

Tomaso Aste

List of Publications by Year in descending order

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Version: 2024-02-01

127
papers

5,998
citations

94381

37
h-index

82499

72
g-index

132
all docs

132
docs citations

132
times ranked

3827
citing authors

#	ARTICLE	IF	CITATIONS
1	Heterogeneous Criticality in High Frequency Finance: A Phase Transition in Flash Crashes. <i>Entropy</i> , 2022, 24, 257.	1.1	1
2	Causal coupling between European and UK markets triggered by announcements of monetary policy decisions. <i>Royal Society Open Science</i> , 2022, 9, 211342.	1.1	0
3	Quantifying impact and response in markets using information filtering networks. <i>Journal of Physics Complexity</i> , 2022, 3, 025004.	0.9	0
4	Topological regularization with information filtering networks. <i>Information Sciences</i> , 2022, 608, 655-669.	4.0	4
5	Stress Testing and Systemic Risk Measures Using Elliptical Conditional Multivariate Probabilities. <i>Journal of Risk and Financial Management</i> , 2021, 14, 213.	1.1	1
6	Information Theoretic Causality Detection between Financial and Sentiment Data. <i>Entropy</i> , 2021, 23, 621.	1.1	8
7	Wisdom of crowds detects COVID-19 severity ahead of officially available data. <i>Scientific Reports</i> , 2021, 11, 13678.	1.6	8
8	Peer-to-peer loan acceptance and default prediction with artificial intelligence. <i>Royal Society Open Science</i> , 2020, 7, 191649.	1.1	22
9	Information Network Modeling for U.S. Banking Systemic Risk. <i>Entropy</i> , 2020, 22, 1331.	1.1	11
10	Information-theoretic measures for nonlinear causality detection: application to social media sentiment and cryptocurrency prices. <i>Royal Society Open Science</i> , 2020, 7, 200863.	1.1	23
11	Analysing Social Media Forums to Discover Potential Causes of Phasic Shifts in Cryptocurrency Price Series. <i>Frontiers in Blockchain</i> , 2020, 3, .	1.6	3
12	The Cost of Bitcoin Mining Has Never Really Increased. <i>Frontiers in Blockchain</i> , 2020, 3, .	1.6	12
13	The multilayer structure of corporate networks. <i>New Journal of Physics</i> , 2019, 21, 025002.	1.2	17
14	Reciprocity and impact in academic careers. <i>EPJ Data Science</i> , 2019, 8, .	1.5	17
15	Forecasting market states. <i>Quantitative Finance</i> , 2019, 19, 1491-1498.	0.9	20
16	Early coauthorship with top scientists predicts success in academic careers. <i>Nature Communications</i> , 2019, 10, 5170.	5.8	105
17	Predicting future stock market structure by combining social and financial network information. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2019, 535, 122343.	1.2	24
18	Can Cryptocurrencies Preserve Privacy and Comply With Regulations?. <i>Frontiers in Blockchain</i> , 2019, 2, .	1.6	15

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19	Cryptocurrency market structure: connecting emotions and economics. <i>Digital Finance</i> , 2019, 1, 5-21.	1.0	41
20	A Decentralized Digital Identity Architecture. <i>Frontiers in Blockchain</i> , 2019, 2, .	1.6	24
21	Dynamic correlations at different time-scales with empirical mode decomposition. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2018, 502, 534-544.	1.2	26
22	Network structure of the Wisconsin Schizotypy Scalesâ€™ Short Forms: Examining psychometric network filtering approaches. <i>Behavior Research Methods</i> , 2018, 50, 2531-2550.	2.3	55
23	Forecasting Market States. <i>SSRN Electronic Journal</i> , 2018, , .	0.4	1
24	Risk-Neutral Pricing and Hedging of In-Play Football Bets. <i>Applied Mathematical Finance</i> , 2018, 25, 315-335.	0.8	2
25	Blockchain inefficiency in the Bitcoin peers network. <i>EPJ Data Science</i> , 2018, 7, .	1.5	43
26	Financial Time Series Forecasting Using Empirical Mode Decomposition and Support Vector Regression. <i>Risks</i> , 2018, 6, 7.	1.3	52
27	Relation between regional uncertainty spillovers in the global banking system. <i>Journal of Network Theory in Finance</i> , 2018, 4, 1-23.	0.7	9
28	Blockchain Technologies: The Foreseeable Impact on Society and Industry. <i>Computer</i> , 2017, 50, 18-28.	1.2	459
29	Asymptotic scaling properties and estimation of the generalized Hurst exponents in financial data. <i>Physical Review E</i> , 2017, 95, 042311.	0.8	16
30	Universal behaviour of the glass and the jamming transitions in finite dimensions for hard spheres. <i>Soft Matter</i> , 2017, 13, 8766-8771.	1.2	7
31	Excess reciprocity distorts reputation in online social networks. <i>Scientific Reports</i> , 2017, 7, 3551.	1.6	14
32	Sparse Causality Network Retrieval from Short Time Series. <i>Complexity</i> , 2017, 2017, 1-13.	0.9	16
33	The Multiplex Dependency Structure of Financial Markets. <i>Complexity</i> , 2017, 2017, 1-13.	0.9	49
34	Time-dependent scaling patterns in high frequency financial data. <i>European Physical Journal: Special Topics</i> , 2016, 225, 1997-2016.	1.2	9
35	Two different flavours of complexity in financial data. <i>European Physical Journal: Special Topics</i> , 2016, 225, 3105-3113.	1.2	12
36	Interplay between past market correlation structure changes and future volatility outbursts. <i>Scientific Reports</i> , 2016, 6, 36320.	1.6	19

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37	A framework for Twitter events detection, differentiation and its application for retail brands. , 2016, , .		9
38	Scalability and Egalitarianism in Peer-to-Peer Networks. New Economic Windows, 2016, , 197-212.	1.0	4
39	To what extent does immigration affect inequality?. Physica A: Statistical Mechanics and Its Applications, 2016, 462, 1029-1039.	1.2	2
40	Parsimonious modeling with information filtering networks. Physical Review E, 2016, 94, 062306.	0.8	43
41	Complex, inter-networked economic and social systems. European Physical Journal: Special Topics, 2016, 225, 1875-1877.	1.2	0
42	Measuring multiscaling in financial time-series. Chaos, Solitons and Fractals, 2016, 88, 38-47.	2.5	44
43	Anomalous volatility scaling in high frequency financial data. Physica A: Statistical Mechanics and Its Applications, 2016, 447, 434-445.	1.2	12
44	Relation between Financial Market Structure and the Real Economy: Comparison between Clustering Methods. PLoS ONE, 2015, 10, e0116201.	1.1	55
45	Risk diversification: a study of persistence with a filtered correlation-network approach. Journal of Network Theory in Finance, 2015, 1, 77-98.	0.7	19
46	Graph Theory Enables Drug Repurposing “ How a Mathematical Model Can Drive the Discovery of Hidden Mechanisms of Action. PLoS ONE, 2014, 9, e84912.	1.1	31
47	Relation between Financial Market Structure and the Real Economy: Comparison between Clustering Methods. SSRN Electronic Journal, 2014, , .	0.4	2
48	Measures of Causality in Complex Datasets with Application to Financial Data. Entropy, 2014, 16, 2309-2349.	1.1	30
49	Systemic Losses Due to Counterparty Risk in a Stylized Banking System. Journal of Statistical Physics, 2014, 156, 998-1024.	0.5	11
50	When Can Social Media Lead Financial Markets?. Scientific Reports, 2014, 4, 4213.	1.6	84
51	Dependency structure and scaling properties of financial time series are related. Scientific Reports, 2014, 4, 4589.	1.6	16
52	Non-stationary multifractality in stock returns. Physica A: Statistical Mechanics and Its Applications, 2013, 392, 6470-6483.	1.2	37
53	Set Voronoi diagrams of 3D assemblies of aspherical particles. Philosophical Magazine, 2013, 93, 3993-4017.	0.7	65
54	Granular Jamming With Hydraulic Control. , 2013, , .		17

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55	Self-referential order. Philosophical Magazine, 2013, 93, 3983-3992.	0.7	1
56	Spread of risk across financial markets: better to invest in the peripheries. Scientific Reports, 2013, 3, 1665.	1.6	128
57	Granular jamming transitions for a robotic mechanism. AIP Conference Proceedings, 2013, , .	0.3	10
58	Building complex networks with Platonic solids. Physical Review E, 2012, 85, 046115.	0.8	28
59	Exploring complex networks via topological embedding on surfaces. Physical Review E, 2012, 86, 036109.	0.8	24
60	Random and frozen states in complex triangulations. Philosophical Magazine, 2012, 92, 246-254.	0.7	3
61	Exponential smoothing weighted correlations. European Physical Journal B, 2012, 85, 1.	0.6	63
62	Hierarchical Information Clustering by Means of Topologically Embedded Graphs. PLoS ONE, 2012, 7, e31929.	1.1	87
63	Dynamical generalized Hurst exponent as a tool to monitor unstable periods in financial time series. Physica A: Statistical Mechanics and Its Applications, 2012, 391, 3180-3189.	1.2	114
64	Understanding the source of multifractality in financial markets. Physica A: Statistical Mechanics and Its Applications, 2012, 391, 4234-4251.	1.2	111
65	Nested hierarchies in planar graphs. Discrete Applied Mathematics, 2011, 159, 2135-2146.	0.5	24
66	The use of dynamical networks to detect the hierarchical organization of financial market sectors. European Physical Journal B, 2010, 73, 3-11.	0.6	54
67	Disordered spherical bead packs are anisotropic. Europhysics Letters, 2010, 90, 34001.	0.7	70
68	kGamma distributions in granular packs. , 2010, , .		6
69	Correlation structure and dynamics in volatile markets. New Journal of Physics, 2010, 12, 085009.	1.2	104
70	Combining tomographic imaging and DEM simulations to investigate the structure of experimental sphere packings. Soft Matter, 2010, 6, 2992.	1.2	44
71	Quantification of the heterogeneity of particle packings. Physical Review E, 2009, 80, 021302.	0.8	33
72	The pursuit of loosest packing. , 2009, , .		3

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73	Specific Surface Area and Volume Fraction of the Cherry-Pit Model with Packed Pits. Journal of Physical Chemistry B, 2009, 113, 7780-7784.	1.2	15
74	Microstructures and mechanical properties of dense particle gels: Microstructural characterisation. Journal of the European Ceramic Society, 2008, 28, 1443-1449.	2.8	19
75	Structural transitions in granular packs: statistical mechanics and statistical geometry investigations. European Physical Journal B, 2008, 64, 511-517.	0.6	30
76	Structural and entropic insights into the nature of the random-close-packing limit. Physical Review E, 2008, 77, 031101.	0.8	102
77	Onset of Mechanical Stability in Random Packings of Frictional Spheres. Physical Review Letters, 2008, 101, 018301.	2.9	150
78	Relation Between Grain Shape and Fractal Properties in Random Apollonian Packing with Grain Rotation. Physical Review Letters, 2008, 101, 120602.	2.9	30
79	Emergence of Gamma distributions in granular materials and packing models. Physical Review E, 2008, 77, 021309.	0.8	126
80	CENTRALITY AND PERIPHERALITY IN FILTERED GRAPHS FROM DYNAMICAL FINANCIAL CORRELATIONS. International Journal of Modeling, Simulation, and Scientific Computing, 2008, 11, 927-950.	0.9	19
81	Applications of physical methods in high-frequency futures markets. Proceedings of SPIE, 2007, , .	0.8	4
82	Multi-scaling modelling in financial markets. Proceedings of SPIE, 2007, , .	0.8	3
83	Self-organization in a complex plasma. , 2007, , .		0
84	Correlation-based biological networks. , 2007, , .		2
85	Virtual experiments on complex materials. , 2007, , .		2
86	An invariant distribution in static granular media. Europhysics Letters, 2007, 79, 24003.	0.7	74
87	Correlation based networks of equity returns sampled at different time horizons. European Physical Journal B, 2007, 55, 209-217.	0.6	180
88	“No Worries”: Trends in Econophysics. European Physical Journal B, 2007, 55, 121-122.	0.6	10
89	Interplay between topology and dynamics in the World Trade Web. European Physical Journal B, 2007, 57, 159-164.	0.6	102
90	Multi-scale correlations in different futures markets. European Physical Journal B, 2007, 58, 207-220.	0.6	33

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91	Correlations and aggregate statistics in granular packs. European Physical Journal E, 2007, 22, 235-240.	0.7	8
92	Fine tuning DEM simulations to perform virtual experiments with three-dimensional granular packings. World Scientific Lecture Notes in Complex Systems, 2007, , 169-185.	0.1	5
93	Volume Fluctuations and Geometrical Constraints in Granular Packs. Physical Review Letters, 2006, 96, 018002.	2.9	49
94	Local and global relations between the number of contacts and density in monodisperse sphere packs. Journal of Statistical Mechanics: Theory and Experiment, 2006, 2006, P07010-P07010.	0.9	49
95	Title is missing!. Physica A: Statistical Mechanics and Its Applications, 2006, 370, xi-xiv.	1.2	1
96	Dynamical networks from correlations. Physica A: Statistical Mechanics and Its Applications, 2006, 370, 156-161.	1.2	27
97	Materials and complexity: emergence of structural complexity in sphere packings. , 2005, , .		0
98	Extracting the correlation structure by means of planar embedding. , 2005, , .		2
99	Complex networks on hyperbolic surfaces. Physica A: Statistical Mechanics and Its Applications, 2005, 346, 20-26.	1.2	96
100	Interest rates hierarchical structure. Physica A: Statistical Mechanics and Its Applications, 2005, 355, 21-33.	1.2	24
101	Innovation flow through social networks: productivity distribution in France and Italy. European Physical Journal B, 2005, 47, 459-466.	0.6	18
102	A tool for filtering information in complex systems. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 10421-10426.	3.3	689
103	Variations around disordered close packing. Journal of Physics Condensed Matter, 2005, 17, S2361-S2390.	0.7	78
104	Correlation filtering in financial time series (Invited Paper). , 2005, 5848, 100.		12
105	Ripples and ripples: from sandy deserts to ion-sputtered surfaces. New Journal of Physics, 2005, 7, 122-122.	1.2	54
106	Long-term memories of developed and emerging markets: Using the scaling analysis to characterize their stage of development. Journal of Banking and Finance, 2005, 29, 827-851.	1.4	339
107	Geometrical structure of disordered sphere packings. Physical Review E, 2005, 71, 061302.	0.8	280
108	Cell theory for liquid solids and glasses: From local packing configurations to global complex behaviors. Europhysics Letters, 2004, 67, 165-171.	0.7	34

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109	Surface instabilities in granular matter and ion-sputtered surfaces. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2004, 332, 548-558.	1.2	33
110	Investigating the geometrical structure of disordered sphere packings. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2004, 339, 16-23.	1.2	115
111	An interest rates cluster analysis. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2004, 339, 181-188.	1.2	45
112	Stratifications of cellular patterns: hysteresis and convergence. <i>European Physical Journal B</i> , 2003, 33, 447-455.	0.6	4
113	Glasses and local packings. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2003, 330, 189-194.	1.2	7
114	Scaling behaviors in differently developed markets. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2003, 324, 183-188.	1.2	251
115	Cell approach to glass transition. <i>Journal of Physics Condensed Matter</i> , 2003, 15, S803-S811.	0.7	4
116	Glass transition in self-organizing cellular patterns. <i>Journal of Physics A</i> , 1999, 32, 7049-7056.	1.6	38
117	The Shell Map. , 1999, , 497-510.		4
118	Dynamical partitions of space in any dimension. <i>Journal of Physics A</i> , 1998, 31, 8577-8593.	1.6	3
119	sRandom walks on disordered networks. <i>Physical Review E</i> , 1997, 55, 6233-6236.	0.8	4
120	Circle, sphere, and drop packings. <i>Physical Review E</i> , 1996, 53, 2571-2579.	0.8	67
121	Equilibrium and evolution of froths under topological constraints. <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , 1995, 71, 967-979.	0.6	2
122	Network Filtering for Big Data: Triangulated Maximally Filtered Graph. <i>Journal of Complex Networks</i> , 0, , cnw015.	1.1	48
123	Reciprocity and Success in Academic Careers. <i>SSRN Electronic Journal</i> , 0, , .	0.4	1
124	Portfolio Optimization with Sparse Multivariate Modelling. <i>SSRN Electronic Journal</i> , 0, , .	0.4	3
125	A Counterparty Risk Study of UK Banking Systems. <i>SSRN Electronic Journal</i> , 0, , .	0.4	3
126	How Did EU Immigrants Affect Income and Wealth Inequality in the UK?. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0

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127	Stress Testing and Systemic Risk Measures Using Multivariate Conditional Probability. SSRN Electronic Journal, 0, , .	0.4	1