# Stefan Bornholdt

List of Publications by Year
in descending order

| 58 papers | 6,150 citations | 172457 | 144013 |
|---|---|---|---|
| | | 29 h-index | 57 g-index |

| 70 all docs | 70 docs citations | 70 times ranked | 5451 citing authors |

| # | Article | IF | Citations |
|---|---------|-----|-----------|
| 1 | A q-spin Potts model of markets: Gain–loss asymmetry in stock indices as an emergent phenomenon. Physica A: Statistical Mechanics and Its Applications, 2022, 588, 126565. | 2.6 | 2 |
| 2 | Self-organized criticality in neural networks from activity-based rewiring. Physical Review E, 2021, 103, 032304. | 2.1 | 7 |
| 3 | A system-wide network reconstruction of gene regulation and metabolism in Escherichia coli. PLoS Computational Biology, 2019, 15, e1006962. | 3.2 | 12 |
| 4 | Critical excitation-inhibition balance in dense neural networks. Physical Review E, 2019, 100, 010301. | 2.1 | 5 |
| 5 | Repulsion in controversial debate drives public opinion into fifty-fifty stalemate. Physical Review E, 2019, 100, 042307. | 2.1 | 5 |
| 6 | Ensembles, dynamics, and cell types: Revisiting the statistical mechanics perspective on cellular regulation. Journal of Theoretical Biology, 2019, 467, 15-22. | 1.7 | 34 |
| 7 | Imitating the winner leads to discrimination in spatial prisoner's dilemma model. Scientific Reports, 2019, 9, 3776. | 3.3 | 1 |
| 8 | Discrimination emerging through spontaneous symmetry breaking in a spatial prisoner's dilemma model with multiple labels. Physical Review E, 2019, 100, 062302. | 2.1 | 5 |
| 9 | Globalization in a nutshell. Physical Review E, 2018, 98, . | 2.1 | 2 |
| 10 | The interdependent network of gene regulation and metabolism is robust where it needs to be. Nature Communications, 2017, 8, 534. | 12.8 | 53 |
| 11 | Motif-based success scores in coauthorship networks are highly sensitive to author name disambiguation. Physical Review E, 2014, 90, 032811. | 2.1 | 7 |
| 12 | Avalanches in Self-Organized Critical Neural Networks: A Minimal Model for the Neural SOC Universality Class. PLoS ONE, 2014, 9, e93090. | 2.5 | 32 |
| 13 | The Citation Wake of Publications Detects Nobel Laureates' Papers. PLoS ONE, 2014, 9, e113184. | 2.5 | 20 |
| 14 | Spin models as microfoundation of macroscopic market models. Physica A: Statistical Mechanics and Its Applications, 2013, 392, 4048-4054. | 2.6 | 19 |
| 15 | Boolean Network Model Predicts Knockout Mutant Phenotypes of Fission Yeast. PLoS ONE, 2013, 8, e71786. | 2.5 | 40 |
| 16 | Mean-field-like behavior of the generalized voter-model-class kinetic Ising model. Physical Review E, 2012, 85, 031126. | 2.1 | 20 |
| 17 | Binary threshold networks as a natural null model for biological networks. Physical Review E, 2012, 86, 026114. | 2.1 | 16 |
| 18 | Opinion formation model for markets with a social temperature and fear. Physical Review E, 2012, 86, 056106. | 2.1 | 24 |

| # | Article | IF | Citations |
|---|---------|-----|-----------|
| 19 | Morphogenesis by coupled regulatory networks: Reliable control of positional information and proportion regulation. Journal of Theoretical Biology, 2009, 261, 176-193. | 1.7 | 8 |
| 20 | Longevity of orders is related to the longevity of their constituent genera rather than genus richness. Theory in Biosciences, 2009, 128, 75-83. | 1.4 | 8 |
| 21 | Reliability of regulatory networks and its evolution. Journal of Theoretical Biology, 2009, 258, 502-512. | 1.7 | 7 |
| 22 | Self-Organized Criticality and Adaptation in Discrete Dynamical Networks. Understanding Complex Systems, 2009, , 73-106. | 0.6 | 9 |
| 23 | Tools from Statistical Physics for the Analysis of Social Networks. Understanding Complex Systems, 2009, , 147-185. | 0.6 | 1 |
| 24 | The transition from differential equations to Boolean networks: A case study in simplifying a regulatory network model. Journal of Theoretical Biology, 2008, 255, 269-277. | 1.7 | 99 |
| 25 | Boolean network models of cellular regulation: prospects and limitations. Journal of the Royal Society Interface, 2008, 5, S85-94. | 3.4 | 303 |
| 26 | Reliability of genetic networks is evolvable. Physical Review E, 2008, 77, 060902. | 2.1 | 15 |
| 27 | Boolean Network Model Predicts Cell Cycle Sequence of Fission Yeast. PLoS ONE, 2008, 3, e1672. | 2.5 | 421 |
| 28 | Market Segmentation: The Network Approach. , 2008, , 19-36. | | 1 |
| 29 | Clustering of sparse data via network communities—a prototype study of a large online market. Journal of Statistical Mechanics: Theory and Experiment, 2007, 2007, P06016-P06016. | 2.3 | 19 |
| 30 | Partitioning and modularity of graphs with arbitrary degree distribution. Physical Review E, 2007, 76, 015102. | 2.1 | 61 |
| 31 | Superstability of the yeast cell-cycle dynamics: Ensuring causality in the presence of biochemical stochasticity. Journal of Theoretical Biology, 2007, 245, 638-643. | 1.7 | 64 |
| 32 | Statistical mechanics of community detection. Physical Review E, 2006, 74, 016110. | 2.1 | 1,427 |
| 33 | When are networks truly modular?. Physica D: Nonlinear Phenomena, 2006, 224, 20-26. | 2.8 | 82 |
| 34 | Self-organized pattern formation and noise-induced control based on particle computations. Journal of Statistical Mechanics: Theory and Experiment, 2005, 2005, L12001-L12001. | 2.3 | 7 |
| 35 | Stable and unstable attractors in Boolean networks. Physical Review E, 2005, 72, 055101. | 2.1 | 126 |
| 36 | Topology of biological networks and reliability of information processing. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 18414-18419. | 7.1 | 164 |

| # | Article | IF | Citations |
|---|---------|-----|-----------|
| 37 | SYSTEMS BIOLOGY: Less Is More in Modeling Large Genetic Networks. Science, 2005, 310, 449-451. | 12.6 | 308 |
| 38 | Orbital frequencies in the carbonate sedimentary record: distorted by diagenesis?. Facies, 2004, 50, 3-11. | 1.4 | 36 |
| 39 | Detecting Fuzzy Community Structures in Complex Networks with a Potts Model. Physical Review Letters, 2004, 93, 218701. | 7.8 | 445 |
| 40 | Self-organized critical neural networks. Physical Review E, 2003, 67, 066118. | 2.1 | 105 |
| 41 | Required but disguised: environmental signals in limestone–marl alternations. Palaeogeography, Palaeoclimatology, Palaeoecology, 2003, 189, 161-178. | 2.3 | 36 |
| 42 | Emergence of a Small World from Local Interactions: Modeling Acquaintance Networks. Physical Review Letters, 2002, 88, 128701. | 7.8 | 247 |
| 43 | Coevolution of Quasispecies: B-Cell Mutation Rates Maximize Viral Error Catastrophes. Physical Review Letters, 2002, 88, 068104. | 7.8 | 62 |
| 44 | Scale-free topology of e-mail networks. Physical Review E, 2002, 66, 035103. | 2.1 | 685 |
| 45 | Dynamics of social networks. Complexity, 2002, 8, 24-27. | 1.6 | 80 |
| 46 | Viral evolution under the pressure of an adaptive immune system: Optimal mutation rates for viral escape. Complexity, 2002, 8, 28-33. | 1.6 | 44 |
| 47 | Criticality in random threshold networks: annealed approximation and beyond. Physica A: Statistical Mechanics and Its Applications, 2002, 310, 245-259. | 2.6 | 59 |
| 48 | Stability of money: phase transitions in an Ising economy. Physica A: Statistical Mechanics and Its Applications, 2002, 316, 453-468. | 2.6 | 27 |
| 49 | Dynamics of price and trading volume in a spin model of stock markets with heterogeneous agents. Physica A: Statistical Mechanics and Its Applications, 2002, 316, 441-452. | 2.6 | 101 |
| 50 | EXPECTATION BUBBLES IN A SPIN MODEL OF MARKETS: INTERMITTENCY FROM FRUSTRATION ACROSS SCALES. International Journal of Modern Physics C, 2001, 12, 667-674. | 1.7 | 162 |
| 51 | World Wide Web scaling exponent from Simon's 1955 model. Physical Review E, 2001, 64, 035104. | 2.1 | 97 |
| 52 | Topological Evolution of Dynamical Networks: Global Criticality from Local Dynamics. Physical Review Letters, 2000, 84, 6114-6117. | 7.8 | 221 |
| 53 | Robustness as an evolutionary principle. Proceedings of the Royal Society B: Biological Sciences, 2000, 267, 2281-2286. | 2.6 | 102 |
| 54 | Neural network interpretation of LWD data (ODP Leg 170) confirms complete sediment subduction at the Costa Rica convergent margin. Earth and Planetary Science Letters, 2000, 174, 301-312. | 4.4 | 19 |

| # | ARTICLE | IF | CITATIONS |
|---|---------|-----|-----------|
| 55 | Annealing schedule from population dynamics. Physical Review E, 1999, 59, 3942-3946. | 2.1 | 3 |
| 56 | Neutral Mutations and Punctuated Equilibrium in Evolving Genetic Networks. Physical Review Letters, 1998, 81, 236-239. | 7.8 | 78 |
| 57 | Genetic algorithm dynamics on a rugged landscape. Physical Review E, 1998, 57, 3853-3860. | 2.1 | 15 |
| 58 | Self-organizing criticality, large anomalous mass dimension and the gauge hierarchy problem. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1992, 282, 399-405. | 4.1 | 21 |