Massimiliano Zingales

List of Publications by Year
in descending order

96 papers	1,972 citations	236833 25 h-index	276775 41 g-index
97 all docs	97 docs citations	97 times ranked	1197 citing authors

#	Article	IF	Citations
1	Can biomechanical analysis shed some light on aneurysmal pathophysiology? Preliminary study on ex vivo cerebral arterial walls. Clinical Biomechanics, 2021, 81, 105184.	0.5	1
2	In Vitro Measurement of Strain Localization Preceding Dissection of the Aortic Wall Subjected to Radial Tension. Experimental Mechanics, 2021, 61, 119-130.	1.1	5
3	How preconditioning and pretensioning of grafts used in ACLigaments surgical reconstruction are influenced by their mechanical time-dependent characteristics: Can we optimize their initial loading state?. Clinical Biomechanics, 2021, 83, 105294.	0.5	6
4	Patient-specific computational evaluation of stiffness distribution in ascending thoracic aortic aneurysm. Journal of Biomechanics, 2021, 119, 110321.	0.9	8
5	A numerical integration approach for fractionalâ€order viscoelastic analysis of hereditaryâ€aging structures. International Journal for Numerical Methods in Engineering, 2020, 121, 1120-1146.	1.5	7
6	Fractional-order nonlinear hereditariness of tendons and ligaments of the human knee. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190294.	1.6	14
7	Exact Mechanical Hierarchy of Non-Linear Fractional-Order Hereditariness. Symmetry, 2020, 12, 673.	1.1	3
8	Advanced materials modelling via fractional calculus: challenges and perspectives. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20200050.	1.6	65
9	A non-linear stochastic approach of ligaments and tendons fractional-order hereditariness. Probabilistic Engineering Mechanics, 2020, 60, 103034.	1.3	9
10	A fractional nonlocal approach to nonlinear blood flow in small-lumen arterial vessels. Meccanica, 2020, 55, 891-906.	1.2	17
11	Mechanobiology predicts raft formations triggered by ligand-receptor activity across the cell membrane. Journal of the Mechanics and Physics of Solids, 2020, 141, 103974.	2.3	14
12	Letter to the Editor. The missing piece to solve the equation. Neurosurgical Focus, 2020, 48, E12.	1.0	1
13	A Single Integral Approach to Fractional Order Non-Linear Hereditariness. Lecture Notes in Mechanical Engineering, 2020, , 932-944.	0.3	1
14	A fractional order theory of poroelasticity. Mechanics Research Communications, 2019, 100, 103395.	1.0	11
15	On the role of material properties in ascending thoracic aortic aneurysms. Computers in Biology and Medicine, 2019, 109, 70-78.	3.9	25
16	Identification of circumferential regional heterogeneity of ascending thoracic aneurysmal aorta by biaxial mechanical testing. Journal of Molecular and Cellular Cardiology, 2019, 130, 205-215.	0.9	35
17	A Fractional-Order Model of Biopolyester Containing Naturally Occurring Compounds for Soil Stabilization. Advances in Materials Science and Engineering, 2019, 2019, 1-6.	1.0	4
18	A Fractional Approach to Non-Newtonian Blood Rheology in Capillary Vessels. Journal of Peridynamics and Nonlocal Modeling, 2019, 1, 88-96.	1.4	11

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19	Enhanced In Situ Availability of Aphanizomenon Flos-Aquae Constituents Entrapped in Buccal Films for the Treatment of Oxidative Stress-Related Oral Diseases: Biomechanical Characterization and In Vitro/Ex Vivo Evaluation. Pharmaceutics, 2019, 11, 35.	2.0	23
20	Power-Laws hereditariness of biomimetic ceramics for cranioplasty neurosurgery. International Journal of Non-Linear Mechanics, 2019, 115, 61-67.	1.4	15
21	Posterior meniscal root repair: a biomechanical comparison between human and porcine menisci. Muscles, Ligaments and Tendons Journal, 2019, 09, 76.	0.1	5
22	A fractional-order model for aging materials: An application to concrete. International Journal of Solids and Structures, 2018, 138, 13-23.	1.3	29
23	A Viscoelastic Model for the Longâ€Term Deflection of Segmental Prestressed Box Girders. Computer-Aided Civil and Infrastructure Engineering, 2018, 33, 64-78.	6.3	14
24	Fractional-Order Theory of Thermoelasticicty. I: Generalization of the Fourier Equation. Journal of Engineering Mechanics - ASCE, 2018, 144, 04017164.	1.6	5
25	Fractional-Order Theory of Thermoelasticity. II: Quasi-Static Behavior of Bars. Journal of Engineering Mechanics - ASCE, 2018, 144, 04017165.	1.6	1
26	Numerical Simulations of the Hydrodynamics of the Abdominal Aorta Aneurysm (AAA) Using a Smoothed Particle Hydrodynamics Code with Deformable Wall Preliminary Results. , 2018, , .		1
27	Experimental Characterization of the Human Meniscal Tissue. , 2018, , .		4
28	Quasi-Fractional Models of Human Tendons Hereditariness. , 2018, , .		2
29	Hereditariness of Aortic Tissue: in-Vitro Time-Dependent Failure of Human and Porcine Specimens. , 2018, , .		1
30	A Non-Local Mode-I Cohesive Model for Ascending Thoracic Aorta Dissections (ATAD). , 2018, , .		2
31	Stability analysis of Beck's column over a fractional-order hereditary foundation. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2018, 474, 20180315.	1.0	5
32	Multifibrillar bundles of a self-assembling hyaluronic acid derivative obtained through a microfluidic technique for aortic smooth muscle cell orientation and differentiation. Biomaterials Science, 2018, 6, 2518-2526.	2.6	9
33	Development and characterization of xyloglucan-poly(vinyl alcohol) hydrogel membrane for Wireless Smart wound dressings. European Polymer Journal, 2018, 106, 214-222.	2.6	23
34	Finite-Element Formulation of a Nonlocal Hereditary Fractional-Order Timoshenko Beam. Journal of Engineering Mechanics - ASCE, 2017, 143, .	1.6	41
35	Toward high performance renewable agave reinforced biocomposites: Optimization of fiber performance and fiber-matrix adhesion analysis. Composites Part B: Engineering, 2017, 122, 109-120.	5.9	32
36	Special Issue on â€œFrontier Biomechanical Challenges in Cardiovascular Physiopathologyâ€• Medical Engineering and Physics, 2017, 47, 1.	0.8	0

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37	Multi-objective optimization of nitinol stent design. Medical Engineering and Physics, 2017, 47, 13-24.	0.8	30
38	Fractional hereditariness of lipid membranes: Instabilities and linearized evolution. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 58, 11-27.	1.5	14
39	An exact thermodynamical model of power-law temperature time scaling. Annals of Physics, 2016, 365, 24-37.	1.0	10
40	The finite element method for fractional non-local thermal energy transfer in non-homogeneous rigid conductors. Communications in Nonlinear Science and Numerical Simulation, 2015, 29, 116-127.	1.7	12
41	A new displacement-based framework for non-local Timoshenko beams. Meccanica, 2015, 50, 2103-2122.	1.2	9
42	Laminar flow through fractal porous materials: the fractional-order transport equation. Communications in Nonlinear Science and Numerical Simulation, 2015, 22, 889-902.	1.7	24
43	A mechanical picture of fractional-order Darcy equation. Communications in Nonlinear Science and Numerical Simulation, 2015, 20, 940-949.	1.7	34
44	A physical description of fractional-order Fourier diffusion. , 2014, , .		1
45	A numerical assessment of the free energy function for fractional-order relaxation. , 2014, , .		0
46	Mechanical response of Bernoulli Euler beams on fractional order elastic foundation. , 2014, , .		2
47	Fractional-Order Thermal Energy Transport for Small-Scale Engineering Devices. Journal of Nanomechanics & Micromechanics, 2014, 4, .	1.4	1
48	Fractional-order theory of heat transport in rigid bodies. Communications in Nonlinear Science and Numerical Simulation, 2014, 19, 3938-3953.	1.7	26
49	Finite element method for a nonlocal Timoshenko beam model. Finite Elements in Analysis and Design, 2014, 89, 77-92.	1.7	34
50	Mechanically Based Nonlocal Euler-Bernoulli Beam Model. Journal of Nanomechanics & Micromechanics, 2014, 4, .	1.4	7
51	Free energy and states of fractional-order hereditariness. International Journal of Solids and Structures, 2014, 51, 3156-3167.	1.3	30
52	A non-local two-dimensional foundation model. Archive of Applied Mechanics, 2013, 83, 253-272.	1.2	24
53	A discrete mechanical model of fractional hereditary materials. Meccanica, 2013, 48, 1573-1586.	1.2	56
54	A non-local model of thermal energy transport: The fractional temperature equation. International Journal of Heat and Mass Transfer, 2013, 67, 593-601.	2.5	38

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55	One-dimensional heterogeneous solids with uncertain elastic modulus in presence of long-range interactions: Interval versus stochastic analysis. Computers and Structures, 2013, 122, 217-229.	2.4	41
56	The Multiscale Stochastic Model of Fractional Hereditary Materials (FHM). Procedia IUTAM, 2013, 6, 50-59.	1.2	11
57	Long-Range Interactions in 1D Heterogeneous Solids with Uncertainty. Procedia IUTAM, 2013, 6, 69-78.	1.2	0
58	Non-local stiffness and damping models for shear-deformable beams. European Journal of Mechanics, A/Solids, 2013, 40, 69-83.	2.1	29
59	Fractional differential equations and related exact mechanical models. Computers and Mathematics With Applications, 2013, 66, 608-620.	1.4	74
60	The mechanically based non-local elasticity: an overview of main results and future challenges. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2013, 371, 20120433.	1.6	60
61	Powerâ€law hereditariness of hierarchical fractal bones. International Journal for Numerical Methods in Biomedical Engineering, 2013, 29, 1338-1360.	1.0	40
62	On the vibrations of a mechanically based non-local beam model. Computational Materials Science, 2012, 64, 278-282.	1.4	9
63	Exact mechanical models of fractional hereditary materials. Journal of Rheology, 2012, 56, 983-1004.	1.3	97
64	A mechanically based approach to non-local beam theories. International Journal of Mechanical Sciences, 2011, 53, 676-687.	3.6	22
65	A non-local model of fractional heat conduction in rigid bodies. European Physical Journal: Special Topics, 2011, 193, 173-184.	1.2	24
66	The finite element method for the mechanically based model of nonâ€local continuum. International Journal for Numerical Methods in Engineering, 2011, 86, 1558-1576.	1.5	15
67	Wave propagation in 1D elastic solids in presence of long-range central interactions. Journal of Sound and Vibration, 2011, 330, 3973-3989.	2.1	39
68	FRACTIONAL DIFFERENTIAL CALCULUS FOR 3D MECHANICALLY BASED NON-LOCAL ELASTICITY. International Journal for Multiscale Computational Engineering, 2011, 9, 579-597.	0.8	25
69	STOCHASTIC ANALYSIS OF ONE-DIMENSIONAL HETEROGENEOUS SOLIDS WITH LONG-RANGE INTERACTIONS. International Journal for Multiscale Computational Engineering, 2011, 9, 379-394.	0.8	8
70	Solution strategies for 1D elastic continuum with long-range interactions: Smooth and fractional decay. Mechanics Research Communications, 2010, 37, 13-21.	1.0	24
71	Mechanically-based approach to non-local elasticity: Variational principles. International Journal of Solids and Structures, 2010, 47, 539-548.	1.3	59
72	The mechanically-based approach to 3D non-local linear elasticity theory: Long-range central interactions. International Journal of Solids and Structures, 2010, 47, 2347-2358.	1.3	55

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73	Variational Aspects of the Physically-Based Approach to 3D Non-Local Continuum Mechanics. Materials Science Forum, 2010, 638-642, 2549-2554.	0.3	0
74	Fractional calculus in solid mechanics: local versus non-local approach. Physica Scripta, 2009, T136, 014003.	1.2	29
75	Physically-Based Approach to the Mechanics ofÂStrongÂNon-Local Linear Elasticity Theory. Journal of Elasticity, 2009, 97, 103-130.	0.9	116
76	Elastic waves propagation in 1D fractional non-local continuum. Physica E: Low-Dimensional Systems and Nanostructures, 2009, 42, 95-103.	1.3	63
77	A generalized model of elastic foundation based on long-range interactions: Integral and fractional model. International Journal of Solids and Structures, 2009, 46, 3124-3137.	1.3	50
78	Fractional mechanical model for the dynamics of non-local continuum. Lecture Notes in Electrical Engineering, 2009, , 389-423.	0.3	23
79	Stochastic differential calculus for wind-exposed structures with autoregressive continuous (ARC) filters. Journal of Wind Engineering and Industrial Aerodynamics, 2008, 96, 2403-2417.	1.7	8
80	Long-range cohesive interactions of non-local continuum faced by fractional calculus. International Journal of Solids and Structures, 2008, 45, 5642-5659.	1.3	120
81	Stochastic analysis of external and parametric dynamical systems under sub-Gaussian Levy white-noise. Structural Engineering and Mechanics, 2008, 28, 373-386.	1.0	1
82	ItÃ´ calculus extended to systems driven by -stable LÃ©vy white noises (a novel clip on the tails of LÃ©vy) Tj ETQq0 0 0 rgBT /Overlock	1.4	9
83	Stochastic analysis of dynamical systems with delayed control forces. Communications in Nonlinear Science and Numerical Simulation, 2006, 11, 483-498.	1.7	1
84	Active controlled structural systems under delta-correlated random excitation: Linear and nonlinear case. Communications in Nonlinear Science and Numerical Simulation, 2006, 11, 646-661.	1.7	6
85	Convergence of Boobnov-Galerkin Method Exemplified. AIAA Journal, 2004, 42, 1931-1933.	1.5	5
86	Stochastic dynamics of linear elastic trusses in presence of structural uncertainties (virtual) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 222 Tc	1.3	14
87	Stochastic seismic analysis of hydrodynamic pressure in dam reservoir systems. Earthquake Engineering and Structural Dynamics, 2003, 32, 165-172.	2.5	7
88	Contrasting probabilistic and anti-optimization approaches in an applied mechanics problem. International Journal of Solids and Structures, 2003, 40, 4281-4297.	1.3	12
89	Seismically induced, non-stationary hydrodynamic pressure in a dam-reservoir system. Probabilistic Engineering Mechanics, 2003, 18, 151-163.	1.3	2
90	Seismically induced, non-stationary hydrodynamic pressure in a dam-reservoir system. Probabilistic Engineering Mechanics, 2003, 18, 151-151.	1.3	0

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91	Coincidence of Boobnov-Galerkin and Closed-Form Solutions in an Applied Mechanics Problem. Journal of Applied Mechanics, Transactions ASME, 2003, 70, 777-779.	1.1	4
92	Hybrid Aeroelastic Optimization and Antioptimization. AIAA Journal, 2001, 39, 161-175.	1.5	7
93	Hybrid aeroelastic optimization and antioptimization. AIAA Journal, 2001, 39, 161-175.	1.5	0
94	Digital simulation of multivariate earthquake ground motions. Earthquake Engineering and Structural Dynamics, 2000, 29, 1011-1027.	2.5	39
95	Localization of the bending response in presence of axial load. International Journal of Solids and Structures, 2000, 37, 6739-6753.	1.3	15
96	Anti-Optimization Versus Probability in an Applied Mechanics Problem: Vector Uncertainty. Journal of Applied Mechanics, Transactions ASME, 2000, 67, 472-484.	1.1	8