Brunello Tirozzi

List of Publications by Year
in descending order

115	1,571	279487	360668
papers	citations	23	35
		h-index	g-index

122	122	122	833
all docs	docs citations	times ranked	citing authors

#	ARTICLE	IF	CITATIONS
1	Magnetic Force-Free Theory: Nonlinear Case. Physics, 2022, 4, 21-36.	0.5	0
2	On the Turbulent Behavior of a Magnetically Confined Plasma near the X-Point. Fluids, 2022, 7, 157.	0.8	3
3	Scattering of Lower Hybrid Waves in a Magnetized Plasma. Physics, 2020, 2, 640-653.	0.5	0
4	Depolarization Block in the Endocannabinoid System of the Hippocampus. NeuroSci, 2020, 1, 85-97.	0.4	1
5	Quantum Hopfield Model. Physics, 2020, 2, 184-196.	0.5	3
6	Analytical studies of PROTO-SPHERA equilibria. Journal of Plasma Physics, 2020, 86, .	0.7	1
7	Short-Wave Asymptotics for Gaussian Beams and Packets and Scalarization of Equations in Plasma Physics. Physics, 2019, 1, 301-320.	0.5	2
8	Free energies of Boltzmann machines: self-averaging, annealed and replica symmetric approximations in the thermodynamic limit. Journal of Statistical Mechanics: Theory and Experiment, 2019, 2019, 033301.	0.9	8
9	1-D Modeling of the Screw-Pinch Plasma in PROTO-SPHERA. Fluids, 2019, 4, 42.	0.8	1
10	Bidimensional analysis of the PROTO-SPHERA flow. , 2019, , .		2
11	Gaussian Packets and Beams with Focal Points in Vector Problems of Plasma Physics. Theoretical and Mathematical Physics(Russian Federation), 2018, 196, 1059-1081.	0.3	3
12	Scalarization of stationary semiclassical problems for systems of equations and its application in plasma physics. Theoretical and Mathematical Physics(Russian Federation), 2017, 193, 1761-1782.	0.3	5
13	Asymptotic theory of linear water waves in a domain with nonuniform bottom with rapidly oscillating sections. Russian Journal of Mathematical Physics, 2016, 23, 455-474.	0.4	14
14	Maslov complex germ and high-frequency Gaussian beams for cold plasma in a toroidal domain. Doklady Mathematics, 2016, 94, 480-485.	0.1	4
15	Analysis of MHD instabilities by asymptotic methods. European Physical Journal D, 2016, 70, 1.	0.6	0
16	Gaussian beams for a linearized cold plasma confined in a torus. Journal of Instrumentation, 2016, 11, C04016-C04016.	0.5	2
17	On a homogenization method for differential operators with oscillating coefficients. Doklady Mathematics, 2015, 91, 227-231.	0.1	8
18	Asymptotics of shallow water equations on the sphere. Russian Journal of Mathematical Physics, 2014, 21, 430-449.	0.4	10

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19	Effects of increasing CREB-dependent transcription on the storage and recall processes in a hippocampal CA1 microcircuit. Hippocampus, 2014, 24, 165-177.	0.9	30
20	Asymptotic solutions of the Cauchy problem with localized initial conditions for linearized two-dimensional Boussinesq-type equations with variable coefficients. Russian Journal of Mathematical Physics, 2013, 20, 155-171.	0.4	15
21	Two-dimensional wave equation with degeneration on the curvilinear boundary of the domain and asymptotic solutions with localized initial data. Russian Journal of Mathematical Physics, 2013, 20, 389-401.	0.4	28
22	Storage and retrieval of ultrametric patterns in a network of CA1 neurons of the hippocampus. P-Adic Numbers, Ultrametric Analysis, and Applications, 2013, 5, 260-277.	0.1	0
23	Functions of Noncommuting Operators in an Asymptotic Problem for a 2D Wave Equation with Variable Velocity and Localized Right-hand Side. , 2013, , 95-125.		6
24	Central limit theorem for fluctuations of linear eigenvalue statistics of large random graphs: Diluted regime. Journal of Mathematical Physics, 2012, 53, .	0.5	9
25	FROM CLASSICAL NEURAL NETWORKS TO QUANTUM NEURAL NETWORKS. , 2012, , .		0
26	On the mechanisms underlying the depolarization block in the spiking dynamics of CA1 pyramidal neurons. Journal of Computational Neuroscience, 2012, 33, 207-225.	0.6	119
27	Asymptotic solutions of the two-dimensional model wave equation with degenerating velocity and localized initial data. St Petersburg Mathematical Journal, 2011, 22, 895-911.	0.1	13
28	Asymptotic solutions of the linear shallow-water equations with localized initial data. Journal of Engineering Mathematics, 2011, 69, 225-242.	0.6	30
29	Asymptotic solutions of 2D wave equations with variable velocity and localized right-hand side. Russian Journal of Mathematical Physics, 2010, 17, 66-76.	0.4	13
30	Asymptotic solution of the one-dimensional wave equation with localized initial data and with degenerating velocity: I. Russian Journal of Mathematical Physics, 2010, 17, 434-447.	0.4	41
31	Localized solutions of one-dimensional non-linear shallow-water equations with velocity $ c=sqrt x$. Russian Mathematical Surveys, 2010, 65, 177-179.	0.2	27
32	Central limit theorem for fluctuations of linear eigenvalue statistics of large random graphs. Journal of Mathematical Physics, 2010, 51, 023523.	0.5	14
33	Behavior near the focal points of asymptotic solutions to the Cauchy problem for the linearized shallow water equations with initial localized perturbations. Russian Journal of Mathematical Physics, 2009, 16, 228-245.	0.4	31
34	Stability of the dynamics of an asymmetric neural network. Communications on Pure and Applied Analysis, 2009, 8, 655-671.	0.4	0
35	Localized wave and vortical solutions to linear hyperbolic systems and their application to linear shallow water equations. Russian Journal of Mathematical Physics, 2008, 15, 192-221.	0.4	80
36	Asymptotics of localized solutions of the one-dimensional wave equation with variable velocity. II. Taking into account a source on the right-hand side and a weak dispersion. Russian Journal of Mathematical Physics, 2008, 15, 427-446.	0.4	9

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37	Identifying short motifs by means of extreme value analysis. Europhysics Letters, 2008, 84, 18001.	0.7	0
38	Emergent Synchronous Bursting of Oxytocin Neuronal Network. PLoS Computational Biology, 2008, 4, e1000123.	1.5	131
39	Dynamical behaviour of a large complex system. Communications on Pure and Applied Analysis, 2008, 7, 249-265.	0.4	0
40	Kohonen neural networks and genetic classification. Mathematical and Computer Modelling, 2007, 45, 34-60.	2.0	15
41	Optimal movement control models of Langevin and Hamiltonian types. Mathematical and Computer Modelling, 2007, 46, 680-698.	2.0	1
42	Representations of rapidly decaying functions by the Maslov canonical operator. Mathematical Notes, 2007, 82, 713-717.	0.1	24
43	Asymptotics of localized solutions of the one-dimensional wave equation with variable velocity. I. The Cauchy problem. Russian Journal of Mathematical Physics, 2007, 14, 28-56.	0.4	21
44	Cauchy–Riemann conditions and point singularities of solutions to linearized shallow-water equations. Russian Journal of Mathematical Physics, 2007, 14, 217-223.	0.4	3
45	Forecast of the trajectory of the center of typhoons and the Maslov decomposition. Russian Journal of Mathematical Physics, 2007, 14, 232-237.	0.4	2
46	Description of tsunami propagation based on the Maslov canonical operator. Doklady Mathematics, 2006, 74, 592-596.	0.1	23
47	Explicit asymptotics for tsunami waves in framework of the piston model. Russian Journal of Earth Sciences, 2006, 8, 1-12.	0.2	64
48	Impact of temperature and pH value on the stability of hGHRH: An MD approach. Mathematical and Computer Modelling, 2005, 41, 1157-1170.	2.0	2
49	The Cauchy-Riemann conditions and localized asymptotic solutions of the linearized shallow-water equations. Prikladnaya Matematika I Mekhanika, 2005, 69, 720-725.	0.4	5
50	Hugoniot-Maslov Chains for the System of Shallow-Water Equations Taking into Account Energy Exchange. Mathematical Notes, 2005, 78, 740-743.	0.1	0
51	A Perturbative Theory of the Evolution of the Center of Typhoons. , 2005, , 31-50.		2
52	A note on minimum-variance theory and beyond. Journal of Physics A, 2004, 37, 4685-4699.	1.6	8
53	Application of a segmentation algorithm to quantum dots study. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2004, 22, 588.	1.6	3
54	STABILITY OF ASYNCHRONOUS STATES OF SPIKING NEURONS. International Journal of Modern Physics B, 2004, 18, 759-771.	1.0	1

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55	Hugonió†€"Maslov Chains for Singular Vortical Solutions to Quasilinear Hyperbolic Systems and Typhoon Trajectory. Journal of Mathematical Sciences, 2004, 124, 5209-5249.	0.1	7
56	Calculation of Integrals of the Hugoniot†€"Maslov Chain for Singular Vortical Solutions of the Shallow-Water Equation. Theoretical and Mathematical Physics(Russian Federation), 2004, 139, 500-512.	0.3	2
57	A meshless boundary method for 2D problems of electromagnetic scattering from inhomogeneous bodies; H-polarized waves. Journal of Quantitative Spectroscopy and Radiative Transfer, 2004, 83, 313-320.	1.1	0
58	Rigorous Solution of the Gardner Problem. Communications in Mathematical Physics, 2003, 234, 383-422.	1.0	28
59	Conduction in bundles of demyelinated nerve fibers: computer simulation. Biological Cybernetics, 2003, 89, 439-448.	0.6	67
60	Linear and nonlinear post-processing of numerically forecasted surface temperature. Nonlinear Processes in Geophysics, 2003, 10, 373-383.	0.6	19
61	DISTINGUISHING BETWEEN CHAOTIC AND STOCHASTIC SYSTEMS IN FINANCIAL TIME SERIES. International Journal of Modern Physics C, 2002, 13, 31-39.	0.8	14
62	On the volume of the intersection of a sphere with random half spaces. Comptes Rendus Mathematique, 2002, 334, 803-806.	0.1	4
63	Generalization and learning error for nonlinear perceptron. Mathematical and Computer Modelling, 2002, 35, 259-271.	2.0	2
64	A new boundary method for electromagnetic scattering from inhomogeneous bodies. Journal of Quantitative Spectroscopy and Radiative Transfer, 2002, 72, 837-852.	1.1	3
65	On the Critical Capacity of the Hopfield Model. Communications in Mathematical Physics, 2001, 216, 139-177.	1.0	6
66	Detectable and undetectable input signals for the integrate-and-fire model. Journal of Physics A, 2001, 34, 1637-1648.	1.6	2
67	A DIFFUSION APPROACH TO ECONOMIC TIME SERIES. International Journal of Theoretical and Applied Finance, 2000, 03, 567-568.	0.2	0
68	HEDGING STRATEGY WITH LANGEVIN EVOLUTION. International Journal of Theoretical and Applied Finance, 2000, 03, 553-556.	0.2	0
69	Enhancement of the em field inside a local probe microscope. Journal of Modern Optics, 2000, 47, 25-32.	0.6	1
70	Stochastic resonance tuned by correlations in neural models. Physical Review E, 2000, 61, 4207-4211.	0.8	28
71	On the replica symmetric equations for the Hopfield model. Journal of Mathematical Physics, 1999, 40, 3930-3947.	0.5	15
72	Learning in a higher-order simple perceptron. Mathematical and Computer Modelling, 1999, 30, 217-223.	2.0	1

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73	Quasi-trefftz spectral method for separable linear elliptic equations. Computers and Mathematics With Applications, 1999, 37, 47-74.	1.4	7
74	P-ADIC DYNAMICAL SYSTEMS AND NEURAL NETWORKS. Mathematical Models and Methods in Applied Sciences, 1999, 09, 1417-1437.	1.7	11
75	Time series analysis of geological data. Chemical Geology, 1999, 161, 253-270.	1.4	15
76	p-adic dynamic systems. Theoretical and Mathematical Physics(Russian Federation), 1998, 114, 276-287.	0.3	32
77	Capacity of the Hopfield model. Journal of Physics A, 1997, 30, 3383-3391.	1.6	6
78	A Quasi Trefftz-Type Spectral Method for Initial Value Problems with Moving Boundaries. Mathematical Models and Methods in Applied Sciences, 1997, 07, 385-404.	1.7	9
79	Quasi Trefftz Spectral Method for Stokes Problem. Mathematical Models and Methods in Applied Sciences, 1997, 07, 1187-1212.	1.7	8
80	An introduction to the mathematical theory of neural networks. Lecture Notes in Physics, 1997, , 197-221.	0.3	3
81	An analysis on neural dynamics with saturated sigmoidal functions. Computers and Mathematics With Applications, 1997, 34, 71-99.	1.4	2
82	Convergence theorems for a class of learning algorithms with VLRPs. Neurocomputing, 1997, 15, 45-68.	3.5	1
83	A discrete version of the dynamic link network. Neurocomputing, 1997, 15, 91-106.	3.5	3
84	A new Trefftz method for solving boundary value problems. ARI Bulletin of the Istanbul Technical University, 1997, 50, 85-95.	0.2	3
85	An extended Kohonen phonetic map. Mathematical and Computer Modelling, 1997, 25, 69-73.	2.0	1
86	Convergence theorems for the kohonen feature mapping algorithms with VLRPs. Computers and Mathematics With Applications, 1997, 33, 45-63.	1.4	7
87	Energy landscape of neural networks storing spatially correlated patterns. Journal of Physics A, 1995, 28, 3733-3741.	1.6	1
88	An application of the saturated attractor analysis to three typical models. Lecture Notes in Computer Science, 1995, , 353-360.	1.0	4
89	NUMERICAL SIMULATION OF NEURAL NETWORKS WITH TRANSLATION AND ROTATION INVARIANT PATTERN RECOGNITION. International Journal of Modern Physics B, 1994, 08, 1529-1541.	1.0	11
90	The replica-symmetric solution without replica trick for the Hopfield model. Journal of Statistical Physics, 1994, 74, 1161-1183.	0.5	39

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91	The free energy of a class of Hopfield models. Journal of Statistical Physics, 1993, 72, 113-125.	0.5	20
92	STATISTICAL MEMORY MODEL FOR POLYMER CHAIN SHAPES. International Journal of Modern Physics B, 1993, 07, 2509-2527.	1.0	1
93	Modified pseudo-inverse neural networks storing correlated patterns. Journal of Physics A, 1992, 25, 2843-2857.	1.6	3
94	Fluctuation of the free energy in the Hopfield model. Journal of Statistical Physics, 1992, 67, 981-1008.	0.5	12
95	Replica-symmetry breaking in neural networks. Physica A: Statistical Mechanics and Its Applications, 1992, 185, 385-394.	1.2	3
96	Rigorous results for the free energy in the Hopfield model. Communications in Mathematical Physics, 1992, 150, 337-373.	1.0	11
97	Replica symmetry breaking in neural networks with modified pseudo-inverse interactions. Journal of Physics A, 1991, 24, 5163-5180.	1.6	10
98	Chaos in Highly Diluted Neural Networks. Europhysics Letters, 1991, 14, 727-732.	0.7	34
99	METASTABLE STATES IN THE HOPFIELD MODEL. International Journal of Modern Physics B, 1990, 04, 143-150.	1.0	4
100	STRUCTURED HIERARCHICAL NEURAL NETWORK. International Journal of Modern Physics B, 1989, 03, 1561-1571.	1.0	1
101	Conformal theories, grassmannians and soliton hierarchies (I). Nuclear Physics B, 1989, 315, 681-701.	0.9	3
102	Renormalons: A dynamical system approach. Nuclear Physics B, 1985, 257, 610-628.	0.9	9
103	Borel summability of the perturbation series in a hierarchical $\phi(??)4$ model. Journal of Statistical Physics, 1984, 36, 145-162.	0.5	2
104	A rigorous study of periodic orbits by means of a computer. Journal of Statistical Physics, 1983, 32, 25-33.	0.5	5
105	Infinite differentiability for one-dimensional spin system with long range random interaction. Communications in Mathematical Physics, 1982, 87, 229-252.	1.0	14
106	Renormalization group convergence for small perturbations of Gaussian random fields with slowly decaying correlations. Journal of Mathematical Physics, 1981, 22, 2020-2025.	0.5	2
107	The local central limit theorem for a Gibbs random field. Communications in Mathematical Physics, 1979, 70, 125-132.	1.0	6
108	Local limit theorem for Gibbs random fields of particles and unbounded spins. Journal of Mathematical Physics, 1979, 20, 1752-1758.	0.5	7

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109	The central limit theorem and the problem of equivalence of ensembles. Communications in Mathematical Physics, 1977, 54, 173-192.	1.0	72
110	Time evolution of infinite classical systems with singular, long range, two body interactions. Communications in Mathematical Physics, 1976, 47, 81-95.	1.0	35
111	On Eckart's approach to the hydrodynamic evolution of oceans and atmosphere. Societa Italiana Di Fisica Nuovo Cimento B-General Physics, Relativity Astronomy and Mathematical Physics and Methods, 1975, 25, 295-307.	0.2	0
112	Time evolution of a quantum lattice system. Communications in Mathematical Physics, 1973, 30, 83-98.	1.0	8
113	Electromagnetic mass differences of hadrons. Il Nuovo Cimento A, 1969, 64, 927-953.	0.2	31
114	The fifth interaction and baryon mass differences. Il Nuovo Cimento A, 1968, 58, 435-448.	0.2	3
115	Lower hadron states classification and SU(3) âŠ— SU(3) chiral algebra approximate saturation. Nuclear Physics B, 1968, 8, 521-534.	0.9	12