Georgios I Giannopoulos

List of Publications by Year
in descending order

61 papers	1,175 citations	471509 17 h-index	395702 33 g-index
62 all docs	62 docs citations	62 times ranked	980 citing authors

#	Article	IF	Citations
1	Nonlinear Finite Element Analysis of Î³-Graphyne Structures under Shearing. Molecules, 2022, 27, 1729.	3.8	4
2	Thermomechanical Behavior of Bone-Shaped SWCNT/Polyethylene Nanocomposites via Molecular Dynamics. Materials, 2021, 14, 2192.	2.9	3
3	Additive Manufacturing for Effective Smart Structures: The Idea of 6D Printing. Journal of Composites Science, 2021, 5, 119.	3.0	33
4	Design of Laminated Composite Plates with Carbon Nanotube Inclusions against Buckling: Waviness and Agglomeration Effects. Nanomaterials, 2021, 11, 2261.	4.1	17
5	A Tunable Metamaterial Joint for Mechanical Shock Applications Inspired by Carbon Nanotubes. Applied Sciences (Switzerland), 2021, 11, 11139.	2.5	1
6	Vibration Analysis of Carbon Fiber-Graphene-Reinforced Hybrid Polymer Composites Using Finite Element Techniques. Materials, 2020, 13, 4225.	2.9	18
7	Thermomechanical Response of Fullerene-Reinforced Polymers by Coupling MD and FEM. Materials, 2020, 13, 4132.	2.9	5
8	Mechanical properties of hexagonal boron nitride monolayers: Finite element and analytical predictions. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2020, 234, 4126-4135.	2.1	7
9	Introducing bone-shaped carbon nanotubes to reinforce polymer nanocomposites: A molecular dynamics investigation. Materials Today Communications, 2019, 20, 100570.	1.9	4
10	Linking MD and FEM to predict the mechanical behaviour of fullerene reinforced nylon-12. Composites Part B: Engineering, 2019, 161, 455-463.	12.0	19
11	Combining FEM and MD to simulate C60/PA-12 nanocomposites. International Journal of Structural Integrity, 2019, 10, 380-392.	3.3	1
12	Damage characteristics in laminated composite structures subjected to low-velocity impact. International Journal of Structural Integrity, 2019, 11, 670-685.	3.3	13
13	On the buckling of hexagonal boron nitride nanoribbons via structural mechanics. Superlattices and Microstructures, 2018, 115, 1-9.	3.1	12
14	Genetic-Based Optimization of the Manufacturing Process of a Robotic Arm under Fuzziness. Mathematical Problems in Engineering, 2018, 2018, 1-12.	1.1	3
15	A model of low-velocity impact damage assessment of laminated composite structures. MATEC Web of Conferences, 2018, 188, 01012.	0.2	2
16	Multiscale simulation of fullerene reinforced composite structures: From molecular dynamics to finite element continuum mechanics. MATEC Web of Conferences, 2018, 188, 01013.	0.2	0
17	Finite Element Modeling of Nanotubes. , 2018, , 291-310.		1
18	Mechanical behavior of planar borophenes: A molecular mechanics study. Computational Materials Science, 2017, 129, 304-310.	3.0	22

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19	Crack Identification in Graphene Using Eigenfrequencies. International Journal of Applied Mechanics, 2017, 09, 1750009.	2.2	10
20	Designing pinhole vacancies in graphene towards functionalization: Effects on critical buckling load. Superlattices and Microstructures, 2017, 103, 343-357.	3.1	6
21	Establishing detection maps for carbon nanotube mass sensors: molecular versus continuum mechanics. Acta Mechanica, 2017, 228, 2377-2390.	2.1	9
22	Tensile behavior of gallium nitride monolayer via nonlinear molecular mechanics. European Journal of Mechanics, A/Solids, 2017, 65, 223-232.	3.7	4
23	Tensile strength of graphene versus temperature and crack size: Analytical expressions from molecular dynamics simulation data. Proceedings of the Institution of Mechanical Engineers, Part N: Journal of Nanomaterials, Nanoengineering and Nanosystems, 2017, 231, 67-73.	0.6	0
24	Thermomechanical buckling of single walled carbon nanotubes by a structural mechanics method. Diamond and Related Materials, 2017, 80, 27-37.	3.9	15
25	Characterizing the Energy Storage in Unidirectionally Packed Single Walled Carbon Nanotube Bundles. Journal of Computational and Theoretical Nanoscience, 2017, 14, 5606-5616.	0.4	0
26	Coupled thermomechanical behavior of graphene using the spring-based finite element approach. Journal of Applied Physics, 2016, 120, .	2.5	16
27	Efficient FEM simulation of static and free vibration behavior of single walled boron nitride nanotubes. Superlattices and Microstructures, 2016, 96, 111-120.	3.1	76
28	Analytical expressions for electrostatics of graphene structures. Physica E: Low-Dimensional Systems and Nanostructures, 2016, 84, 27-36.	2.7	6
29	Numerical stability analysis of imperfect single-walled carbon nanotubes under axial compressive loads. International Journal of Structural Integrity, 2015, 6, 423-438.	3.3	3
30	Planning the construction process of a robotic arm using a genetic algorithm. International Journal of Advanced Manufacturing Technology, 2015, 79, 1293-1302.	3.0	11
31	Coupled vibration response of a shaft with a breathing crack. Journal of Sound and Vibration, 2015, 336, 191-206.	3.9	37
32	A Heterogeneous Discrete Approach of Interfacial Effects on Multi-Scale Modelling of Carbon Nanotube and Graphene Based Composites. Springer Series in Materials Science, 2014, , 83-109.	0.6	1
33	Fullerenes as mass sensors: A numerical investigation. Physica E: Low-Dimensional Systems and Nanostructures, 2014, 56, 36-42.	2.7	14
34	Mechanical properties of graphene based nanocomposites incorporating a hybrid interphase. Finite Elements in Analysis and Design, 2014, 90, 31-40.	3.2	62
35	Mechanical vibrations of carbon nanotube-based mass sensors: an analytical approach. Sensor Review, 2014, 34, 319-326.	1.8	2
36	The Effect of Atom Vacancy Defect on the Vibrational Behavior of Single-Walled Carbon Nanotubes: A Structural Mechanics Approach. Advances in Mechanical Engineering, 2014, 6, 291645.	1.6	9

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37	Prediction of Elastic Mechanical Behavior and Stability of Single-Walled Carbon Nanotubes Using Bar Elements. Mechanics of Advanced Materials and Structures, 2013, 20, 730-741.	2.6	20
38	Radial Stiffness and Natural Frequencies of Fullerenes via a Structural Mechanics Spring-based Method. Fullerenes Nanotubes and Carbon Nanostructures, 2013, 21, 248-257.	2.1	19
39	Elastic buckling and flexural rigidity of graphene nanoribbons by using a unique translational spring element per interatomic interaction. Computational Materials Science, 2012, 53, 388-395.	3.0	42
40	Size-dependent non-linear mechanical properties of graphene nanoribbons. Computational Materials Science, 2011, 50, 2057-2062.	3.0	71
41	Parametric study of elastic mechanical properties of graphene nanoribbons by a new structural mechanics approach. Physica E: Low-Dimensional Systems and Nanostructures, 2011, 44, 124-134.	2.7	46
42	Effective Young's Modulus of Carbon Nanotube Composites: From Multi-Scale Finite Element Predictions to an Analytical Rule. Journal of Computational and Theoretical Nanoscience, 2010, 7, 1436-1442.	0.4	15
43	On the coupling of axial and shear deformations of single-walled carbon nanotubes and graphene: a numerical study. Proceedings of the Institution of Mechanical Engineers, Part N: Journal of Nanoengineering and Nanosystems, 2010, 224, 163-172.	0.1	6
44	A semi-continuum finite element approach to evaluate the Youngâ€™s modulus of single-walled carbon nanotube reinforced composites. Composites Part B: Engineering, 2010, 41, 594-601.	12.0	65
45	Numerical investigation of elastic mechanical properties of graphene structures. Materials & Design, 2010, 31, 4646-4654.	5.1	119
46	A Numerical Investigation on the Influence of Steel Fiber Shape and Interface Strength in Reinforced Concrete. Composite Interfaces, 2010, 17, 319-336.	2.3	2
47	An efficient numerical model for vibration analysis of single-walled carbon nanotubes. Computational Mechanics, 2009, 43, 731-741.	4.0	47
48	Investigation of stressâ€“strain behavior of single walled carbon nanotube/rubber composites by a multi-scale finite element method. Theoretical and Applied Fracture Mechanics, 2009, 52, 158-164.	4.7	51
49	Thermomechanical Interfacial Crack Closure: A BEM Approach. , 2009, , 451-464.		0
50	Prediction of the twisting moment and axial force in a circular rubber cylinder for combined extension and torsion based on the logarithmic strain approach. Journal of Applied Polymer Science, 2008, 110, 1028-1033.	2.6	0
51	Evaluation of the effective mechanical properties of single walled carbon nanotubes using a spring based finite element approach. Computational Materials Science, 2008, 41, 561-569.	3.0	131
52	EVALUATION OF VIBRATIONAL CHARACTERISTICS OF CARBON NANOTUBE RESONATORS. , 2008, , .		0
53	Mixed Finite Element Analysis of Elastomeric Butt-Joints. Journal of Engineering Materials and Technology, Transactions of the ASME, 2007, 129, 11-18.	1.4	4
54	Micromechanical modeling of mechanical behavior of Tiâ€“6Alâ€“4V/TiB composites using FEM analysis. Computational Materials Science, 2007, 39, 437-445.	3.0	10

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55	A BEM analysis for thermomechanical closure of interfacial cracks incorporating friction and thermal resistance. Computer Methods in Applied Mechanics and Engineering, 2007, 196, 1018-1029.	6.6	27
56	A comparative study on the failure resistance of thermal barrier coatings. Computers and Structures, 2006, 84, 1958-1964.	4.4	7
57	Boundary-only element analysis of crack contact under thermal shock. Engineering Fracture Mechanics, 2005, 72, 33-48.	4.3	6
58	Finite element analysis of crack closure in two-dimensional bodies subjected to heating. Computers and Structures, 2005, 83, 303-314.	4.4	9
59	Interfacial steady-state and transient thermal fracture of dissimilar media using the boundary element contact analysis. International Journal for Numerical Methods in Engineering, 2005, 62, 1399-1420.	2.8	7
60	Thermal fracture interference: a two-dimensional boundary element approach. International Journal of Fracture, 2005, 132, 351-369.	2.2	15
61	Mechanical Characterization of Boron-Nitride Nanoribbons via Nonlinear Structural Mechanics. Journal of Nano Research, 0, 40, 58-71.	0.8	7