surface reconstruction of undercut features in atomic force microscopy. , 2007, , .		11
85	An Efficient Sensing Localization Algorithm for Free-Form Surface Digitization. , 2007, , .		0
86	Adaptive Slicing of Moving Least Squares Surfaces: Toward Direct Manufacturing of Point Set Surfaces. , 2007, , .		3
87	General three-dimensional image simulation and surface reconstruction in scanning probe microscopy using a dixel representation. Ultramicroscopy, 2007, 108, 29-42.	0.8	26
88	A B-spline-based approach to heterogeneous objects design and analysis. CAD Computer Aided Design, 2007, 39, 95-111.	1.4	44
89	Dynamic -spline surface reconstruction: Closing the sensing-and-modeling loop in 3D digitization. CAD Computer Aided Design, 2007, 39, 987-1002.	1.4	19
90	A Stochastic Approach to Surface Reconstruction. , 2006, , 343.		2

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91	A Dynamic Sensing-and-Modeling Approach to 3D Point- and Area-Sensor Integration. , 2006, , .		0
92	Admissible transformation volume for part dimensional quality gauging. CAD Computer Aided Design, 2005, 37, 1335-1352.	1.4	2
93	Feature-based design for heterogeneous objects. CAD Computer Aided Design, 2004, 36, 1263-1278.	1.4	51
94	Three-dimensional dynamic range reduction techniques. , 2004, 5265, 110.		3
95	Heterogeneous object modeling through direct face neighborhood alteration. Computers and Graphics, 2003, 27, 943-961.	1.4	15
96	Design of heterogeneous turbine blade. CAD Computer Aided Design, 2003, 35, 319-329.	1.4	61
97	Computational approach for optimal sensor setup. Optical Engineering, 2003, 42, 1238.	0.5	17
98	Physics-Based Modeling for Heterogeneous Objects. Journal of Mechanical Design, Transactions of the ASME, 2003, 125, 416-427.	1.7	43
99	Partitioning Positional and Normal Space for Fast Occlusion Detection. , 2003, , .		2
100	Feature Based Fabrication in Layered Manufacturing. Journal of Mechanical Design, Transactions of the ASME, 2001, 123, 337-345.	1.7	23
101	A Generic Methodology for Chamber Flame Geometry Modeling. , 2000, , .		2
102	Feature-Based Slicing for Layered Manufacturing. , 1999, , .		2