

# Giuseppe Vairo

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

74  
papers

1,470  
citations

20  
h-index

36  
g-index

75  
ext. papers

1,663  
ext. citations

2.8  
avg. IF

5.11  
L-index

#	Paper	IF	Citations
74	A computational insight on damage-based constitutive modelling in femur mechanics. <i>European Journal of Mechanics, A/Solids</i> , <b>2022</b> , 93, 104538	3.7	2
73	Elasto-damage mechanics of osteons: A bottom-up multiscale approach. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2022</b> , 104962	5	0
72	Mechano-chemo-biological Computational Models for Arteries in Health, Disease and Healing: From Tissue Remodelling to Drug-eluting Devices. <i>Current Pharmaceutical Design</i> , <b>2021</b> , 27, 1904-1917	3.3	2
71	Computational multiscale modelling of soft tissues mechanics: Application to tendons and ligaments <b>2021</b> , 121-153		1
70	Mechanical performance of Anatomic-Functional-Geometry dental treatments: A computational study. <i>Medical Engineering and Physics</i> , <b>2020</b> , 86, 96-108	2.4	1
69	Structural Assessment of the DTT Poloidal Field Coil System. <i>IEEE Transactions on Applied Superconductivity</i> , <b>2020</b> , 30, 1-5	1.8	3
68	Effective mechanical response of non-linear heterogeneous materials comprising bimodular phases. <i>European Journal of Mechanics, A/Solids</i> , <b>2020</b> , 81, 103962	3.7	1
67	A Patient-Specific Mechanical Modeling of Metastatic Femurs. <i>Lecture Notes in Mechanical Engineering</i> , <b>2020</b> , 868-880	0.4	
66	Basalt-Based FRP Composites as Strengthening of Reinforced Concrete Members: Experimental and Theoretical Insights. <i>Lecture Notes in Mechanical Engineering</i> , <b>2020</b> , 472-486	0.4	
65	Fracture risk assessment in metastatic femurs: a patient-specific CT-based finite-element approach. <i>Meccanica</i> , <b>2020</b> , 55, 861-881	2.1	11
64	Mechanical behavior of metastatic femurs through patient-specific computational models accounting for bone-metastasis interaction. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , <b>2019</b> , 93, 9-22	4.1	16
63	Basalt-based fiber-reinforced materials and structural applications in civil engineering. <i>Composite Structures</i> , <b>2019</b> , 214, 246-263	5.3	114
62	Effectiveness of some technical standards for debonding analysis in FRP-concrete systems. <i>Composites Part B: Engineering</i> , <b>2019</b> , 160, 254-267	10	12
61	Experimental investigation on the debonding failure mode of basalt-based FRP sheets from concrete. <i>Composites Part B: Engineering</i> , <b>2018</b> , 153, 205-216	10	15
60	Limit analysis and homogenization of nanoporous materials with a general isotropic plastic matrix. <i>International Journal of Plasticity</i> , <b>2018</b> , 105, 24-61	7.6	7
59	Strength properties of nanoporous materials: A 3-layered based non-linear homogenization approach with interface effects. <i>International Journal of Engineering Science</i> , <b>2017</b> , 115, 28-42	5.7	13
58	Progressive damage in composite bolted joints via a computational micromechanical approach. <i>Composites Part B: Engineering</i> , <b>2017</b> , 111, 357-371	10	19

57	Void-shape effects on strength properties of nanoporous materials. <i>Mechanics Research Communications</i> , <b>2017</b> , 86, 11-17	2.2	6
56	A chemo-mechano-biological formulation for the effects of biochemical alterations on arterial mechanics: the role of molecular transport and multiscale tissue remodelling. <i>Journal of the Royal Society Interface</i> , <b>2017</b> , 14,	4.1	18
55	A FSI computational framework for vascular physiopathology: A novel flow-tissue multiscale strategy. <i>Medical Engineering and Physics</i> , <b>2017</b> , 47, 25-37	2.4	21
54	Nanoporous materials with a general isotropic plastic matrix: Exact limit state under isotropic loadings. <i>International Journal of Plasticity</i> , <b>2017</b> , 89, 1-28	7.6	16
53	Deviatoric Strength of Nanoporous Materials: A Limit Analysis Approach. <i>Springer Series in Solid and Structural Mechanics</i> , <b>2017</b> , 153-166	0.2	1
52	A computational insight into void-size effects on strength properties of nanoporous materials. <i>Mechanics of Materials</i> , <b>2016</b> , 101, 102-117	3.3	17
51	Strengthening of reinforced concrete beams with basalt-based FRP sheets: An analytical assessment <b>2016</b> ,		2
50	Mechanical behavior of peripheral stents and stent-vessel interaction: A computational study. <i>International Journal for Computational Methods in Engineering Science and Mechanics</i> , <b>2016</b> , 17, 196-210 <sup>0.7</sup>		12
49	An integrated computational approach for aortic mechanics including geometric, histological and chemico-physical data. <i>Journal of Biomechanics</i> , <b>2016</b> , 49, 2331-40	2.9	15
48	Normal and tangential stiffnesses of rough surfaces in contact via an imperfect interface model. <i>International Journal of Solids and Structures</i> , <b>2016</b> , 87, 245-253	3.1	22
47	Energy harvesting from wind-induced bridge vibrations via electromagnetic transduction. <i>Engineering Structures</i> , <b>2016</b> , 115, 118-128	4.7	12
46	Computational multiscale methods for tissue biomechanics. <i>International Journal for Computational Methods in Engineering Science and Mechanics</i> , <b>2016</b> , 17, 135-136	0.7	
45	Analytical modeling of drug dynamics induced by eluting stents in the coronary multi-layered curved domain. <i>Mathematical Biosciences</i> , <b>2015</b> , 267, 79-96	3.9	10
44	Numerical modeling of failure modes in bolted composite laminates <b>2015</b> ,		2
43	On the effects of uniform temperature variations on stay cables. <i>Journal of Civil Structural Health Monitoring</i> , <b>2015</b> , 5, 735-742	2.9	19
42	Multiscale hierarchical mechanics in soft tissues. <i>Proceedings in Applied Mathematics and Mechanics</i> , <b>2015</b> , 15, 35-38	0.2	3
41	A Numerical Failure Analysis of Multi-bolted Joints in FRP Laminates Based on Basalt Fibers. <i>Procedia Engineering</i> , <b>2015</b> , 109, 492-506		21
40	Coupled optimization of tuned-mass energy harvesters accounting for host structure dynamics. <i>Journal of Intelligent Material Systems and Structures</i> , <b>2014</b> , 25, 1553-1565	2.3	8

39	Influence of inter-molecular interactions on the elasto-damage mechanics of collagen fibrils: A bottom-up approach towards macroscopic tissue modeling. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2014</b> , 73, 38-54	5	25
38	An operative algebraic formulation for the unilaterally-constrained mechanical problem of smart tensegrities. <i>International Journal of Solids and Structures</i> , <b>2014</b> , 51, 3333-3349	3.1	1
37	On the identification of flutter derivatives of bridge decks via RANS turbulence models: Benchmarking on rectangular prisms. <i>Engineering Structures</i> , <b>2014</b> , 76, 359-370	4.7	28
36	Erratum to "Comparative Evaluation of Osseointegrated Dental Implants Based on Platform-Switching Concept: Influence of Diameter, Length, Thread Shape, and In-Bone Positioning Depth on Stress-Based Performance" <i>Computational and Mathematical Methods in Medicine</i> , <b>2014</b> , 2014, 1-1	2.8	46
35	A finite-element approach for the analysis of pin-bearing failure of composite laminates. <i>Frattura Ed Integrita Strutturale</i> , <b>2014</b> , 8, 241-250	0.9	1
34	Stress and strain localization in stretched collagenous tissues via a multiscale modelling approach. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , <b>2014</b> , 17, 11-30	2.1	34
33	An Interface Model Including Cracks and Roughness Applied to Masonry. <i>Open Civil Engineering Journal</i> , <b>2014</b> , 8, 263-271	0.8	18
32	Implant-bone load transfer mechanisms in complete-arch prostheses supported by four implants: a three-dimensional finite element approach. <i>Journal of Prosthetic Dentistry</i> , <b>2013</b> , 109, 9-21	4	48
31	Age-Dependent Arterial Mechanics via a Multiscale Elastic Approach. <i>International Journal for Computational Methods in Engineering Science and Mechanics</i> , <b>2013</b> , 14, 141-151	0.7	25
30	Indicial functions and flutter derivatives: A generalized approach to the motion-related wind loads. <i>Journal of Fluids and Structures</i> , <b>2013</b> , 42, 466-487	3.1	21
29	Multiscale Elastic Models of Collagen Bio-structures: From Cross-Linked Molecules to Soft Tissues. <i>Studies in Mechanobiology, Tissue Engineering and Biomaterials</i> , <b>2013</b> , 73-102	0.5	11
28	Comparative evaluation of osseointegrated dental implants based on platform-switching concept: influence of diameter, length, thread shape, and in-bone positioning depth on stress-based performance. <i>Computational and Mathematical Methods in Medicine</i> , <b>2013</b> , 2013, 250929	2.8	33
27	Equilibrium and stability of tensegrity structures: A convex analysis approach. <i>Discrete and Continuous Dynamical Systems - Series S</i> , <b>2013</b> , 6, 461-478	2.8	1
26	Modeling and simulation in tissue biomechanics: Modern tools to face an ancient challenge. <i>Journal of Biomedical Science and Engineering</i> , <b>2013</b> , 06, 1-5	0.7	3
25	Beams Comprising Unilateral Material in Frictionless Contact: A Variational Approach with Constraints in Dual Spaces. <i>Lecture Notes in Applied and Computational Mechanics</i> , <b>2013</b> , 275-292	0.3	3
24	Equivalent Stiffness and Compliance of Curvilinear Elastic Fibers. <i>Lecture Notes in Applied and Computational Mechanics</i> , <b>2012</b> , 309-332	0.3	6
23	An insight on multiscale tendon modeling in muscle-tendon integrated behavior. <i>Biomechanics and Modeling in Mechanobiology</i> , <b>2012</b> , 11, 505-17	3.8	27
22	Integrated mechanical models for collagenous biostructures at different length scales. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , <b>2012</b> , 45, 1018-1022		

21	Mechanical Modelling of Stays under Thermal Loads. <i>Lecture Notes in Applied and Computational Mechanics</i> , <b>2012</b> , 481-498	0.3	4
20	Convex analysis and ideal tensegrities. <i>Comptes Rendus - Mecanique</i> , <b>2011</b> , 339, 683-691	2.1	2
19	Stress Distribution on Edentulous Mandible and Maxilla Rehabilitated by Full-Arch Techniques: A Comparative 3D Finite-Element Approach <b>2011</b> ,		1
18	Unilateral Problems for Laminates: A Variational Formulation with Constraints in Dual Spaces. <i>Lecture Notes in Applied and Computational Mechanics</i> , <b>2011</b> , 321-338	0.3	6
17	A Simple Analytical Approach to the Aeroelastic Stability Problem of Long-Span Cable-Stayed Bridges. <i>International Journal for Computational Methods in Engineering Science and Mechanics</i> , <b>2010</b> , 11, 1-19	0.7	17
16	A unified multiscale mechanical model for soft collagenous tissues with regular fiber arrangement. <i>Journal of Biomechanics</i> , <b>2010</b> , 43, 355-63	2.9	81
15	Drug release from coronary eluting stents: A multidomain approach. <i>Journal of Biomechanics</i> , <b>2010</b> , 43, 1580-9	2.9	67
14	Optimal mechanical design of anatomical post-systems for endodontic restoration. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , <b>2009</b> , 12, 59-71	2.1	5
13	A Closed-Form Refined Model of the Cables' Nonlinear Response in Cable-Stayed Structures. <i>Mechanics of Advanced Materials and Structures</i> , <b>2009</b> , 16, 456-466	1.8	11
12	Optimal mechanical design of anatomical post-systems for endodontic restoration. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , <b>2009</b> , 12, 59-71	2.1	4
11	Anisotropic thin-walled beam models: A rational deduction from three-dimensional elasticity. <i>Journal of Mechanics of Materials and Structures</i> , <b>2009</b> , 4, 371-394	1.2	14
10	The influence of implant diameter and length on stress distribution of osseointegrated implants related to crestal bone geometry: a three-dimensional finite element analysis. <i>Journal of Prosthetic Dentistry</i> , <b>2008</b> , 100, 422-31	4	304
9	A quasi-secant continuous model for the analysis of long-span cable-stayed bridges. <i>Meccanica</i> , <b>2008</b> , 43, 237-250	2.1	9
8	Stress-based performance evaluation of osseointegrated dental implants by finite-element simulation. <i>Simulation Modelling Practice and Theory</i> , <b>2008</b> , 16, 971-987	3.9	44
7	Mechanical behaviour of endodontic restorations with multiple prefabricated posts: a finite-element approach. <i>Journal of Biomechanics</i> , <b>2007</b> , 40, 2386-98	2.9	68
6	A mixed FSDT finite element for monoclinic laminated plates. <i>Computers and Structures</i> , <b>2006</b> , 84, 624-639	1.5	21
5	A Finite Element for the Analysis of Monoclinic Laminated Plates <b>2005</b> , 333-343		
4	A Mixed FSDT Finite-Element Formulation for the Analysis of Composite Laminates Without Shear Correction Factors <b>2005</b> , 345-358		5

3	Modelling and Simulation of Long-Span Bridges under Aerodynamic Loads. <i>Lecture Notes in Applied and Computational Mechanics</i> , <b>2004</b> , 359-381	0.3	10
2	Flutter instability of long-span suspension bridges: a simplified critical wind speed evaluation in closed form. <i>Proceedings in Applied Mathematics and Mechanics</i> , <b>2003</b> , 3, 116-117	0.2	4
1	A numerical model for wind loads simulation on long-span bridges. <i>Simulation Modelling Practice and Theory</i> , <b>2003</b> , 11, 315-351	3.9	39