

# Anthony P Roberts

## List of Publications by Year in descending order

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48  
papers

3,735  
citations

201575

27  
h-index

214721

47  
g-index

48  
all docs

48  
docs citations

48  
times ranked

3374  
citing authors

#	ARTICLE	IF	CITATIONS
1	Multi-objective structural optimisation of piezoelectric materials. <i>International Journal of Solids and Structures</i> , 2022, 248, 111666.	1.3	7
2	Novel properties of multi-poled piezoelectric network structures. <i>Smart Materials and Structures</i> , 2021, 30, 105016.	1.8	2
3	Chord-length distributions cannot generally be obtained from small-angle scattering. <i>Journal of Applied Crystallography</i> , 2020, 53, 127-132.	1.9	7
4	Stochastic analysis of capillary condensation in disordered mesopores. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 13646-13659.	1.3	11
5	Physically Realizable Three-Dimensional Bone Prosthesis Design With Interpolated Microstructures. <i>Journal of Biomechanical Engineering</i> , 2017, 139, .	0.6	9
6	Contact inhibition of locomotion and mechanical cross-talk between cell-cell and cell-substrate adhesion determine the pattern of junctional tension in epithelial cell aggregates. <i>Molecular Biology of the Cell</i> , 2016, 27, 3436-3448.	0.9	21
7	Microstructure interpolation for macroscopic design. <i>Structural and Multidisciplinary Optimization</i> , 2016, 53, 489-500.	1.7	49
8	Modelling wound closure in an epithelial cell sheet using the cellular Potts model. <i>Integrative Biology (United Kingdom)</i> , 2015, 7, 1253-1264.	0.6	20
9	High specific strength and stiffness structures produced using selective laser melting. <i>Materials &amp; Design</i> , 2014, 63, 783-788.	5.1	127
10	High resolution topology optimization using graphics processing units (GPUs). <i>Structural and Multidisciplinary Optimization</i> , 2014, 49, 315-325.	1.7	49
11	A mathematics support programme for first-year engineering students. <i>International Journal of Mathematical Education in Science and Technology</i> , 2013, 44, 1030-1044.	0.8	18
12	Computationally generated cross-property bounds for stiffness and fluid permeability using topology optimization. <i>International Journal of Solids and Structures</i> , 2012, 49, 3397-3408.	1.3	73
13	Elastic moduli of sintered powders with application to components fabricated using selective laser melting. <i>Acta Materialia</i> , 2011, 59, 5257-5265.	3.8	16
14	Electrostatic approximation of source-to-target mean first-passage times on networks. <i>Physical Review E</i> , 2011, 83, 031113.	0.8	11
15	Prototypes for Bone Implant Scaffolds Designed via Topology Optimization and Manufactured by Solid Freeform Fabrication. <i>Advanced Engineering Materials</i> , 2010, 12, 1106-1110.	1.6	103
16	Diffusion on asymmetric fractal networks. <i>Physical Review E</i> , 2010, 82, 061121.	0.8	1
17	Generalization of the Fractal Einstein Law Relating Conduction and Diffusion on Networks. <i>Physical Review Letters</i> , 2009, 103, 020601.	2.9	30
18	Continuum diffusion on networks: Trees with hyperbranched trunks and fractal branches. <i>Physical Review E</i> , 2009, 79, 031111.	0.8	8

#	ARTICLE	IF	CITATIONS
19	Fracture resistance via topology optimization. <i>Structural and Multidisciplinary Optimization</i> , 2008, 36, 263-271.	1.7	37
20	Design of three dimensional isotropic microstructures for maximized stiffness and conductivity. <i>International Journal of Solids and Structures</i> , 2008, 45, 4130-4146.	1.3	133
21	Structure development of resorcinol-formaldehyde gels: Microphase separation or colloid aggregation. <i>Physical Review E</i> , 2008, 77, 041409.	0.8	60
22	Global first-passage times of fractal lattices. <i>Physical Review E</i> , 2008, 78, 041111.	0.8	74
23	Modeling Structure-Property Relationships in Random Cellular Materials. , 2006, , 267-288.		0
24	Yield criterion of porous materials subjected to complex stress states. <i>Acta Materialia</i> , 2006, 54, 1995-2002.	3.8	33
25	The Effect of the Lipid Layer on Tear Film Behaviour. <i>Bulletin of Mathematical Biology</i> , 2006, 68, 1355-1381.	0.9	44
26	Yield Functions for Porous Materials with Cubic Symmetry Using Different Definitions of Yield. <i>Advanced Engineering Materials</i> , 2006, 8, 870-876.	1.6	12
27	Dynamics of tear film deposition and draining. <i>Mathematical Medicine and Biology</i> , 2005, 22, 265-288.	0.8	58
28	Computation of the linear elastic properties of random porous materials with a wide variety of microstructure. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2002, 458, 1033-1054.	1.0	229
29	Gas permeation in silicon-oxide/polymer (SiO <sub>x</sub> /PET) barrier films: role of the oxide lattice, nano-defects and macro-defects. <i>Journal of Membrane Science</i> , 2002, 208, 75-88.	4.1	287
30	Elastic properties of model random three-dimensional open-cell solids. <i>Journal of the Mechanics and Physics of Solids</i> , 2002, 50, 33-55.	2.3	378
31	How cracks in SiO <sub>x</sub> -coated polyester films affect gas permeation. <i>Thin Solid Films</i> , 2001, 397, 176-185.	0.8	81
32	Elastic moduli of model random three-dimensional closed-cell cellular solids. <i>Acta Materialia</i> , 2001, 49, 189-197.	3.8	399
33	Elastic Properties of Model Porous Ceramics. <i>Journal of the American Ceramic Society</i> , 2000, 83, 3041-3048.	1.9	396
34	Mechanical structure-property relationship of aerogels. <i>Journal of Non-Crystalline Solids</i> , 2000, 277, 127-141.	1.5	170
35	Chord-distribution functions of three-dimensional random media: Approximate first-passage times of Gaussian processes. <i>Physical Review E</i> , 1999, 59, 4953-4963.	0.8	74
36	Elastic properties of a tungsten-silver composite by reconstruction and computation. <i>Journal of the Mechanics and Physics of Solids</i> , 1999, 47, 2029-2055.	2.3	62

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37	A microstructural study of transparent metal oxide gas barrier films. <i>Thin Solid Films</i> , 1999, 355-356, 500-505.	0.8	94
38	Morphology, Cocontinuity, and Conductive Properties of Anisotropic Polymer Blends. <i>Macromolecules</i> , 1999, 32, 5964-5966.	2.2	17
39	Morphology and thermal conductivity of model organic aerogels. <i>Physical Review E</i> , 1997, 55, R1286-R1289.	0.8	55
40	Statistical reconstruction of three-dimensional porous media from two-dimensional images. <i>Physical Review E</i> , 1997, 56, 3203-3212.	0.8	194
41	Cross-property correlations for disordered materials. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 1997, 129-130, 377-385.	2.3	2
42	Transport and elastic properties of fractal media. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1996, 233, 848-858.	1.2	8
43	Structure-property correlations in model composite materials. <i>Physical Review E</i> , 1996, 54, 2313-2328.	0.8	98
44	Mechanical and transport properties of model foamed solids. <i>Journal of Materials Science Letters</i> , 1995, 14, 1357-1359.	0.5	24
45	Transport properties of heterogeneous materials derived from Gaussian random fields: Bounds and simulation. <i>Physical Review E</i> , 1995, 51, 4141-4154.	0.8	139
46	Comparative study of large-scale Laplacian growth patterns. <i>Physical Review E</i> , 1995, 51, 807-810.	0.8	6
47	Growth in non-Laplacian fields. <i>Physical Review E</i> , 1993, 47, 2724-2728.	0.8	8
48	Comment on "Hitting probabilities of diffusion-limited-aggregation clusters". <i>Physical Review E</i> , 1993, 48, 4143-4144.	0.8	1