James M Hill

List of Publications by Year in Descending Order

107 papers	1,437 citations	19 h-index	33 g-index
115 ext. papers	1,554 ext. citations	2.3 avg, IF	5.12 L-index

#	Paper	IF	Citations
107	Bagnold velocity profile for steady-state dense granular chute flow with base slip. *Rheologica Acta*, **2022**, 61, 207-214	2.3	2
106	Einstein's energy and space isotropy. *Zeitschrift Fur Angewandte Mathematik Und Physik*, **2022**, 73, 1	1.6	0
105	Steady-state similarity velocity profiles for dense granular flow down inclined chutes. *Granular Matter*, **2021**, 23, 1	2.6	0
104	Four states of matter and centrally symmetric de Broglie particle wave mechanical systems. *Mathematics and Mechanics of Solids*, **2021**, 26, 263-284	2.3	4
103	A mechanical model for dark matter and dark energy. *Zeitschrift Fur Angewandte Mathematik Und Physik*, **2021**, 72, 1	1.6	5
102	A review of de Broglie particle wave mechanical systems. *Mathematics and Mechanics of Solids*, **2020**, 25, 1763-1777	2.3	6
101	Continuum Modelling for Interacting Coronene Molecules with a Carbon Nanotube. *Nanomaterials*, **2020**, 10,	5.4	4
100	Modeling Interactions between Graphene and Heterogeneous Molecules. *Computation*, **2020**, 8, 107	2.2	2
99	Interacting Ru(bpy)$_3^{2+}$ Dye Molecules and TiO2 Semiconductor in Dye-Sensitized Solar Cells. *Mathematics*, **2020**, 8, 841	2.3	1
98	The effect of non-covalent functionalization on the interaction energy of carbon nanotubes. *Journal of Physics Communications*, **2019**, 3, 035018	1.2	1
97	Special relativity, de Broglie waves, dark energy and quantum mechanics. *Zeitschrift Fur Angewandte Mathematik Und Physik*, **2019**, 70, 1	1.6	8
96	A Review of Geometry, Construction and Modelling for Carbon Nanotori. *Applied Sciences (Switzerland)*, **2019**, 9, 2301	2.6	7
95	Optimal configurations for interacting carbon nanotori. *Applied Nanoscience (Switzerland)*, **2019**, 9, 225-232	3.3	2
94	Some further comments on special relativity and dark energy. *Zeitschrift Fur Angewandte Mathematik Und Physik*, **2019**, 70, 1	1.6	9
93	Interaction energy for a fullerene encapsulated in a carbon nanotorus. *Zeitschrift Fur Angewandte Mathematik Und Physik*, **2018**, 69, 1	1.6	5
92	Generalized transformations and coordinates for static spherically symmetric general relativity. *Royal Society Open Science*, **2018**, 5, 171109	3.3	2
91	On the formal origins of dark energy. *Zeitschrift Fur Angewandte Mathematik Und Physik*, **2018**, 69, 1	1.6	9

90	Carbon Nanocones with Curvature Effects Close to the Vertex. *Nanomaterials*, **2018**, 8,	5.4	2
89	Equilibrium location for spherical DNA and toroidal cyclodextrin. *Applied Nanoscience (Switzerland)*, **2018**, 8, 537-544	3.3	4
88	Generalised Einstein mass-variation formulae: I Subluminal relative frame velocities. *Results in Physics*, **2016**, 6, 112-121	3.7	1
87	Encapsulation of L-Histidine Amino Acid Inside Single-Walled Carbon Nanotubes. *Journal of Biomaterials and Tissue Engineering*, **2016**, 6, 362-369	0.3	7
86	DESIGN OF A NANOTORI-METALLOFULLERENE LOGIC GATE. *ANZIAM Journal*, **2015**, 57, 29-42	0.5	
85	Carbon nanotori and nanotubes encapsulating carbon atomic-chains. *Journal of Mathematical Chemistry*, **2014**, 52, 1817-1830	2.1	9
84	DNA adsorption on graphene. *European Physical Journal D*, **2013**, 67, 1	1.3	9
83	Instability of C□fullerene interacting with lipid bilayer. *Journal of Molecular Modeling*, **2012**, 18, 549-57	2	31
82	Carbon nanotori as traps for atoms and ions. *Physica B: Condensed Matter*, **2012**, 407, 3479-3483	2.8	15
81	Einstein's special relativity beyond the speed of light. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2012**, 468, 4174-4192	2.4	29
80	Composite Multiwalled Carbon Nanotubes as Memory Devices and Logic Gates. *Journal of Nanotechnology in Engineering and Medicine*, **2012**, 3,		1
79	Orientation of a benzene molecule inside a carbon nanotube. *Journal of Mathematical Chemistry*, **2011**, 49, 1115-1127	2.1	11
78	Encapsulation of methane molecules into carbon nanotubes. *Physica B: Condensed Matter*, **2011**, 406, 88-93	2.8	24
77	Discrete and Continuous Approximations for Nanobuds. *Fullerenes Nanotubes and Carbon Nanostructures*, **2010**, 18, 160-177	1.8	8
76	Electronic properties of carbon nanotubes with distinct bond lengths. *Journal of Applied Physics*, **2010**, 107, 023511	2.5	3
75	General Model for Molecular Interactions in a Benzene Dimer. *Mathematics and Mechanics of Solids*, **2010**, 15, 782-799	2.3	7
74	Adsorption of polycyclic aromatic hydrocarbons on graphite surfaces. *Computational Materials Science*, **2010**, 49, S307-S312	3.2	17
73	Modelling Gas Separation in Porous Membranes **2010**, 85-109		7

72	Modelling the interaction in a benzene dimer. *Philosophical Magazine*, **2010**, 90, 1771-1785	1.6	9
71	Silicon nanotubes with distinct bond lengths. *Journal of Mathematical Chemistry*, **2010**, 47, 569-589	2.1	8
70	On three simple experiments to determine slip lengths. *Microfluidics and Nanofluidics*, **2009**, 6, 611-619	2.8	9
69	Asymptotic analysis of the viscous micro/nano pump at low Reynolds number. *Journal of Engineering Mathematics*, **2009**, 63, 279-292	1.2	4
68	Mechanics of nanoscale orbiting systems. *Journal of Mathematical Chemistry*, **2009**, 46, 1271-1291	2.1	4
67	Nanotube bundle oscillators: Carbon and boron nitride nanostructures. *Physica B: Condensed Matter* , **2009**, 404, 3906-3910	2.8	21
66	Polyhedral model for boron nitride nanotubes **2009**,		1
65	Encapsulation of the anticancer drug cisplatin into nanotubes **2008**,		8
64	Joining a carbon nanotube and a graphene sheet **2008**,		2
63	A carbon atom orbiting around the outside of a carbon nanotube **2008**,		3
62	Carbon molecules oscillating in carbon nanotube bundles **2008**,		2
61	Oscillation of nested fullerenes (carbon onions) in carbon nanotubes. *Journal of Nanoparticle Research*, **2008**, 10, 665-677	2.3	20
60	Equilibrium locations for nested carbon nanocones. *Journal of Mathematical Chemistry*, **2008**, 43, 1489-1504	2.1	15
59	Toroidal molecules formed from three distinct carbon nanotubes. *Journal of Mathematical Chemistry*, **2008**, 44, 515-527	2.1	9
58	Effect of slip on the linear stability of flow through a tube. *Zeitschrift Fur Angewandte Mathematik Und Physik*, **2008**, 59, 360-379	1.6	5
57	Lubrication analysis of the viscous micro/nano pump with slip. *Microfluidics and Nanofluidics*, **2008**, 4, 439-449	2.8	10
56	Geometric structure of ultra-small carbon nanotubes. *Carbon*, **2008**, 46, 711-713	10.4	21
55	Laplace transforms and the Riemann zeta function. *Integral Transforms and Special Functions*, **2007**, 18, 193-205	1	0

54	New Carbon Molecules in the Form of Elbow-Connected Nanotori. *Journal of Physical Chemistry C*, **2007**, 111, 10855-10860	3.8	18
53	Oscillating carbon nanotori along carbon nanotubes. *Physical Review B*, **2007**, 75,	3.3	42
52	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	2.4	149
51	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	2.4	115
50	Exact and approximate geometric parameters for carbon nanotubes incorporating curvature. *Carbon*, **2007**, 45, 1453-1462	10.4	49
49	Electrostatic force between coated conducting spheres with applications to electrorheological nanofluids. *Journal of Electrostatics*, **2007**, 65, 680-688	1.7	5
48	Determination of nanolayer thickness for a nanofluid. *International Communications in Heat and Mass Transfer*, **2007**, 34, 399-407	5.8	69
47	Force distribution for double-walled carbon nanotubes and gigahertz oscillators. *Zeitschrift Fur Angewandte Mathematik Und Physik*, **2007**, 58, 857-875	1.6	58
46	Asymptotic Axially Symmetric Deformations for Perfectly Elastic Neo-Hookean and Mooney Materials. *Journal of Elasticity*, **2007**, 86, 113-137	1.5	2
45	Mechanics of fullerenes oscillating in carbon nanotube bundles. *Journal of Physics A: Mathematical and Theoretical*, **2007**, 40, 13197-13208	2	16
44	Zigzag and spiral configurations for fullerenes in carbon nanotubes. *Journal of Physics A: Mathematical and Theoretical*, **2007**, 40, 7543-7556	2	11
43	Continuous versus discrete for interacting carbon nanostructures. *Journal of Physics A: Mathematical and Theoretical*, **2007**, 40, 3851-3868	2	36
42	Micro/nano thermal boundary layer equations with slip creep jump boundary conditions. *IMA Journal of Applied Mathematics*, **2007**, 72, 894-911	1	16
41	Modelling the encapsulation of the anticancer drug cisplatin into carbon nanotubes. *Nanotechnology*, **2007**, 18, 275704	3.4	89
40	Mechanics of spheroidal fullerenes and carbon nanotubes for drug and gene delivery. *Quarterly Journal of Mechanics and Applied Mathematics*, **2007**, 60, 231-253	1	18
39	Encapsulation of C60 fullerenes into single-walled carbon nanotubes: Fundamental mechanical principles and conventional applied mathematical modeling. *Physical Review B*, **2007**, 76,	3.3	24
38	Orbiting atoms and C60 fullerenes inside carbon nanotori. *Journal of Applied Physics*, **2007**, 101, 064319	2.5	50
37	Micro/nano sliding plate problem with Navier boundary condition. *Zeitschrift Fur Angewandte Mathematik Und Physik*, **2006**, 57, 875-903	1.6	10

36	Electric field-induced force between two identical uncharged spheres. *Applied Physics Letters*, **2006**, 88, 152903	3.4	16
35	Force Distribution for Double-Walled Carbon Nanotubes **2006**,		2
34	Flow around nanospheres and nanocylinders. *Quarterly Journal of Mechanics and Applied Mathematics*, **2006**, 59, 191-210	1	33
33	Maximising the electrorheological effect for bidisperse nanofluids from the electrostatic force between two particles. *Rheologica Acta*, **2006**, 45, 909-917	2.3	5
32	Perturbation solutions for highly frictional granular media. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2005**, 461, 21-42	2.4	6
31	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	2.4	3
30	Some exact velocity profiles for granular flow in converging hoppers. *Zeitschrift Fur Angewandte Mathematik Und Physik*, **2005**, 56, 92-106	1.6	13
29	Symmetry analysis for uniaxial compression of a hypoplastic granular material. *Zeitschrift Fur Angewandte Mathematik Und Physik*, **2005**, 56, 1061-1083	1.6	2
28	Curve Fitting, Differential Equations And The Riemann Hypothesis. *Ramanujan Journal*, **2005**, 9, 357-372	0.7	1
27	New stress and velocity fields for highly frictional granular materials. *IMA Journal of Applied Mathematics*, **2004**, 70, 92-118	1	5
26	Stress distributions in highly frictional granular heaps. *Zeitschrift Fur Angewandte Mathematik Und Physik*, **2004**, 55, 330-356	1.6	6
25	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		
24	Nonlinear Plane Waves in Finite Deformable Infinite Mooney Elastic Materials. *Journal of Elasticity*, **2002**, 67, 71-80	1.5	3
23	Stress profiles for tapered cylindrical cavities in granular media. *International Journal of Solids and Structures*, **2001**, 38, 3795-3811	3.1	8
22	Non-dilatant double-shearing theory applied to granular funnel-flow in hoppers. *Journal of Engineering Mathematics*, **2001**, 41, 55-73	1.2	13
21	Cylindrical cavities and classical rat-hole theory occurring in bulk materials. *International Journal for Numerical and Analytical Methods in Geomechanics*, **2000**, 24, 971-990	4	15
20	Analysis of flux flow and the formation of oscillation marks in the continuous caster. *Journal of Engineering Mathematics*, **1999**, 36, 311-326	1.2	21
19	On the General Structure of Small on Large Problems for Elastic Deformations of Varga Materials I: Plane Strain Deformations. *Journal of Elasticity*, **1999**, 54, 193-212	1.5	2