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	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
2	Physically-Based Approach to the Mechanics ofÂStrongÂNon-Local Linear Elasticity Theory. Journal of Elasticity, 2009, 97, 103-130.	0.9	116
3	Exact mechanical models of fractional hereditary materials. Journal of Rheology, 2012, 56, 983-1004.	1.3	97
4	Fractional differential equations and related exact mechanical models. Computers and Mathematics With Applications, 2013, 66, 608-620.	1.4	74
5	Advanced materials modelling via fractional calculus: challenges and perspectives. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20200050.	1.6	65
6	Elastic waves propagation in 1D fractional non-local continuum. Physica E: Low-Dimensional Systems and Nanostructures, 2009, 42, 95-103.	1.3	63
7	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
8	Mechanically-based approach to non-local elasticity: Variational principles. International Journal of Solids and Structures, 2010, 47, 539-548.	1.3	59
9	A discrete mechanical model of fractional hereditary materials. Meccanica, 2013, 48, 1573-1586.	1.2	56
10	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
11	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
12	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
13	Finite-Element Formulation of a Nonlocal Hereditary Fractional-Order Timoshenko Beam. Journal of Engineering Mechanics - ASCE, 2017, 143, .	1.6	41
14	Powerâ€law hereditariness of hierarchical fractal bones. International Journal for Numerical Methods in Biomedical Engineering, 2013, 29, 1338-1360.	1.0	40
15	Digital simulation of multivariate earthquake ground motions. Earthquake Engineering and Structural Dynamics, 2000, 29, 1011-1027.	2.5	39
16	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
17	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
18	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

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19	Finite element method for a nonlocal Timoshenko beam model. Finite Elements in Analysis and Design, 2014, 89, 77-92.	1.7	34
20	A mechanical picture of fractional-order Darcy equation. Communications in Nonlinear Science and Numerical Simulation, 2015, 20, 940-949.	1.7	34
21	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
22	Free energy and states of fractional-order hereditariness. International Journal of Solids and Structures, 2014, 51, 3156-3167.	1.3	30
23	Multi-objective optimization of nitinol stent design. Medical Engineering and Physics, 2017, 47, 13-24.	0.8	30
24	Fractional calculus in solid mechanics: local versus non-local approach. Physica Scripta, 2009, T136, 014003.	1.2	29
25	Non-local stiffness and damping models for shear-deformable beams. European Journal of Mechanics, A/Solids, 2013, 40, 69-83.	2.1	29
26	A fractional-order model for aging materials: An application to concrete. International Journal of Solids and Structures, 2018, 138, 13-23.	1.3	29
27	Fractional-order theory of heat transport in rigid bodies. Communications in Nonlinear Science and Numerical Simulation, 2014, 19, 3938-3953.	1.7	26
28	On the role of material properties in ascending thoracic aortic aneurysms. Computers in Biology and Medicine, 2019, 109, 70-78.	3.9	25
29	FRACTIONAL DIFFERENTIAL CALCULUS FOR 3D MECHANICALLY BASED NON-LOCAL ELASTICITY. International Journal for Multiscale Computational Engineering, 2011, 9, 579-597.	0.8	25
30	Solution strategies for 1D elastic continuum with long-range interactions: Smooth and fractional decay. Mechanics Research Communications, 2010, 37, 13-21.	1.0	24
31	A non-local model of fractional heat conduction in rigid bodies. European Physical Journal: Special Topics, 2011, 193, 173-184.	1.2	24
32	A non-local two-dimensional foundation model. Archive of Applied Mechanics, 2013, 83, 253-272.	1.2	24
33	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
34	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
35	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
36	Fractional mechanical model for the dynamics of non-local continuum. Lecture Notes in Electrical Engineering, 2009, , 389-423.	0.3	23

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37	A mechanically based approach to non-local beam theories. International Journal of Mechanical Sciences, 2011, 53, 676-687.	3.6	22
38	A fractional nonlocal approach to nonlinear blood flow in small-lumen arterial vessels. Meccanica, 2020, 55, 891-906.	1.2	17
39	Localization of the bending response in presence of axial load. International Journal of Solids and Structures, 2000, 37, 6739-6753.	1.3	15
40	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
41	Power-Laws hereditariness of biomimetic ceramics for cranioplasty neurosurgery. International Journal of Non-Linear Mechanics, 2019, 115, 61-67.	1.4	15
42	Stochastic dynamics of linear elastic trusses in presence of structural uncertainties (virtual) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 542 Tc	1.3	14
43	Fractional hereditariness of lipid membranes: Instabilities and linearized evolution. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 58, 11-27.	1.5	14
44	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
45	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
46	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
47	Contrasting probabilistic and anti-optimization approaches in an applied mechanics problem. International Journal of Solids and Structures, 2003, 40, 4281-4297.	1.3	12
48	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
49	The Multiscale Stochastic Model of Fractional Hereditary Materials (FHM). Procedia IUTAM, 2013, 6, 50-59.	1.2	11
50	A fractional order theory of poroelasticity. Mechanics Research Communications, 2019, 100, 103395.	1.0	11
51	A Fractional Approach to Non-Newtonian Blood Rheology in Capillary Vessels. Journal of Peridynamics and Nonlocal Modeling, 2019, 1, 88-96.	1.4	11
52	An exact thermodynamical model of power-law temperature time scaling. Annals of Physics, 2016, 365, 24-37.	1.0	10
53	ItÃ´ calculus extended to systems driven by -stable LÃ©vy white noises (a novel clip on the tails of LÃ©vy) Tj ETQq1 1 0.784314 rgBT	1.4	9
54	On the vibrations of a mechanically based non-local beam model. Computational Materials Science, 2012, 64, 278-282.	1.4	9

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55	A new displacement-based framework for non-local Timoshenko beams. Meccanica, 2015, 50, 2103-2122.	1.2	9
56	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
57	A non-linear stochastic approach of ligaments and tendons fractional-order hereditariness. Probabilistic Engineering Mechanics, 2020, 60, 103034.	1.3	9
58	Anti-Optimization Versus Probability in an Applied Mechanics Problem: Vector Uncertainty. Journal of Applied Mechanics, Transactions ASME, 2000, 67, 472-484.	1.1	8
59	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
60	Patient-specific computational evaluation of stiffness distribution in ascending thoracic aortic aneurysm. Journal of Biomechanics, 2021, 119, 110321.	0.9	8
61	STOCHASTIC ANALYSIS OF ONE-DIMENSIONAL HETEROGENEOUS SOLIDS WITH LONG-RANGE INTERACTIONS. International Journal for Multiscale Computational Engineering, 2011, 9, 379-394.	0.8	8
62	Hybrid Aeroelastic Optimization and Antioptimization. AIAA Journal, 2001, 39, 161-175.	1.5	7
63	Stochastic seismic analysis of hydrodynamic pressure in dam reservoir systems. Earthquake Engineering and Structural Dynamics, 2003, 32, 165-172.	2.5	7
64	Mechanically Based Nonlocal Euler-Bernoulli Beam Model. Journal of Nanomechanics & Micromechanics, 2014, 4, .	1.4	7
65	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
66	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
67	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
68	Convergence of Boobnov-Galerkin Method Exemplified. AIAA Journal, 2004, 42, 1931-1933.	1.5	5
69	Fractional-Order Theory of Thermoelasticicty. I: Generalization of the Fourier Equation. Journal of Engineering Mechanics - ASCE, 2018, 144, 04017164.	1.6	5
70	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
71	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
72	Posterior meniscal root repair: a biomechanical comparison between human and porcine menisci. Muscles, Ligaments and Tendons Journal, 2019, 09, 76.	0.1	5

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73	Experimental Characterization of the Human Meniscal Tissue. , 2018, , .		4
74	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
75	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
76	Exact Mechanical Hierarchy of Non-Linear Fractional-Order Hereditariness. Symmetry, 2020, 12, 673.	1.1	3
77	Seismically induced, non-stationary hydrodynamic pressure in a dam-reservoir system. Probabilistic Engineering Mechanics, 2003, 18, 151-163.	1.3	2
78	Mechanical response of Bernoulli Euler beams on fractional order elastic foundation. , 2014, , .		2
79	Quasi-Fractional Models of Human Tendons Hereditariness. , 2018, , .		2
80	A Non-Local Mode-I Cohesive Model for Ascending Thoracic Aorta Dissections (ATAD). , 2018, , .		2
81	Stochastic analysis of dynamical systems with delayed control forces. Communications in Nonlinear Science and Numerical Simulation, 2006, 11, 483-498.	1.7	1
82	A physical description of fractional-order Fourier diffusion. , 2014, , .		1
83	Fractional-Order Thermal Energy Transport for Small-Scale Engineering Devices. Journal of Nanomechanics & Micromechanics, 2014, 4, .	1.4	1
84	Fractional-Order Theory of Thermoelasticity. II: Quasi-Static Behavior of Bars. Journal of Engineering Mechanics - ASCE, 2018, 144, 04017165.	1.6	1
85	Numerical Simulations of the Hydrodynamics of the Abdominal Aorta Aneurysm (AAA) Using a Smoothed Particle Hydrodynamics Code with Deformable Wall Preliminary Results. , 2018, , .		1
86	Hereditariness of Aortic Tissue: in-Vitro Time-Dependent Failure of Human and Porcine Specimens. , 2018, , .		1
87	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
88	Letter to the Editor. The missing piece to solve the equation. Neurosurgical Focus, 2020, 48, E12.	1.0	1
89	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
90	A Single Integral Approach to Fractional Order Non-Linear Hereditariness. Lecture Notes in Mechanical Engineering, 2020, , 932-944.	0.3	1

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91	Seismically induced, non-stationary hydrodynamic pressure in a dam-reservoir system. Probabilistic Engineering Mechanics, 2003, 18, 151-151.	1.3	0
92	Variational Aspects of the Physically-Based Approach to 3D Non-Local Continuum Mechanics. Materials Science Forum, 2010, 638-642, 2549-2554.	0.3	0
93	Long-Range Interactions in 1D Heterogeneous Solids with Uncertainty. Procedia IUTAM, 2013, 6, 69-78.	1.2	0
94	A numerical assessment of the free energy function for fractional-order relaxation. , 2014, , .		0
95	Special Issue on â€œFrontier Biomechanical Challenges in Cardiovascular Physiopathologyâ€. Medical Engineering and Physics, 2017, 47, 1.	0.8	0
96	Hybrid aeroelastic optimization and antioptimization. AIAA Journal, 2001, 39, 161-175.	1.5	0