

# Yichao Zhu

## List of Publications by Year in descending order

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35  
papers

883  
citations

516710

16  
h-index

477307

29  
g-index

35  
all docs

35  
docs citations

35  
times ranked

624  
citing authors

#	ARTICLE	IF	CITATIONS
1	About Homogenisation. , 2022, , .		0
2	Revisiting Kirchhoff's Love plate theories for thin laminated configurations and the role of transverse loads. <i>Journal of Composite Materials</i> , 2022, 56, 1363-1377.	2.4	1
3	Optimisation of spatially varying orthotropic porous structures based on conformal mapping. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2022, 391, 114589.	6.6	5
4	Compliance minimisation of smoothly varying multiscale structures using asymptotic analysis and machine learning. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2022, 395, 114861.	6.6	12
5	Attempts on representing sink strengths with machine learning formulations and the long-term role of crystalline interfaces in the development of irradiation-induced bubbles. <i>Journal of Nuclear Materials</i> , 2021, 544, 152676.	2.7	2
6	Formulation of voids and bubbles as biased sinks to crystalline point defects. <i>Scripta Materialia</i> , 2021, 197, 113806.	5.2	4
7	Generation of smoothly-varying infill configurations from a continuous menu of cell patterns and the asymptotic analysis of its mechanical behaviour. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2020, 366, 113037.	6.6	26
8	Optimal design of shell-graded-infill structures by a hybrid MMC-MMV approach. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2020, 369, 113187.	6.6	32
9	On speeding up an asymptotic-analysis-based homogenisation scheme for designing gradient porous structured materials using a zoning strategy. <i>Structural and Multidisciplinary Optimization</i> , 2020, 62, 457-473.	3.5	12
10	Characterisation of dislocation patterning behaviour with a continuum dislocation dynamics model on two parallel slip planes equipped with a deep neural network resolving local microstructures. <i>International Journal of Solids and Structures</i> , 2020, 198, 57-71.	2.7	12
11	A magnification-based multi-asperity (MBMA) model of rough contact without adhesion. <i>Journal of the Mechanics and Physics of Solids</i> , 2019, 133, 103724.	4.8	14
12	A novel asymptotic-analysis-based homogenisation approach towards fast design of infill graded microstructures. <i>Journal of the Mechanics and Physics of Solids</i> , 2019, 124, 612-633.	4.8	46
13	Explicit structural topology optimization under finite deformation via Moving Morphable Void (MMV) approach. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2019, 344, 798-818.	6.6	37
14	A lightweight optimal design model for bolted flange joints without gaskets considering its sealing performance. <i>Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering</i> , 2018, 232, 234-255.	2.5	5
15	Topology optimization with multiple materials via moving morphable component (MMC) method. <i>International Journal for Numerical Methods in Engineering</i> , 2018, 113, 1653-1675.	2.8	112
16	An efficient moving morphable component (MMC)-based approach for multi-resolution topology optimization. <i>Structural and Multidisciplinary Optimization</i> , 2018, 58, 2455-2479.	3.5	67
17	The mechanical principles behind the golden ratio distribution of veins in plant leaves. <i>Scientific Reports</i> , 2018, 8, 13859.	3.3	26
18	Role of Grain Boundaries under Long-Time Radiation. <i>Physical Review Letters</i> , 2018, 120, 222501.	7.8	11

#	ARTICLE	IF	CITATIONS
19	A Moving Morphable Component Based Topology Optimization Approach for Rib-Stiffened Structures Considering Buckling Constraints. <i>Journal of Mechanical Design, Transactions of the ASME</i> , 2018, 140, .	2.9	50
20	A continuum model for distributions of dislocations incorporating short-range interactions. <i>Communications in Mathematical Sciences</i> , 2018, 16, 491-522.	1.0	2
21	Point defect sink efficiency of low-angle tilt grain boundaries. <i>Journal of the Mechanics and Physics of Solids</i> , 2017, 101, 166-179.	4.8	15
22	A three-scale homogenisation approach to the prediction of long-time absorption of radiation induced interstitials by nanovoids at interfaces. <i>Journal of the Mechanics and Physics of Solids</i> , 2017, 105, 1-20.	4.8	10
23	Additive Manufacturing-Oriented Design of Graded Lattice Structures Through Explicit Topology Optimization. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2017, 84, .	2.2	112
24	Kirigami pattern design of mechanically driven formation of complex 3D structures through topology optimization. <i>Extreme Mechanics Letters</i> , 2017, 15, 139-144.	4.1	39
25	Gurtin-Murdoch surface elasticity theory revisit: An orbital-free density functional theory perspective. <i>Journal of the Mechanics and Physics of Solids</i> , 2017, 109, 178-197.	4.8	24
26	Structural complexity control in topology optimization via moving morphable component (MMC) approach. <i>Structural and Multidisciplinary Optimization</i> , 2017, 56, 535-552.	3.5	66
27	Explicit control of structural complexity in topology optimization. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2017, 324, 149-169.	6.6	26
28	Homogenization of a Row of Dislocation Dipoles from Discrete Dislocation Dynamics. <i>SIAM Journal on Applied Mathematics</i> , 2016, 76, 750-775.	1.8	12
29	Continuum dynamics of the formation, migration and dissociation of self-locked dislocation structures on parallel slip planes. <i>Journal of the Mechanics and Physics of Solids</i> , 2016, 96, 369-387.	4.8	6
30	The role of dislocation pile-up in flow stress determination and strain hardening. <i>Scripta Materialia</i> , 2016, 116, 53-56.	5.2	24
31	A continuum model for dislocation dynamics in three dimensions using the dislocation density potential functions and its application to micro-pillars. <i>Journal of the Mechanics and Physics of Solids</i> , 2015, 84, 230-253.	4.8	20
32	Motion of screw segments in the early stage of fatigue testing. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2014, 589, 132-139.	5.6	4
33	A Natural Transition Between Equilibrium Patterns of Dislocation Dipoles. <i>Journal of Elasticity</i> , 2014, 117, 51-61.	1.9	7
34	A continuum model for dislocation dynamics incorporating Frank's Read sources and Hall's Petch relation in two dimensions. <i>International Journal of Plasticity</i> , 2014, 60, 19-39.	8.8	33
35	Dislocation motion and instability. <i>Journal of the Mechanics and Physics of Solids</i> , 2013, 61, 1835-1853.	4.8	9