

Gert H M Van Der Heijden

List of Publications by Year in descending order

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73
papers

1,732
citations

331670

21
h-index

289244

40
g-index

75
all docs

75
docs citations

75
times ranked

1179
citing authors

#	ARTICLE	IF	CITATIONS
1	Collagen Fibrils: Nanoscale Ropes. <i>Biophysical Journal</i> , 2007, 92, 70-75.	0.5	217
2	The shape of a Möbius strip. <i>Nature Materials</i> , 2007, 6, 563-567.	27.5	182
3	Instability and self-contact phenomena in the writhing of clamped rods. <i>International Journal of Mechanical Sciences</i> , 2003, 45, 161-196.	6.7	117
4	Helical and Localised Buckling in Twisted Rods: A Unified Analysis of the Symmetric Case. <i>Nonlinear Dynamics</i> , 2000, 21, 71-99.	5.2	112
5	Supercoiling of DNA plasmids: mechanics of the generalized ply. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2002, 458, 959-985.	2.1	72
6	The static deformation of a twisted elastic rod constrained to lie on a cylinder. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2001, 457, 695-715.	2.1	63
7	Geometry and Mechanics of Uniform n-Plies: from Engineering Ropes to Biological Filaments. <i>Journal of Elasticity</i> , 2002, 69, 41-72.	1.9	63
8	Spatially complex localisation in twisted elastic rods constrained to a cylinder. <i>International Journal of Solids and Structures</i> , 2002, 39, 1863-1883.	2.7	55
9	Triangular buckling patterns of twisted inextensible strips. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2011, 467, 285-303.	2.1	41
10	Tension-Induced Multistability in Inextensible Helical Ribbons. <i>Physical Review Letters</i> , 2008, 101, 084301.	7.8	40
11	Equilibrium Shapes with Stress Localisation for Inextensible Elastic Möbius and Other Strips. <i>Journal of Elasticity</i> , 2015, 119, 67-112.	1.9	39
12	Spatially complex localization after one-twist-per-wave equilibria in twisted circular rods with initial curvature. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 1997, 355, 2151-2174.	3.4	37
13	Lock-on to tape-like behaviour in the torsional buckling of anisotropic rods. <i>Physica D: Nonlinear Phenomena</i> , 1998, 112, 201-224.	2.8	33
14	Helical post-buckling of a rod in a cylinder: with applications to drill-strings. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2012, 468, 1591-1614.	2.1	32
15	Writhing instabilities of twisted rods: from infinite to finite length. <i>Journal of the Mechanics and Physics of Solids</i> , 2002, 50, 1175-1191.	4.8	30
16	Localised lateral buckling of partially embedded subsea pipelines with nonlinear soil resistance. <i>Thin-Walled Structures</i> , 2017, 120, 408-420.	5.3	30
17	Theory of equilibria of elastic 2-braids with interstrand interaction. <i>Journal of the Mechanics and Physics of Solids</i> , 2014, 64, 83-132.	4.8	28
18	Localised upheaval buckling of buried subsea pipelines. <i>Marine Structures</i> , 2018, 60, 165-185.	3.8	28

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19	Analytical study of lateral thermal buckling for subsea pipelines with sleeper. <i>Thin-Walled Structures</i> , 2018, 122, 17-29.	5.3	28
20	The Spatial Complexity of Localized Buckling in Rods with Noncircular Cross Section. <i>SIAM Journal on Applied Mathematics</i> , 1998, 59, 198-221.	1.8	24
21	Analytical study of distributed buoyancy sections to control lateral thermal buckling of subsea pipelines. <i>Marine Structures</i> , 2018, 58, 199-222.	3.8	24
22	Force and moment balance equations for geometric variational problems on curves. <i>Physical Review E</i> , 2009, 79, 066602.	2.1	22
23	Quantified "Shock-Sensitivity" Above the Maxwell Load. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2014, 24, 1430009.	1.7	19
24	Snap behaviour in the upheaval buckling of subsea pipelines under topographic step imperfection. <i>Marine Structures</i> , 2020, 69, 102674.	3.8	18
25	Ecomorphology reveals Euler spiral of mammalian whiskers. <i>Journal of Morphology</i> , 2020, 281, 1271-1279.	1.2	18
26	The Euler spiral of rat whiskers. <i>Science Advances</i> , 2020, 6, eaax5145.	10.3	18
27	Spatially complex localisation in twisted elastic rods constrained to lie in the plane. <i>Journal of the Mechanics and Physics of Solids</i> , 1998, 47, 59-79.	4.8	17
28	Chiral effects in dual-DNA braiding. <i>Soft Matter</i> , 2013, 9, 9833.	2.7	17
29	Analytical study of third-mode lateral thermal buckling for unburied subsea pipelines with sleeper. <i>Engineering Structures</i> , 2018, 168, 447-461.	5.3	17
30	On end rotation for open rods undergoing large deformations. <i>Quarterly of Applied Mathematics</i> , 2007, 65, 385-402.	0.7	16
31	The equilibrium shape of an elastic developable Möbius strip. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2007, 7, 2020115-2020116.	0.2	15
32	Bifurcation and chaos in drillstring dynamics. <i>Chaos, Solitons and Fractals</i> , 1993, 3, 219-247.	5.1	14
33	Matched asymptotic expansions for bent and twisted rods: applications for cable and pipeline laying. <i>Journal of Engineering Mathematics</i> , 2000, 38, 13-31.	1.2	13
34	Feature Extraction and Geomagnetic Matching. <i>Journal of Navigation</i> , 2013, 66, 799-811.	1.7	13
35	Helical Collapse of a Whirling Elastic Rod Forced to Lie on a Cylinder. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2003, 70, 771-774.	2.2	11
36	Self-Contact for Rods on Cylinders. <i>Archive for Rational Mechanics and Analysis</i> , 2006, 182, 471-511.	2.4	11

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37	Bifurcation sequences in the interaction of resonances in a model deriving from nonlinear rotordynamics: The zipper. <i>Dynamical Systems</i> , 2000, 15, 159-183.	0.7	10
38	Cascade unlooping of a low-pitch helical spring under tension. <i>Journal of the Mechanics and Physics of Solids</i> , 2009, 57, 959-969.	4.8	10
39	Elasto-plastic and geometrically nonlinear vibrations of beams by the p-version finite element method. <i>Journal of Sound and Vibration</i> , 2009, 325, 321-337.	3.9	10
40	Dynamic analysis of a tapered cantilever beam under a travelling mass. <i>Meccanica</i> , 2015, 50, 1419-1429.	2.0	10
41	Application of topological conservation to model key features of zero-torque multi-ply yarns. <i>Journal of the Textile Institute</i> , 2008, 99, 325-337.	1.9	9
42	Curvature-induced electron localization in developable Möbius-like nanostructures. <i>Journal of Physics Condensed Matter</i> , 2009, 21, 495301.	1.8	9
43	Magnetically-Induced Buckling of Whirling Conducting Rod with Applications to Electrodynamic Space Tethers. <i>Journal of Nonlinear Science</i> , 2010, 20, 309-339.	2.1	9
44	Shock sensitivity in the localised buckling of a beam on a nonlinear foundation: The case of a trenched subsea pipeline. <i>Journal of the Mechanics and Physics of Solids</i> , 2020, 143, 104044.	4.8	9
45	Birdcaging and the collapse of rods and cables in fixed-grip compression. <i>International Journal of Solids and Structures</i> , 2001, 38, 4265-4278.	2.7	8
46	Spatial chaos of an extensible conducting rod in a uniform magnetic field. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2009, 42, 375207.	2.1	8
47	The chaotic instability of a slowly spinning asymmetric top. <i>Mathematical and Computer Modelling</i> , 2002, 36, 359-369.	2.0	7
48	A graphical criterion for the instability of elastic equilibria under multiple loads: with applications to drill-strings. <i>International Journal of Mechanical Sciences</i> , 2013, 68, 160-170.	6.7	7
49	Characterisation of cylindrical curves. <i>Monatshefte Fur Mathematik</i> , 2015, 176, 481-491.	0.9	7
50	Integrability of a conducting elastic rod in a magnetic field. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2008, 41, 045207.	2.1	6
51	Torsional properties of staple fibre plied yarns. <i>Journal of the Textile Institute</i> , 2010, 101, 595-612.	1.9	6
52	Comment on "Statistical Mechanics of Developable Ribbons". <i>Physical Review Letters</i> , 2011, 107, 239801; discussion 239802.	7.8	6
53	Planar dynamics of large-deformation rods under moving loads. <i>Journal of Sound and Vibration</i> , 2018, 412, 309-325.	3.9	6
54	Mode jumping in the lateral buckling of subsea pipelines. <i>Marine Structures</i> , 2021, 80, 103077.	3.8	6

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55	The torsional buckling and writhing of a simply supported rod hanging under gravity. <i>International Journal of Solids and Structures</i> , 2001, 38, 795-813.	2.7	5
56	A Two-Strand Ply Hanging Under Its Own Weight. <i>Nonlinear Dynamics</i> , 2006, 43, 197-208.	5.2	5
57	On the theory of localised snarling instabilities in false-twist yarn processes. <i>Journal of Engineering Mathematics</i> , 2008, 61, 81-95.	1.2	5
58	Horseshoes for the nearly symmetric heavy top. <i>Zeitschrift Fur Angewandte Mathematik Und Physik</i> , 2014, 65, 221-240.	1.4	5
59	Dynamic torsional buckling: Prebuckling waves and delayed instability. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2019, 69, 360-369.	3.3	5
60	Mode-locking in nonlinear rotordynamics. <i>Journal of Nonlinear Science</i> , 1995, 5, 257-283.	2.1	4
61	Nonintegrability of an extensible conducting rod in a uniform magnetic field. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2011, 44, 495101.	2.1	4
62	Experiments on Snap Buckling, Hysteresis and Loop Formation in Twisted Rods. <i>Experimental Mechanics</i> , 2005, 45, 101-111.	2.0	4
63	Tightening elastic (n , 2)-torus knots. <i>Journal of Physics: Conference Series</i> , 2014, 544, 012007.	0.4	3
64	Forceless Sadowsky strips are spherical. <i>Physical Review E</i> , 2018, 97, 023001.	2.1	3
65	Helical buckling of a whirling conducting rod in a uniform magnetic field. <i>International Journal of Non-Linear Mechanics</i> , 2012, 47, 38-53.	2.6	2
66	Vibrations of beams and rods carrying a moving mass. <i>Journal of Physics: Conference Series</i> , 2016, 721, 012016.	0.4	2
67	Buckling between soft walls: sequential stabilization through contact. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2021, 477, .	2.1	2
68	Dynamics and stability of slender structures carrying a moving load or mass. <i>Procedia Engineering</i> , 2017, 199, 2609-2614.	1.2	1
69	Patterns of Bifurcation Suppressing Escape at Internal Resonance. <i>Solid Mechanics and Its Applications</i> , 2005, , 69-78.	0.2	1
70	Comment on Y.-C. Chen, E. Fried, Möbius bands, unstretchable material sheets and developable surfaces. <i>Proc. R. Soc. A</i> 472, 20160459 (2016). <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2022, 478, .	2.1	1
71	Guidance and control of a cruise missile flying along a geomagnetic isoline. <i>Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering</i> , 2014, 228, 1215-1224.	1.3	0
72	Homoclinic complexity in the localised buckling of an extensible conducting rod in a uniform magnetic field. <i>Physica D: Nonlinear Phenomena</i> , 2014, 284, 42-52.	2.8	0

#	ARTICLE	IF	CITATIONS
73	Analytical Study for Lateral Buckling of Imperfect Pipelines With Distributed Buoyancy Section. , 2019, , ·		0