

# Wing Kam Liu

## List of Publications by Year in descending order

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173  
papers

13,339  
citations

23500

58  
h-index

22764

112  
g-index

181  
all docs

181  
docs citations

181  
times ranked

7111  
citing authors

#	ARTICLE	IF	CITATIONS
1	Reproducing kernel particle methods. <i>International Journal for Numerical Methods in Fluids</i> , 1995, 20, 1081-1106.	0.9	2,374
2	Reproducing kernel particle methods for structural dynamics. <i>International Journal for Numerical Methods in Engineering</i> , 1995, 38, 1655-1679.	1.5	701
3	Coupling of atomistic and continuum simulations using a bridging scale decomposition. <i>Journal of Computational Physics</i> , 2003, 190, 249-274.	1.9	589
4	Immersed finite element method. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2004, 193, 2051-2067.	3.4	416
5	A unified stability analysis of meshless particle methods. <i>International Journal for Numerical Methods in Engineering</i> , 2000, 48, 1359-1400.	1.5	377
6	Self-consistent clustering analysis: An efficient multi-scale scheme for inelastic heterogeneous materials. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2016, 306, 319-341.	3.4	298
7	Shape effect in cellular uptake of PEGylated nanoparticles: comparison between sphere, rod, cube and disk. <i>Nanoscale</i> , 2015, 7, 16631-16646.	2.8	268
8	Rheology of red blood cell aggregation by computer simulation. <i>Journal of Computational Physics</i> , 2006, 220, 139-154.	1.9	248
9	Immersed finite element method and its applications to biological systems. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2006, 195, 1722-1749.	3.4	240
10	Wavelet and multiple scale reproducing kernel methods. <i>International Journal for Numerical Methods in Fluids</i> , 1995, 21, 901-931.	0.9	220
11	Linking process, structure, property, and performance for metal-based additive manufacturing: computational approaches with experimental support. <i>Computational Mechanics</i> , 2016, 57, 583-610.	2.2	190
12	Endocytosis of PEGylated nanoparticles accompanied by structural and free energy changes of the grafted polyethylene glycol. <i>Biomaterials</i> , 2014, 35, 8467-8478.	5.7	176
13	Extended immersed boundary method using FEM and RKPM. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2004, 193, 1305-1321.	3.4	175
14	Challenges in Multiscale Modeling of Polymer Dynamics. <i>Polymers</i> , 2013, 5, 751-832.	2.0	173
15	Reproducing kernel hierarchical partition of unity, Part I: formulation and theory. <i>International Journal for Numerical Methods in Engineering</i> , 1999, 45, 251-288.	1.5	162
16	Data-driven multi-scale multi-physics models to derive process-structure-property relationships for additive manufacturing. <i>Computational Mechanics</i> , 2018, 61, 521-541.	2.2	162
17	Mechanics of C60 in Nanotubes. <i>Journal of Physical Chemistry B</i> , 2001, 105, 10753-10758.	1.2	161
18	Nanoparticle Effect on the Dynamics of Polymer Chains and Their Entanglement Network. <i>Physical Review Letters</i> , 2012, 109, 118001.	2.9	160

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19	Mesh-free Galerkin simulations of dynamic shear band propagation and failure mode transition. <i>International Journal of Solids and Structures</i> , 2002, 39, 1213-1240.	1.3	149
20	A multiscale projection method for the analysis of carbon nanotubes. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2004, 193, 1603-1632.	3.4	149
21	A meshfree unification: reproducing kernel peridynamics. <i>Computational Mechanics</i> , 2014, 53, 1251-1264.	2.2	144
22	Reproducing kernel element method. Part I: Theoretical formulation. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2004, 193, 933-951.	3.4	140
23	Bridging scale methods for nanomechanics and materials. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2006, 195, 1407-1421.	3.4	135
24	Coupling of Navier-Stokes equations with protein molecular dynamics and its application to hemodynamics. <i>International Journal for Numerical Methods in Fluids</i> , 2004, 46, 1237-1252.	0.9	128
25	A cellular automaton finite volume method for microstructure evolution during additive manufacturing. <i>Materials and Design</i> , 2019, 169, 107672.	3.3	117
26	Application of essential boundary conditions in mesh-free methods: a corrected collocation method. <i>International Journal for Numerical Methods in Engineering</i> , 2000, 47, 1367-1379.	1.5	112
27	Multi-scale constitutive model and computational framework for the design of ultra-high strength, high toughness steels. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2004, 193, 1865-1908.	3.4	112
28	Enrichment of the Finite Element Method With the Reproducing Kernel Particle Method. <i>Journal of Applied Mechanics, Transactions ASME</i> , 1997, 64, 861-870.	1.1	109
29	Multiresolution reproducing kernel particle method for computational fluid dynamics. <i>International Journal for Numerical Methods in Fluids</i> , 1997, 24, 1391-1415.	0.9	109
30	On criteria for dynamic adiabatic shear band propagation. <i>Journal of the Mechanics and Physics of Solids</i> , 2007, 55, 1439-1461.	2.3	106
31	Reproducing kernel hierarchical partition of unity, Part II?applications. <i>International Journal for Numerical Methods in Engineering</i> , 1999, 45, 289-317.	1.5	105
32	Design of mechanical metamaterials for simultaneous vibration isolation and energy harvesting. <i>Applied Physics Letters</i> , 2017, 111, .	1.5	105
33	Universal scaling laws of keyhole stability and porosity in 3D printing of metals. <i>Nature Communications</i> , 2021, 12, 2379.	5.8	105
34	An integrated process-structure-property modeling framework for additive manufacturing. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2018, 339, 184-204.	3.4	98
35	Benchmark Study of Thermal Behavior, Surface Topography, and Dendritic Microstructure in Selective Laser Melting of Inconel 625. <i>Integrating Materials and Manufacturing Innovation</i> , 2019, 8, 178-193.	1.2	97
36	A parallelized three-dimensional cellular automaton model for grain growth during additive manufacturing. <i>Computational Mechanics</i> , 2018, 61, 543-558.	2.2	96

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37	A Green's function approach to deriving non-reflecting boundary conditions in molecular dynamics simulations. <i>International Journal for Numerical Methods in Engineering</i> , 2005, 62, 1250-1262.	1.5	95
38	A micromorphic model for the multiple scale failure of heterogeneous materials. <i>Journal of the Mechanics and Physics of Solids</i> , 2008, 56, 1320-1347.	2.3	94
39	Three-dimensional bridging scale analysis of dynamic fracture. <i>Journal of Computational Physics</i> , 2005, 207, 588-609.	1.9	91
40	Powder-scale multi-physics modeling of multi-layer multi-track selective laser melting with sharp interface capturing method. <i>Computational Mechanics</i> , 2019, 63, 649-661.	2.2	88
41	Multiscale modeling of electron beam and substrate interaction: a new heat source model. <i>Computational Mechanics</i> , 2015, 56, 265-276.	2.2	87
42	Molecular simulation guided constitutive modeling on finite strain viscoelasticity of elastomers. <i>Journal of the Mechanics and Physics of Solids</i> , 2016, 88, 204-226.	2.3	87
43	Hierarchical enrichment for bridging scales and mesh-free boundary conditions. <i>International Journal for Numerical Methods in Engineering</i> , 2001, 50, 507-524.	1.5	84
44	Bridging multi-scale method for localization problems. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2004, 193, 3267-3302.	3.4	80
45	Mathematical foundations of the immersed finite element method. <i>Computational Mechanics</i> , 2006, 39, 211-222.	2.2	79
46	Cell and nanoparticle transport in tumour microvasculature: the role of size, shape and surface functionality of nanoparticles. <i>Interface Focus</i> , 2016, 6, 20150086.	1.5	79
47	Hierarchical Deep Learning Neural Network (HiDeNN): An artificial intelligence (AI) framework for computational science and engineering. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2021, 373, 113452.	3.4	77
48	Numerical simulations of strain localization in inelastic solids using mesh-free methods. <i>International Journal for Numerical Methods in Engineering</i> , 2000, 48, 1285-1309.	1.5	75
49	Synthesis of nanodiamondâ€œdaunorubicin conjugates to overcome multidrug chemoresistance in leukemia. <i>Nanomedicine: Nanotechnology, Biology, and Medicine</i> , 2014, 10, 359-369.	1.7	74
50	Clustering discretization methods for generation of material performance databases in machine learning and design optimization. <i>Computational Mechanics</i> , 2019, 64, 281-305.	2.2	74
51	Dynamic structure of unentangled polymer chains in the vicinity of non-attractive nanoparticles. <i>Soft Matter</i> , 2014, 10, 1723.	1.2	73
52	A Multiscale Model for the Quasi-Static Thermo-Plastic Behavior of Highly Cross-Linked Glassy Polymers. <i>Macromolecules</i> , 2015, 48, 6713-6723.	2.2	73
53	Two-scale mechanism-based theory of nonlinear viscoelasticity. <i>Journal of the Mechanics and Physics of Solids</i> , 2012, 60, 199-226.	2.3	69
54	Multiple quadrature underintegrated finite elements. <i>International Journal for Numerical Methods in Engineering</i> , 1994, 37, 3263-3289.	1.5	65

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55	Immersed electrokinetic finite element method. <i>International Journal for Numerical Methods in Engineering</i> , 2007, 71, 379-405.	1.5	65
56	Linking microstructure and properties through a predictive multiresolution continuum. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2008, 197, 3268-3290.	3.4	64
57	Modeling process-structure-property relationships for additive manufacturing. <i>Frontiers of Mechanical Engineering</i> , 2018, 13, 482-492.	2.5	64
58	A mathematical framework of the bridging scale method. <i>International Journal for Numerical Methods in Engineering</i> , 2006, 65, 1688-1713.	1.5	63
59	A multiresolution continuum simulation of the ductile fracture process. <i>Journal of the Mechanics and Physics of Solids</i> , 2010, 58, 1681-1700.	2.3	60
60	A phonon heat bath approach for the atomistic and multiscale simulation of solids. <i>International Journal for Numerical Methods in Engineering</i> , 2007, 70, 351-378.	1.5	58
61	Automatised selection of load paths to construct reduced-order models in computational damage micromechanics: from dissipation-driven random selection to Bayesian optimization. <i>Computational Mechanics</i> , 2016, 58, 213-234.	2.2	55
62	Multi-scale methods. <i>International Journal for Numerical Methods in Engineering</i> , 2000, 47, 1343-1361.	1.5	54
63	Thermodynamically consistent microstructure prediction of additively manufactured materials. <i>Computational Mechanics</i> , 2016, 57, 359-370.	2.2	54
64	Multiple scale finite element methods. <i>International Journal for Numerical Methods in Engineering</i> , 1991, 32, 969-990.	1.5	53
65	Derivation of heterogeneous material laws via data-driven principal component expansions. <i>Computational Mechanics</i> , 2019, 64, 365-379.	2.2	53
66	Self-consistent clustering analysis for multiscale modeling at finite strains. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2019, 349, 339-359.	3.4	53
67	Multiscale modeling and uncertainty quantification in nanoparticle-mediated drug/gene delivery. <i>Computational Mechanics</i> , 2014, 53, 511-537.	2.2	52
68	The 3-D computational modeling of shear-dominated ductile failure in steel. <i>Jom</i> , 2006, 58, 45-51.	0.9	51
69	From virtual clustering analysis to self-consistent clustering analysis: a mathematical study. <i>Computational Mechanics</i> , 2018, 62, 1443-1460.	2.2	48
70	Predictive multiscale theory for design of heterogeneous materials. <i>Computational Mechanics</i> , 2008, 42, 147-170.	2.2	47
71	Multiscale methods for mechanical science of complex materials: Bridging from quantum to stochastic multiresolution continuum. <i>International Journal for Numerical Methods in Engineering</i> , 2010, 83, 1039-1080.	1.5	47
72	Efficient multiscale modeling for woven composites based on self-consistent clustering analysis. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2020, 364, 112929.	3.4	47

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73	Non-reflecting boundary conditions for atomistic, continuum and coupled atomistic/continuum simulations. <i>International Journal for Numerical Methods in Engineering</i> , 2005, 64, 237-259.	1.5	46
74	Hierarchical deep-learning neural networks: finite elements and beyond. <i>Computational Mechanics</i> , 2021, 67, 207-230.	2.2	46
75	Complexity science of multiscale materials via stochastic computations. <i>International Journal for Numerical Methods in Engineering</i> , 2009, 80, 932-978.	1.5	45
76	Moving particle finite element method with superconvergence: Nodal integration formulation and applications. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2006, 195, 6059-6072.	3.4	44
77	Mechanistic data-driven prediction of as-built mechanical properties in metal additive manufacturing. <i>Npj Computational Materials</i> , 2021, 7, .	3.5	43
78	Meshfree point collocation method with intrinsic enrichment for interface problems. <i>Computational Mechanics</i> , 2007, 40, 1037-1052.	2.2	41
79	Data-Driven Microstructure and Microhardness Design in Additive Manufacturing Using a Self-Organizing Map. <i>Engineering</i> , 2019, 5, 730-735.	3.2	40
80	An ALE hydrodynamic lubrication finite element method with application to strip rolling. <i>International Journal for Numerical Methods in Engineering</i> , 1993, 36, 855-880.	1.5	39
81	Multiresolution continuum modeling of micro-void assisted dynamic adiabatic shear band propagation. <i>Journal of the Mechanics and Physics of Solids</i> , 2010, 58, 187-205.	2.3	39
82	Effective Models for Prediction of Springback In Flanging. <i>Journal of Engineering Materials and Technology</i> , <i>Transactions of the ASME</i> , 2001, 123, 456-461.	0.8	36
83	USNCTAM perspectives on mechanics in medicine. <i>Journal of the Royal Society Interface</i> , 2014, 11, 20140301.	1.5	35
84	Predictive multiscale modeling for Unidirectional Carbon Fiber Reinforced Polymers. <i>Composites Science and Technology</i> , 2020, 186, 107922.	3.8	35
85	Multiresolution modeling of ductile reinforced brittle composites. <i>Journal of the Mechanics and Physics of Solids</i> , 2009, 57, 244-267.	2.3	32
86	An extended micromechanics method for probing interphase properties in polymer nanocomposites. <i>Journal of the Mechanics and Physics of Solids</i> , 2016, 95, 663-680.	2.3	32
87	A Petrov-Galerkin finite element method for the fractional advection-diffusion equation. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2016, 309, 388-410.	3.4	32
88	Mechanistic artificial intelligence (mechanistic-AI) for modeling, design, and control of advanced manufacturing processes: Current state and perspectives. <i>Journal of Materials Processing Technology</i> , 2022, 302, 117485.	3.1	32
89	ALE finite element formulation for ring rolling analysis. <i>International Journal for Numerical Methods in Engineering</i> , 1992, 33, 1217-1236.	1.5	31
90	Moving particle finite element method. <i>International Journal for Numerical Methods in Engineering</i> , 2002, 53, 1937-1958.	1.5	31

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91	Image-based modelling for Adolescent Idiopathic Scoliosis: Mechanistic machine learning analysis and prediction. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2021, 374, 113590.	3.4	31
92	Parallel computation of meshless methods for explicit dynamic analysis. <i>International Journal for Numerical Methods in Engineering</i> , 2000, 47, 1323-1341.	1.5	28
93	Implementation aspects of the bridging scale method and application to intersonic crack propagation. <i>International Journal for Numerical Methods in Engineering</i> , 2007, 71, 583-605.	1.5	28
94	Multi-scale solid oxide fuel cell materials modeling. <i>Computational Mechanics</i> , 2009, 44, 683-703.	2.2	28
95	Adaptive enrichment meshfree simulation and experiment on buckling and post-buckling analysis in sheet metal forming. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2005, 194, 2569-2590.	3.4	27
96	Stochastic Reassembly Strategy for Managing Information Complexity in Heterogeneous Materials Analysis and Design. <i>Journal of Mechanical Design, Transactions of the ASME</i> , 2013, 135, .	1.7	26
97	Data science for finite strain mechanical science of ductile materials. <i>Computational Mechanics</i> , 2019, 64, 33-45.	2.2	26
98	Moving particle finite element method with global smoothness. <i>International Journal for Numerical Methods in Engineering</i> , 2004, 59, 1007-1020.	1.5	25
99	Predicting band structure of 3D mechanical metamaterials with complex geometry via XFEM. <i>Computational Mechanics</i> , 2015, 55, 659-672.	2.2	25
100	Multiscale ductile fracture integrating tomographic characterization and 3-D simulation. <i>Acta Materialia</i> , 2015, 82, 503-510.	3.8	24
101	Data-Driven Mechanistic Modeling of Influence of Microstructure on High-Cycle Fatigue Life of Nickel Titanium. <i>Jom</i> , 2018, 70, 1154-1158.	0.9	24
102	Multi-length scale micromorphic process zone model. <i>Computational Mechanics</i> , 2009, 44, 433-445.	2.2	23
103	Quantifying uncertainties in the microvascular transport of nanoparticles. <i>Biomechanics and Modeling in Mechanobiology</i> , 2014, 13, 515-526.	1.4	23
104	A generalized uncertainty propagation criterion from benchmark studies of microstructured material systems. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2013, 254, 271-291.	3.4	22
105	Convergence analysis of a hierarchical enrichment of Dirichlet boundary conditions in a mesh-free method. <i>International Journal for Numerical Methods in Engineering</i> , 2002, 53, 1323-1336.	1.5	21
106	Materials integrity in microsystems: a framework for a petascale predictive-science-based multiscale modeling and simulation system. <i>Computational Mechanics</i> , 2008, 42, 485-510.	2.2	21
107	A computational mechanics special issue on: data-driven modeling and simulation—theory, methods, and applications. <i>Computational Mechanics</i> , 2019, 64, 275-277.	2.2	20
108	Data-driven characterization of thermal models for powder-bed-fusion additive manufacturing. <i>Additive Manufacturing</i> , 2020, 36, 101503.	1.7	19

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109	Finite element method for mixed elasto-hydrodynamic lubrication of journal-bearing systems. <i>International Journal for Numerical Methods in Engineering</i> , 2004, 60, 1759-1790.	1.5	18
110	Fast calculation of interaction tensors in clustering-based homogenization. <i>Computational Mechanics</i> , 2019, 64, 351-364.	2.2	18
111	Numerical Modelling in Science and Engineering. <i>Journal of Applied Mechanics, Transactions ASME</i> , 1988, 55, 996-997.	1.1	17
112	Meshfree simulation of failure modes in thin cylinders subjected to combined loads of internal pressure and localized heat. <i>International Journal for Numerical Methods in Engineering</i> , 2008, 76, 1159-1184.	1.5	17
113	A statistical descriptor based volume-integral micromechanics model of heterogeneous material with arbitrary inclusion shape. <i>Computational Mechanics</i> , 2015, 55, 963-981.	2.2	17
114	Enriched reproducing kernel particle method for fractional advection-diffusion equation. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2018, 34, 515-527.	1.5	17
115	Image-based multiscale modeling with spatially varying microstructures from experiments: Demonstration with additively manufactured metal in fatigue and fracture. <i>Journal of the Mechanics and Physics of Solids</i> , 2021, 150, 104350.	2.3	17
116	Concurrent multiresolution finite element: formulation and algorithmic aspects. <i>Computational Mechanics</i> , 2013, 52, 1265-1279.	2.2	16
117	The archetype-genome exemplar in molecular dynamics and continuum mechanics. <i>Computational Mechanics</i> , 2014, 53, 687-737.	2.2	16
118	Differential operator multiplication method for fractional differential equations. <i>Computational Mechanics</i> , 2016, 58, 879-888.	2.2	16
119	From microscale to mesoscale: The non-linear behavior prediction of 3D braided composites based on the SCA2 concurrent multiscale simulation. <i>Composites Science and Technology</i> , 2021, 213, 108947.	3.8	16
120	HiDeNN-TD: Reduced-order hierarchical deep learning neural networks. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2022, 389, 114414.	3.4	16
121	A finite temperature continuum theory based on interatomic potential in crystalline solids. <i>Computational Mechanics</i> , 2008, 42, 531-541.	2.2	15
122	Simulation and prediction of endothelial cell adhesion modulated by molecular engineering. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2008, 197, 2340-2352.	3.4	14
123	Adaptive hyper reduction for additive manufacturing thermal fluid analysis. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2020, 372, 113312.	3.4	14
124	Multiresolution clustering analysis for efficient modeling of hierarchical material systems. <i>Computational Mechanics</i> , 2021, 67, 1293-1306.	2.2	14
125	Conforming local meshfree method. <i>International Journal for Numerical Methods in Engineering</i> , 2011, 86, 335-357.	1.5	13
126	A semi-numerical algorithm for instability of compressible multilayered structures. <i>Computational Mechanics</i> , 2015, 56, 63-75.	2.2	13



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127	An enriched finite element method to fractional advection–diffusion equation. <i>Computational Mechanics</i> , 2017, 60, 181-201.	2.2	13
128	An inverse modeling approach for predicting filled rubber performance. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2019, 357, 112567.	3.4	13
129	A renormalization approach to model interaction in microstructured solids: Application to porous elastomer. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2012, 217-220, 213-225.	3.4	12
130	Efficient prediction of protein conformational pathways based on the hybrid elastic network model. <i>Journal of Molecular Graphics and Modelling</i> , 2014, 47, 25-36.	1.3	11
131	Bimaterial Interfacial Crack Growth With Strain Gradient Theory. <i>Journal of Engineering Materials and Technology, Transactions of the ASME</i> , 1999, 121, 413-421.	0.8	10
132	Treatment of discontinuity in the reproducing kernel element method. <i>International Journal for Numerical Methods in Engineering</i> , 2005, 63, 241-255.	1.5	10
133	An Efficient Elastic Displacement Analysis Procedure for Simulating Transient Conformal-Contact Elastohydrodynamic Lubrication Systems. <i>Journal of Tribology</i> , 2010, 132, .	1.0	10
134	Tensile Stress-Driven Surface Wrinkles on Cylindrical Core–Shell Soft Solids. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2015, 82, .	1.1	10
135	Finite element hydrodynamic friction model for metal forming. <i>International Journal for Numerical Methods in Engineering</i> , 1994, 37, 4015-4037.	1.5	9
136	Cohesive solutions of intersonic moving dislocations. <i>Philosophical Magazine</i> , 2004, 84, 1067-1104.	0.7	9
137	Approaching Mixed Elastohydrodynamic Lubrication of Smooth Journal-Bearing Systems with Low Rotating Speed. <i>Tribology Transactions</i> , 2006, 49, 598-610.	1.1	9
138	A variable constraint tube model for size effects of polymer nano-structures. <i>Applied Physics Letters</i> , 2011, 99, .	1.5	9
139	Modular-based multiscale modeling on viscoelasticity of polymer nanocomposites. <i>Computational Mechanics</i> , 2017, 59, 187-201.	2.2	9
140	Benchmark Study of Melted Track Geometries in Laser Powder Bed Fusion of Inconel 625. <i>Integrating Materials and Manufacturing Innovation</i> , 2021, 10, 177-195.	1.2	9
141	Flexible piecewise approximations based on partition of unity. <i>Advances in Computational Mathematics</i> , 2005, 23, 191-199.	0.8	8
142	Microscale Structure to Property Prediction for Additively Manufactured IN625 through Advanced Material Model Parameter Identification. <i>Integrating Materials and Manufacturing Innovation</i> , 2021, 10, 142-156.	1.2	8
143	Elastic interactions of a fatigue crack with a micro-defect by the mixed boundary integral equation method. <i>International Journal for Numerical Methods in Engineering</i> , 1993, 36, 2743-2759.	1.5	7
144	Multiple time scale method for atomistic simulations. <i>Computational Mechanics</i> , 2008, 42, 569-577.	2.2	7

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145	Mechano-kinetic coupling approach for materials with dynamic internal structure. Philosophical Magazine Letters, 2010, 90, 471-480.	0.5	7
146	A domain-reduction approach to bridging-scale simulation of one-dimensional nanostructures. Computational Mechanics, 2011, 47, 31-47.	2.2	7
147	Finite element simulation of saw-tooth chip in high-speed machining based on multiresolution continuum theory. International Journal of Advanced Manufacturing Technology, 2019, 101, 1759-1772.	1.5	7
148	A modal analysis of carbon nanotube using elastic network model. Journal of Mechanical Science and Technology, 2012, 26, 3433-3438.	0.7	6
149	An energetically consistent concurrent multiscale method for heterogeneous heat transfer and phase transition applications. Computer Methods in Applied Mechanics and Engineering, 2017, 315, 100-120.	3.4	6
150	Special issue on Additive manufacturing: progress in modeling and simulation with experimental validations in additive manufacturing. Computational Mechanics, 2018, 61, 519-520.	2.2	6
151	Dynamic stability characteristics of liquid-filled shells. Earthquake Engineering and Structural Dynamics, 1989, 18, 1219-1231.	2.5	5
152	Curvilinear fatigue crack reliability analysis by stochastic boundary element method. International Journal for Numerical Methods in Engineering, 1993, 36, 3841-3858.	1.5	5
153	Experimental and computational validation of Hele-Shaw stagnation flow with varying shear stress. Computational Mechanics, 2013, 52, 1463-1473.	2.2	5
154	Advancements in multiresolution analysis. International Journal for Numerical Methods in Engineering, 2015, 102, 784-807.	1.5	5
155	A sequential homogenization of multi-coated micromechanical model for functionally graded interphase composites. Computational Mechanics, 2019, 64, 1321-1337.	2.2	5
156	Macroscale Property Prediction for Additively Manufactured IN625 from Microstructure Through Advanced Homogenization. Integrating Materials and Manufacturing Innovation, 2021, 10, 360-372.	1.2	5
157	Precise spring constant assignment in elastic network model for identification of vibration frequency and modeshape. Journal of Mechanical Science and Technology, 2010, 24, 1771-1780.	0.7	4
158	Intersection-free tetrahedral meshing from volumetric images. Computer Methods in Biomechanics and Biomedical Engineering: Imaging and Visualization, 2013, 1, 100-110.	1.3	4
159	Analytical expression of RKPM shape functions. Computational Mechanics, 2020, 66, 1343-1352.	2.2	4
160	Self-consistent clustering analysis for modeling of thermelastic heterogeneous materials. AIP Conference Proceedings, 2021, , .	0.3	4
161	Reproducing kernel hierarchical partition of unity, Part I – formulation and theory. , 1999, 45, 251.		4
162	Double Averaging Analysis Applied to a Large Eddy Simulation of Coupled Turbulent Overlying and Porewater Flow. Water Resources Research, 2021, 57, e2021WR029918.	1.7	3

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163	Enhancement of Endothelial Cell Retention on ePTFE Vascular Constructs by siRNA-Mediated SHP-1 or SHP-2 Gene Silencing. Cellular and Molecular Bioengineering, 2015, 8, 507-516.	1.0	2
164	Variable Chain Confinement in Polymers With Nanosized Pores and Its Impact on Instability. Journal of Applied Mechanics, Transactions ASME, 2015, 82, .	1.1	2
165	Implicit finite element formulation of multiresolution continuum theory. Computer Methods in Applied Mechanics and Engineering, 2015, 293, 114-130.	3.4	2
166	Numerical simulations of strain localization in inelastic solids using mesh-free methods. International Journal for Numerical Methods in Engineering, 2000, 48, 1285-1309.	1.5	2
167	Nanomedicine. Computational Mechanics, 2014, 53, 401-402.	2.2	1
168	A Multi-scale Simulation of Micro-forming Process with RKEM. AIP Conference Proceedings, 2004, , .	0.3	0
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