James M Hill

List of Publications by Year
in descending order

113 papers	1,680 citations	361296 20 h-index	345118 36 g-index
115 all docs	115 docs citations	115 times ranked	968 citing authors

#	Article	IF	Citations
1	Bagnold velocity profile for steady-state dense granular chute flow with base slip. Rheologica Acta, 2022, 61, 207-214.	1.1	5
2	Ferric Ion Diffusion for MOF-Polymer Composite with Internal Boundary Sinks. Nanomaterials, 2022, 12, 887.	1.9	1
3	Einsteinâ€™s energy and space isotropy. Zeitschrift Fur Angewandte Mathematik Und Physik, 2022, 73, 1.	0.7	1
4	Four states of matter and centrally symmetric de Broglie particleâ€“wave mechanical systems. Mathematics and Mechanics of Solids, 2021, 26, 263-284.	1.5	7
5	A mechanical model for dark matter and dark energy. Zeitschrift Fur Angewandte Mathematik Und Physik, 2021, 72, 1.	0.7	7
6	Steady-state similarity velocity profiles for dense granular flow down inclined chutes. Granular Matter, 2021, 23, 1.	1.1	1
7	A review of de Broglie particleâ€“wave mechanical systems. Mathematics and Mechanics of Solids, 2020, 25, 1763-1777.	1.5	9
8	Continuum Modelling for Interacting Coronene Molecules with a Carbon Nanotube. Nanomaterials, 2020, 10, 152.	1.9	5
9	Modeling Interactions between Graphene and Heterogeneous Molecules. Computation, 2020, 8, 107.	1.0	4
10	Interacting Ru(bpy)

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 Dye Molecules and TiO2 Semiconductor in Dye-Sensitized Solar Cells. Mathematics, 2020, 8, 841. | 1.1 | 1 |
11	Special relativity, de Broglie waves, dark energy and quantum mechanics. Zeitschrift Fur Angewandte Mathematik Und Physik, 2019, 70, 1.	0.7	11
12	A Review of Geometry, Construction and Modelling for Carbon Nanotori. Applied Sciences (Switzerland), 2019, 9, 2301.	1.3	15
13	The effect of non-covalent functionalization on the interaction energy of carbon nanotubes. Journal of Physics Communications, 2019, 3, 035018.	0.5	3
14	Optimal configurations for interacting carbon nanotori. Applied Nanoscience (Switzerland), 2019, 9, 225-232.	1.6	2
15	Some further comments on special relativity and dark energy. Zeitschrift Fur Angewandte Mathematik Und Physik, 2019, 70, 1.	0.7	14
16	Generalized transformations and coordinates for static spherically symmetric general relativity. Royal Society Open Science, 2018, 5, 171109.	1.1	4
17	On the formal origins of dark energy. Zeitschrift Fur Angewandte Mathematik Und Physik, 2018, 69, 1.	0.7	13
18	Carbon Nanocones with Curvature Effects Close to the Vertex. Nanomaterials, 2018, 8, 624.	1.9	5

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19	Equilibrium location for spherical DNA and toroidal cyclodextrin. Applied Nanoscience (Switzerland), 2018, 8, 537-544.	1.6	4
20	Interaction energy for a fullerene encapsulated in a carbon nanotorus. Zeitschrift Fur Angewandte Mathematik Und Physik, 2018, 69, 1.	0.7	6
21	Generalised Einstein mass-variation formulae: I Subluminal relative frame velocities. Results in Physics, 2016, 6, 112-121.	2.0	2
22	Encapsulation of L-Histidine Amino Acid Inside Single-Walled Carbon Nanotubes. Journal of Biomaterials and Tissue Engineering, 2016, 6, 362-369.	0.0	9
23	DESIGN OF A NANOTORI-METALLOFULLERENE LOGIC GATE. ANZIAM Journal, 2015, 57, 29-42.	0.3	0
24	Carbon nanotori and nanotubes encapsulating carbon atomic-chains. Journal of Mathematical Chemistry, 2014, 52, 1817-1830.	0.7	9
25	DNA adsorption on graphene. European Physical Journal D, 2013, 67, 1.	0.6	10
26	Composite Multiwalled Carbon Nanotubes as Memory Devices and Logic Gates. Journal of Nanotechnology in Engineering and Medicine, 2012, 3, .	0.8	1
27	Carbon nanotori as traps for atoms and ions. Physica B: Condensed Matter, 2012, 407, 3479-3483.	1.3	20
28	Einstein's special relativity beyond the speed of light. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2012, 468, 4174-4192.	1.0	41
29	Instability of C60 fullerene interacting with lipid bilayer. Journal of Molecular Modeling, 2012, 18, 549-557.	0.8	32
30	Orientation of a benzene molecule inside a carbon nanotube. Journal of Mathematical Chemistry, 2011, 49, 1115-1127.	0.7	14
31	Encapsulation of methane molecules into carbon nanotubes. Physica B: Condensed Matter, 2011, 406, 88-93.	1.3	26
32	Silicon nanotubes with distinct bond lengths. Journal of Mathematical Chemistry, 2010, 47, 569-589.	0.7	8
33	Discrete and Continuous Approximations for Nanobuds. Fullerenes Nanotubes and Carbon Nanostructures, 2010, 18, 160-177.	1.0	9
34	Electronic properties of carbon nanotubes with distinct bond lengths. Journal of Applied Physics, 2010, 107, 023511.	1.1	5
35	General Model for Molecular Interactions in a Benzene Dimer. Mathematics and Mechanics of Solids, 2010, 15, 782-799.	1.5	7
36	Adsorption of polycyclic aromatic hydrocarbons on graphite surfaces. Computational Materials Science, 2010, 49, S307-S312.	1.4	22

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37	Modelling the interaction in a benzene dimer. Philosophical Magazine, 2010, 90, 1771-1785.	0.7	10
38	Mathematical modelling for nanotube bundle oscillators. , 2009, , .		0
39	Modelling hydrogen adsorption within spherical, cylindrical and slitâ€shaped cavities. , 2009, , .		0
40	On three simple experiments to determine slip lengths. Microfluidics and Nanofluidics, 2009, 6, 611-619.	1.0	10
41	Asymptotic analysis of the viscous micro/nano pump at low Reynolds number. Journal of Engineering Mathematics, 2009, 63, 279-292.	0.6	5
42	Mechanics of nanoscale orbiting systems. Journal of Mathematical Chemistry, 2009, 46, 1271-1291.	0.7	4
43	Nanotube bundle oscillators: Carbon and boron nitride nanostructures. Physica B: Condensed Matter, 2009, 404, 3906-3910.	1.3	22
44	Polyhedral model for boron nitride nanotubes. , 2009, , .		2
45	Oscillation of nested fullerenes (carbon onions) in carbon nanotubes. Journal of Nanoparticle Research, 2008, 10, 665-677.	0.8	23
46	Equilibrium locations for nested carbon nanocones. Journal of Mathematical Chemistry, 2008, 43, 1489-1504.	0.7	16
47	Toroidal molecules formed from three distinct carbon nanotubes. Journal of Mathematical Chemistry, 2008, 44, 515-527.	0.7	11
48	Effect of slip on the linear stability of flow through a tube. Zeitschrift Fur Angewandte Mathematik Und Physik, 2008, 59, 360-379.	0.7	6
49	Lubrication analysis of the viscous micro/nano pump with slip. Microfluidics and Nanofluidics, 2008, 4, 439-449.	1.0	12
50	Geometric structure of ultra-small carbon nanotubes. Carbon, 2008, 46, 711-713.	5.4	23
51	Encapsulation of the anticancer drug cisplatin into nanotubes. , 2008, , .		9
52	Joining a carbon nanotube and a graphene sheet. , 2008, , .		2
53	A carbon atom orbiting around the outside of a carbon nanotube. , 2008, , .		3
54	Carbon molecules oscillating in carbon nanotube bundles. , 2008, , .		2

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55	Mechanics of fullerenes oscillating in carbon nanotube bundles. Journal of Physics A: Mathematical and Theoretical, 2007, 40, 13197-13208.	0.7	19
56	Zigzag and spiral configurations for fullerenes in carbon nanotubes. Journal of Physics A: Mathematical and Theoretical, 2007, 40, 7543-7556.	0.7	11
57	Continuous versus discrete for interacting carbon nanostructures. Journal of Physics A: Mathematical and Theoretical, 2007, 40, 3851-3868.	0.7	39
58	Micro/nano thermal boundary layer equations with slip creep jump boundary conditions. IMA Journal of Applied Mathematics, 2007, 72, 894-911.	0.8	18
59	Modelling the encapsulation of the anticancer drug cisplatin into carbon nanotubes. Nanotechnology, 2007, 18, 275704.	1.3	97
60	Mechanics of spheroidal fullerenes and carbon nanotubes for drug and gene delivery. Quarterly Journal of Mechanics and Applied Mathematics, 2007, 60, 231-253.	0.5	18
61	Encapsulation of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi mathvariant="normal">C</mml:mi><mml:mn>60</mml:mn></mml:msub></mml:math>fullerenes into single-walled carbon nanotubes: Fundamental mechanical principles and conventional applied mathematical modeling. Physical Review B, 2007, 76, .	1.1	30
62	Orbiting atoms and C60 fullerenes inside carbon nanotori. Journal of Applied Physics, 2007, 101, 064319.	1.1	56
63	Laplace transforms and the Riemann zeta function. Integral Transforms and Special Functions, 2007, 18, 193-205.	0.8	1
64	New Carbon Molecules in the Form of Elbow-Connected Nanotori. Journal of Physical Chemistry C, 2007, 111, 10855-10860.	1.5	21
65	Oscillating carbon nanotori along carbon nanotubes. Physical Review B, 2007, 75, .	1.1	44
66	Mechanics of atoms and fullerenes in single-walled carbon nanotubes. I. Acceptance and suction energies. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2007, 463, 461-477.	1.0	162
67	Mechanics of atoms and fullerenes in single-walled carbon nanotubes. II. Oscillatory behaviour. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2007, 463, 477-494.	1.0	128
68	Exact and approximate geometric parameters for carbon nanotubes incorporating curvature. Carbon, 2007, 45, 1453-1462.	5.4	55
69	Electrostatic force between coated conducting spheres with applications to electrorheological nanofluids. Journal of Electrostatics, 2007, 65, 680-688.	1.0	9
70	Determination of nanolayer thickness for a nanofluid. International Communications in Heat and Mass Transfer, 2007, 34, 399-407.	2.9	79
71	Force distribution for double-walled carbon nanotubes and gigahertz oscillators. Zeitschrift Fur Angewandte Mathematik Und Physik, 2007, 58, 857-875.	0.7	61
72	Asymptotic Axially Symmetric Deformations for Perfectly Elastic Neo-Hookean and Mooney Materials. Journal of Elasticity, 2007, 86, 113-137.	0.9	3

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73	Flow around nanospheres and nanocylinders. Quarterly Journal of Mechanics and Applied Mathematics, 2006, 59, 191-210.	0.5	39
74	Mathematical Modelling for a C/sub 60/ Carbon Nanotube Oscillator. , 2006, , .		0
75	Mathematical Modelling of Nanoparticle Melting. , 2006, , .		0
76	Maximising the electrorheological effect for bidisperse nanofluids from the electrostatic force between two particles. Rheologica Acta, 2006, 45, 909-917.	1.1	6
77	Micro/nano sliding plate problem with Navier boundary condition. Zeitschrift Fur Angewandte Mathematik Und Physik, 2006, 57, 875-903.	0.7	13
78	Electric field-induced force between two identical uncharged spheres. Applied Physics Letters, 2006, 88, 152903.	1.5	20
79	Modelling the Induced Force of Attraction in Electrorheological Nanofluids. , 2006, , .		1
80	Force Distribution for Double-Walled Carbon Nanotubes. , 2006, , .		3
81	Orbiting Buckyballs Inside Nanotori. , 2006, , .		0
82	Some exact velocity profiles for granular flow in converging hoppers. Zeitschrift Fur Angewandte Mathematik Und Physik, 2005, 56, 92-106.	0.7	14
83	Symmetry analysis for uniaxial compression of a hypoplastic granular material. Zeitschrift Fur Angewandte Mathematik Und Physik, 2005, 56, 1061-1083.	0.7	2
84	Curve Fitting, Differential Equations And The Riemann Hypothesis. Ramanujan Journal, 2005, 9, 357-372.	0.4	1
85	Perturbation solutions for highly frictional granular media. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2005, 461, 21-42.	1.0	7
86	On an infinite integral arising in the numerical integration of stochastic differential equations. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2005, 461, 397-413.	1.0	4
87	New stress and velocity fields for highly frictional granular materials. IMA Journal of Applied Mathematics, 2004, 70, 92-118.	0.8	7
88	Stress distributions in highly frictional granular heaps. Zeitschrift Fur Angewandte Mathematik Und Physik, 2004, 55, 330-356.	0.7	6
89	A two-stage heat transfer model for the peripheral layers of a grain store. Journal of Applied Mathematics and Decision Sciences, 2003, 7, 147-164.	0.4	0
90	Nonlinear Plane Waves in Finite Deformable Infinite Mooney Elastic Materials. Journal of Elasticity, 2002, 67, 71-80.	0.9	7

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91	Stress profiles for tapered cylindrical cavities in granular media. International Journal of Solids and Structures, 2001, 38, 3795-3811.	1.3	11
92	Non-dilatant double-shearing theory applied to granular funnel-flow in hoppers. Journal of Engineering Mathematics, 2001, 41, 55-73.	0.6	16
93	Cylindrical cavities and classical rat-hole theory occurring in bulk materials. International Journal for Numerical and Analytical Methods in Geomechanics, 2000, 24, 971-990.	1.7	18
94	Analysis of flux flow and the formation of oscillation marks in the continuous caster. Journal of Engineering Mathematics, 1999, 36, 311-326.	0.6	22
95	Title is missing!. Journal of Elasticity, 1999, 54, 193-212.	0.9	2
96	Finite elastic non-symmetrical inflation and eversion of circular cylindrical rubber tubes. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 1999, 455, 1067-1082.	1.0	3
97	A novel finite element method for heat transfer in the continuous caster. Journal of the Australian Mathematical Society Series B Applied Mathematics, 1994, 35, 263-288.	0.3	13
98	Some similarity temperature profiles for the microwave heating of a half-space. Journal of the Australian Mathematical Society Series B Applied Mathematics, 1992, 33, 290-320.	0.3	27
99	The symmetrical adhesive contact problem for circular elastic cylinders. Journal of Elasticity, 1992, 27, 1-36.	0.9	4
100	The combined compression and shear of a rectangular rubber block. Zeitschrift Fur Angewandte Mathematik Und Physik, 1992, 43, 911-923.	0.7	3
101	On the derivation of first integrals for similarity solutions. Journal of Engineering Mathematics, 1991, 25, 287-299.	0.6	16
102	On Dankwerts' transformation for two variable coupled systems. Bulletin of the Australian Mathematical Society, 1990, 41, 355-369.	0.3	2
103	THE PRESSURE DISTRIBUTION FOR SYMMETRICAL CONTACT OF CIRCULAR ELASTIC CYLINDERS. Quarterly Journal of Mechanics and Applied Mathematics, 1989, 42, 581-604.	0.5	6
104	On the problem of uncoupling systems of linear differential equations. Journal of the Australian Mathematical Society Series B Applied Mathematics, 1989, 30, 483-501.	0.3	3
105	The Stefan problem in nonlinear heat conduction. Zeitschrift Fur Angewandte Mathematik Und Physik, 1986, 37, 206-229.	0.7	13
106	On pseudo-plane deformations for the neo-Hookean material. Zeitschrift Fur Angewandte Mathematik Und Physik, 1986, 37, 104-113.	0.7	5
107	On the general random walk formulation for diffusion in media with Diffusivities. Journal of the Australian Mathematical Society Series B Applied Mathematics, 1985, 27, 73-87.	0.3	2
108	On an analogy between plane finite elastic deformations and certain magnetohydrodynamic flows. Zeitschrift Fur Angewandte Mathematik Und Physik, 1984, 35, 24-33.	0.7	4

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109	Reduced equilibrium equations for perfectly elastic materials. Journal of Elasticity, 1982, 12, 153-158.	0.9	3
110	Elastic and Particulate Media. Journal of the Engineering Mechanics Division, 1982, 108, 596-604.	0.4	1
111	A discrete random walk model for diffusion in media with double diffusivity. Journal of the Australian Mathematical Society Series B Applied Mathematics, 1980, 22, 58-74.	0.3	12
112	Generalized shear deformations for isotropic incompressible hyperelastic materials. Journal of the Australian Mathematical Society Series B Applied Mathematics, 1977, 20, 129-141.	0.3	6
113	Loadâ€“deflection relations of long cylindrical rubber bush mountings constructed from rectangular blocks. Journal of Applied Polymer Science, 1977, 21, 1459-1467.	1.3	3