

# Rainer M J Groh

## List of Publications by Year in descending order

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52  
papers

1,140  
citations

394421

19  
h-index

434195

31  
g-index

54  
all docs

54  
docs citations

54  
times ranked

595  
citing authors

#	ARTICLE	IF	CITATIONS
1	A geometrically nonlinear variable-kinematics continuum shell element for the analyses of laminated composites. <i>Finite Elements in Analysis and Design</i> , 2022, 202, 103697.	3.2	0
2	A morphoelastic stability framework for post-critical pattern formation in growing thin biomaterials. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2022, 394, 114839.	6.6	4
3	Nonlinear Buckling and Postbuckling Analysis of Tow-Steered Composite Cylinders with Cutouts. <i>AIAA Journal</i> , 2022, 60, 5533-5546.	2.6	1
4	A mixed inverse differential quadrature method for static analysis of constant- and variable-stiffness laminated beams based on Hellinger-Reissner mixed variational formulation. <i>International Journal of Solids and Structures</i> , 2021, 210-211, 66-87.	2.7	28
5	Experimental path-following of equilibria using Newton's method. Part I: Theory, modelling, experiments. <i>International Journal of Solids and Structures</i> , 2021, 210-211, 203-223.	2.7	13
6	Aeroelastic and local buckling optimisation of a variable-angle-tow composite wing-box structure. <i>Composite Structures</i> , 2021, 258, 113201.	5.8	13
7	Optimisation of Imperfection-Insensitive Continuous Tow Sheared Rocket Launch Structures. , 2021, , .		5
8	Experimental path-following of equilibria using Newton's method. Part II: Applications and outlook. <i>International Journal of Solids and Structures</i> , 2021, 213, 25-40.	2.7	15
9	Editorial: Nonlinear Structured Materials. <i>Frontiers in Materials</i> , 2021, 8, .	2.4	0
10	Imperfection-insensitive continuous tow-sheared cylinders. <i>Composite Structures</i> , 2021, 260, 113445.	5.8	15
11	Snaking and laddering in axially compressed cylinders. <i>International Journal of Mechanical Sciences</i> , 2021, 196, 106297.	6.7	13
12	Design of Shape-Adaptive Deployable Slat-Cove Filler for Airframe Noise Reduction. <i>Journal of Aircraft</i> , 2021, 58, 1034-1050.	2.4	4
13	A strain-displacement mixed formulation based on the modified couple stress theory for the flexural behaviour of laminated beams. <i>Composites Part B: Engineering</i> , 2020, 185, 107740.	12.0	12
14	Beyond the fold: experimentally traversing limit points in nonlinear structures. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2020, 476, 20190576.	2.1	7
15	Maxwell tipping points: the hidden mechanics of an axially compressed cylindrical shell. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2020, 476, 20200273.	2.1	5
16	An efficient semi-analytical framework to tailor snap-through loads in bistable variable stiffness laminates. <i>International Journal of Solids and Structures</i> , 2020, 195, 91-107.	2.7	30
17	Exploring Adaptive Behavior of Non-linear Hexagonal Frameworks. <i>Frontiers in Materials</i> , 2020, 7, .	2.4	0
18	Happy Catastrophe: Recent Progress in Analysis and Exploitation of Elastic Instability. <i>Frontiers in Applied Mathematics and Statistics</i> , 2019, 5, .	1.3	28

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19	Spatial chaos as a governing factor for imperfection sensitivity in shell buckling. <i>Physical Review E</i> , 2019, 100, 032205.	2.1	18
20	Three-dimensional stress analyses of complex laminated shells with a variable-kinematics continuum shell element. <i>Composite Structures</i> , 2019, 229, 111405.	5.8	5
21	On the accuracy of localised 3D stress fields in tow-steered laminated composite structures. <i>Composite Structures</i> , 2019, 225, 111034.	5.8	14
22	On the role of localizations in buckling of axially compressed cylinders. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2019, 475, 20190006.	2.1	40
23	Nudging Axially Compressed Cylindrical Panels Toward Imperfection Insensitivity. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2019, 86, .	2.2	12
24	Efficient 3D Stress Capture of Variable-Stiffness and Sandwich Beam Structures. <i>AIAA Journal</i> , 2019, 57, 4042-4056.	2.6	12
25	Localised post-buckling states of axially compressed cylinders and their energy barriers. , 2019, , .		4
26	Quasi-static experimental path-following. , 2019, , .		2
27	Efficient 3D Stress Capture of Variable Stiffness and Sandwich Beam Structures. , 2019, , .		2
28	Bridging the gap between material science and human-computer interaction. <i>Interactions</i> , 2019, 26, 64-69.	1.0	5
29	HCI meets Material Science. , 2018, , .		67
30	Exploring the design space of nonlinear shallow arches with generalised path-following. <i>Finite Elements in Analysis and Design</i> , 2018, 143, 1-10.	3.2	14
31	Generalised path-following for well-behaved nonlinear structures. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2018, 331, 394-426.	6.6	91
32	A Tailored Nonlinear Slat-Cove Filler for Airframe Noise Reduction. , 2018, , .		0
33	Design and testing of a passively adaptive inlet. <i>Smart Materials and Structures</i> , 2018, 27, 085019.	3.5	12
34	Three-dimensional stress analysis for laminated composite and sandwich structures. <i>Composites Part B: Engineering</i> , 2018, 155, 299-328.	12.0	46
35	Modal nudging in nonlinear elasticity: Tailoring the elastic post-buckling behaviour of engineering structures. <i>Journal of the Mechanics and Physics of Solids</i> , 2018, 116, 135-149.	4.8	29
36	Orthotropy as a driver for complex stability phenomena in cylindrical shell structures. <i>Composite Structures</i> , 2018, 198, 63-72.	5.8	14

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37	Shape Control for Experimental Continuation. <i>Physical Review Letters</i> , 2018, 120, 254101.	7.8	29
38	Extreme mechanics in laminated shells: New insights. <i>Extreme Mechanics Letters</i> , 2018, 23, 17-23.	4.1	7
39	Investigation of failure initiation in curved composite laminates using a higher-order beam model. <i>Composite Structures</i> , 2017, 168, 143-152.	5.8	10
40	Computationally efficient beam elements for accurate stresses in sandwich laminates and laminated composites with delaminations. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2017, 320, 369-395.	6.6	53
41	Adaptive compliant structures for flow regulation. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2017, 473, 20170334.	2.1	43
42	Post-buckling analysis of variable-angle tow composite plates using Koiter's approach and the finite element method. <i>Thin-Walled Structures</i> , 2017, 110, 1-13.	5.3	63
43	A computationally efficient 2D model for inherently equilibrated 3D stress predictions in heterogeneous laminated plates. Part II: Model validation. <i>Composite Structures</i> , 2016, 156, 186-217.	5.8	30
44	A computationally efficient 2D model for inherently equilibrated 3D stress predictions in heterogeneous laminated plates. Part I: Model formulation. <i>Composite Structures</i> , 2016, 156, 171-185.	5.8	38
45	Mixed shell element for static and buckling analysis of variable angle tow composite plates. <i>Composite Structures</i> , 2016, 152, 324-338.	5.8	43
46	Deleterious localized stress fields: the effects of boundaries and stiffness tailoring in anisotropic laminated plates. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2016, 472, 20160391.	2.1	8
47	Higher-order beam model for stress predictions in curved beams made from anisotropic materials. <i>International Journal of Solids and Structures</i> , 2016, 97-98, 16-28.	2.7	26
48	On displacement-based and mixed-variational equivalent single layer theories for modelling highly heterogeneous laminated beams. <i>International Journal of Solids and Structures</i> , 2015, 59, 147-170.	2.7	58
49	Static inconsistencies in certain axiomatic higher-order shear deformation theories for beams, plates and shells. <i>Composite Structures</i> , 2015, 120, 231-245.	5.8	54
50	Buckling analysis of variable angle tow, variable thickness panels with transverse shear effects. <i>Composite Structures</i> , 2014, 107, 482-493.	5.8	64
51	A 2D equivalent single-layer formulation for the effect of transverse shear on laminated plates with curvilinear fibres. <i>Composite Structures</i> , 2013, 100, 464-478.	5.8	30
52	Localization and snaking in axially compressed and internally pressurized thin cylindrical shells. <i>IMA Journal of Applied Mathematics</i> , 0, , .	1.6	2