Giuseppe Vairo

List of Publications by Citations

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	The influence of implant diameter and length on stress distribution of osseointegrated implants related to crestal bone geometry: a three-dimensional finite element analysis. *Journal of Prosthetic Dentistry*, **2008**, 100, 422-31	4	304
73	Basalt-based fiber-reinforced materials and structural applications in civil engineering. *Composite Structures*, **2019**, 214, 246-263	5.3	114
72	A unified multiscale mechanical model for soft collagenous tissues with regular fiber arrangement. *Journal of Biomechanics*, **2010**, 43, 355-63	2.9	81
71	Mechanical behaviour of endodontic restorations with multiple prefabricated posts: a finite-element approach. *Journal of Biomechanics*, **2007**, 40, 2386-98	2.9	68
70	Drug release from coronary eluting stents: A multidomain approach. *Journal of Biomechanics*, **2010**, 43, 1580-9	2.9	67
69	Implant-bone load transfer mechanisms in complete-arch prostheses supported by four implants: a three-dimensional finite element approach. *Journal of Prosthetic Dentistry*, **2013**, 109, 9-21	4	48
68	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 *Computational and Mathematical Methods in Medicine*, **2014**, 2014, 1-1	2.8	46
67	Stress-based performance evaluation of osseointegrated dental implants by finite-element simulation. *Simulation Modelling Practice and Theory*, **2008**, 16, 971-987	3.9	44
66	A numerical model for wind loads simulation on long-span bridges. *Simulation Modelling Practice and Theory*, **2003**, 11, 315-351	3.9	39
65	Stress and strain localization in stretched collagenous tissues via a multiscale modelling approach. *Computer Methods in Biomechanics and Biomedical Engineering*, **2014**, 17, 11-30	2.1	34
64	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. *Computational and Mathematical Methods in Medicine*, **2013**, 2013, 250929	2.8	33
63	On the identification of flutter derivatives of bridge decks via RANS turbulence models: Benchmarking on rectangular prisms. *Engineering Structures*, **2014**, 76, 359-370	4.7	28
62	An insight on multiscale tendon modeling in muscle-tendon integrated behavior. *Biomechanics and Modeling in Mechanobiology*, **2012**, 11, 505-17	3.8	27
61	Influence of inter-molecular interactions on the elasto-damage mechanics of collagen fibrils: A bottom-up approach towards macroscopic tissue modeling. *Journal of the Mechanics and Physics of Solids*, **2014**, 73, 38-54	5	25
60	Age-Dependent Arterial Mechanics via a Multiscale Elastic Approach. *International Journal for Computational Methods in Engineering Science and Mechanics*, **2013**, 14, 141-151	0.7	25
59	Normal and tangential stiffnesses of rough surfaces in contact via an imperfect interface model. *International Journal of Solids and Structures*, **2016**, 87, 245-253	3.1	22
58	Indicial functions and flutter derivatives: A generalized approach to the motion-related wind loads. *Journal of Fluids and Structures*, **2013**, 42, 466-487	3.1	21

57	A FSI computational framework for vascular physiopathology: A novel flow-tissue multiscale strategy. *Medical Engineering and Physics*, **2017**, 47, 25-37	2.4	21
56	A Numerical Failure Analysis of Multi-bolted Joints in FRP Laminates Based on Basalt Fibers. *Procedia Engineering*, **2015**, 109, 492-506		21
55	A mixed FSDT finite element for monoclinic laminated plates. *Computers and Structures*, **2006**, 84, 624-639	4.5	21
54	Progressive damage in composite bolted joints via a computational micromechanical approach. *Composites Part B: Engineering*, **2017**, 111, 357-371	10	19
53	On the effects of uniform temperature variations on stay cables. *Journal of Civil Structural Health Monitoring*, **2015**, 5, 735-742	2.9	19
52	A chemo-mechano-biological formulation for the effects of biochemical alterations on arterial mechanics: the role of molecular transport and multiscale tissue remodelling. *Journal of the Royal Society Interface*, **2017**, 14,	4.1	18
51	An Interface Model Including Cracks and Roughness Applied to Masonry. *Open Civil Engineering Journal*, **2014**, 8, 263-271	0.8	18
50	A computational insight into void-size effects on strength properties of nanoporous materials. *Mechanics of Materials*, **2016**, 101, 102-117	3.3	17
49	A Simple Analytical Approach to the Aeroelastic Stability Problem of Long-Span Cable-Stayed Bridges. *International Journal for Computational Methods in Engineering Science and Mechanics*, **2010**, 11, 1-19	0.7	17
48	Mechanical behavior of metastatic femurs through patient-specific computational models accounting for bone-metastasis interaction. *Journal of the Mechanical Behavior of Biomedical Materials*, **2019**, 93, 9-22	4.1	16
47	Nanoporous materials with a general isotropic plastic matrix: Exact limit state under isotropic loadings. *International Journal of Plasticity*, **2017**, 89, 1-28	7.6	16
46	An integrated computational approach for aortic mechanics including geometric, histological and chemico-physical data. *Journal of Biomechanics*, **2016**, 49, 2331-40	2.9	15
45	Experimental investigation on the debonding failure mode of basalt-based FRP sheets from concrete. *Composites Part B: Engineering*, **2018**, 153, 205-216	10	15
44	Anisotropic thin-walled beam models: A rational deduction from three-dimensional elasticity. *Journal of Mechanics of Materials and Structures*, **2009**, 4, 371-394	1.2	14
43	Strength properties of nanoporous materials: A 3-layered based non-linear homogenization approach with interface effects. *International Journal of Engineering Science*, **2017**, 115, 28-42	5.7	13
42	Mechanical behavior of peripheral stents and stent-vessel interaction: A computational study. *International Journal for Computational Methods in Engineering Science and Mechanics*, **2016**, 17, 196-210	0.7	12
41	Energy harvesting from wind-induced bridge vibrations via electromagnetic transduction. *Engineering Structures*, **2016**, 115, 118-128	4.7	12
40	Effectiveness of some technical standards for debonding analysis in FRP-concrete systems. *Composites Part B: Engineering*, **2019**, 160, 254-267	10	12

39	Multiscale Elastic Models of Collagen Bio-structures: From Cross-Linked Molecules to Soft Tissues. *Studies in Mechanobiology, Tissue Engineering and Biomaterials*, **2013**, 73-102	0.5	11
38	A Closed-Form Refined Model of the Cables' Nonlinear Response in Cable-Stayed Structures. *Mechanics of Advanced Materials and Structures*, **2009**, 16, 456-466	1.8	11
37	Fracture risk assessment in metastatic femurs: a patient-specific CT-based finite-element approach. *Meccanica*, **2020**, 55, 861-881	2.1	11
36	Analytical modeling of drug dynamics induced by eluting stents in the coronary multi-layered curved domain. *Mathematical Biosciences*, **2015**, 267, 79-96	3.9	10
35	Modelling and Simulation of Long-Span Bridges under Aerodynamic Loads. *Lecture Notes in Applied and Computational Mechanics*, **2004**, 359-381	0.3	10
34	A quasi-secant continuous model for the analysis of long-span cable-stayed bridges. *Meccanica*, **2008**, 43, 237-250	2.1	9
33	Coupled optimization of tuned-mass energy harvesters accounting for host structure dynamics. *Journal of Intelligent Material Systems and Structures*, **2014**, 25, 1553-1565	2.3	8
32	Limit analysis and homogenization of nanoporous materials with a general isotropic plastic matrix. *International Journal of Plasticity*, **2018**, 105, 24-61	7.6	7
31	Void-shape effects on strength properties of nanoporous materials. *Mechanics Research Communications*, **2017**, 86, 11-17	2.2	6
30	Equivalent Stiffness and Compliance of Curvilinear Elastic Fibers. *Lecture Notes in Applied and Computational Mechanics*, **2012**, 309-332	0.3	6
29	Unilateral Problems for Laminates: A Variational Formulation with Constraints in Dual Spaces. *Lecture Notes in Applied and Computational Mechanics*, **2011**, 321-338	0.3	6
28	Optimal mechanical design of anatomical post-systems for endodontic restoration. *Computer Methods in Biomechanics and Biomedical Engineering*, **2009**, 12, 59-71	2.1	5
27	A Mixed FSDT Finite-Element Formulation for the Analysis of Composite Laminates Without Shear Correction Factors **2005**, 345-358		5
26	Optimal mechanical design of anatomical post-systems for endodontic restoration. *Computer Methods in Biomechanics and Biomedical Engineering*, **2009**, 12, 59-71	2.1	4
25	Flutter instability of long-span suspension bridges: a simplified critical wind speed evaluation in closed form. *Proceedings in Applied Mathematics and Mechanics*, **2003**, 3, 116-117	0.2	4
24	Mechanical Modelling of Stays under Thermal Loads. *Lecture Notes in Applied and Computational Mechanics*, **2012**, 481-498	0.3	4
23	Structural Assessment of the DTT Poloidal Field Coil System. *IEEE Transactions on Applied Superconductivity*, **2020**, 30, 1-5	1.8	3
22	Multiscale hierarchical mechanics in soft tissues. *Proceedings in Applied Mathematics and Mechanics*, **2015**, 15, 35-38	0.2	3

21	Modeling and simulation in tissue biomechanics: Modern tools to face an ancient challenge. *Journal of Biomedical Science and Engineering*, **2013**, 06, 1-5	0.7	3
20	Beams Comprising Unilateral Material in Frictionless Contact: A Variational Approach with Constraints in Dual Spaces. *Lecture Notes in Applied and Computational Mechanics*, **2013**, 275-292	0.3	3
19	Numerical modeling of failure modes in bolted composite laminates **2015**,		2
18	Strengthening of reinforced concrete beams with basalt-based FRP sheets: An analytical assessment **2016**,		2
17	Convex analysis and ideal tensegrities. *Comptes Rendus - Mecanique*, **2011**, 339, 683-691	2.1	2
16	A computational insight on damage-based constitutive modelling in femur mechanics. *European Journal of Mechanics, A/Solids*, **2022**, 93, 104538	3.7	2
15	Mechano-chemo-biological Computational Models for Arteries in Health, Disease and Healing: From Tissue Remodelling to Drug-eluting Devices. *Current Pharmaceutical Design*, **2021**, 27, 1904-1917	3.3	2
14	Mechanical performance of Anatomic-Functional-Geometry dental treatments: A computational study. *Medical Engineering and Physics*, **2020**, 86, 96-108	2.4	1
13	Effective mechanical response of non-linear heterogeneous materials comprising bimodular phases. *European Journal of Mechanics, A/Solids*, **2020**, 81, 103962	3.7	1
12	An operative algebraic formulation for the unilaterally-constrained mechanical problem of smart tensegrities. *International Journal of Solids and Structures*, **2014**, 51, 3333-3349	3.1	1
11	A finite-element approach for the analysis of pin-bearing failure of composite laminates. *Frattura Ed Integrita Strutturale*, **2014**, 8, 241-250	0.9	1
10	Stress Distribution on Edentulous Mandible and Maxilla Rehabilitated by Full-Arch Techniques: A Comparative 3D Finite-Element Approach **2011**,		1
9	Equilibrium and stability of tensegrity structures: A convex analysis approach. *Discrete and Continuous Dynamical Systems - Series S*, **2013**, 6, 461-478	2.8	1
8	Deviatoric Strength of Nanoporous Materials: A Limit Analysis Approach. *Springer Series in Solid and Structural Mechanics*, **2017**, 153-166	0.2	1
7	Computational multiscale modelling of soft tissues mechanics: Application to tendons and ligaments **2021**, 121-153		1
6	Elasto-damage mechanics of osteons: A bottom-up multiscale approach. *Journal of the Mechanics and Physics of Solids*, **2022**, 104962	5	0
5	Integrated mechanical models for collagenous biostructures at different length scales. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2012**, 45, 1018-1022		
4	A Patient-Specific Mechanical Modeling of Metastatic Femurs. *Lecture Notes in Mechanical Engineering*, **2020**, 868-880	0.4	

3	A Finite Element for the Analysis of Monoclinic Laminated Plates **2005**, 333-343	
2	Basalt-Based FRP Composites as Strengthening of Reinforced Concrete Members: Experimental and Theoretical Insights. *Lecture Notes in Mechanical Engineering*, **2020**, 472-486	0.4
1	Computational multiscale methods for tissue biomechanics. *International Journal for Computational Methods in Engineering Science and Mechanics*, **2016**, 17, 135-136	0.7