

# Silvio Franz

## List of Publications by Citations

**Source:** <https://exaly.com/author-pdf/1581406/silvio-franz-publications-by-citations.pdf>  
**Version:** 2024-04-09

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.  
The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

111 papers	3,538 citations	33 h-index	57 g-index
115 ext. papers	3,939 ext. citations	3.1 avg, IF	5.52 L-index

#	Paper	IF	Citations
111	Recipes for Metastable States in Spin Glasses. <i>Journal De Physique, I</i> , <b>1995</b> , 5, 1401-1415		173
110	Phase Diagram of Coupled Glassy Systems: A Mean-Field Study. <i>Physical Review Letters</i> , <b>1997</b> , 79, 2486-2489	7.4	171
109	Measuring Equilibrium Properties in Aging Systems. <i>Physical Review Letters</i> , <b>1998</b> , 81, 1758-1761	7.4	163
108	Theory of non-linear susceptibility and correlation length in glasses and liquids. <i>Journal of Non-Crystalline Solids</i> , <b>2002</b> , 307-310, 215-224	3.9	142
107	On non-linear susceptibility in supercooled liquids. <i>Journal of Physics Condensed Matter</i> , <b>2000</b> , 12, 6335-6342	3.9	139
106	Replica Bounds for Optimization Problems and Diluted Spin Systems. <i>Journal of Statistical Physics</i> , <b>2003</b> , 111, 535-564	1.5	118
105	Off-Equilibrium Glassy Dynamics: A Simple Case. <i>Europhysics Letters</i> , <b>1994</b> , 26, 209-214	1.6	113
104	Universal spectrum of normal modes in low-temperature glasses. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2015</b> , 112, 14539-44	11.5	108
103	Quasi-equilibrium interpretation of ageing dynamics. <i>Journal of Physics A</i> , <b>2000</b> , 33, 891-905		96
102	The Response of Glassy Systems to Random Perturbations: A Bridge Between Equilibrium and Off-Equilibrium. <i>Journal of Statistical Physics</i> , <b>1999</b> , 97, 459-488	1.5	88
101	Glassy transition and aging in a model without disorder. <i>Physical Review Letters</i> , <b>1995</b> , 74, 2114-2117	7.4	88
100	Field theory of fluctuations in glasses. <i>European Physical Journal E</i> , <b>2011</b> , 34, 102	1.5	85
99	Constrained Boltzmann-Gibbs measures and effective potential for glasses in hypernetted chain approximation and numerical simulations. <i>Journal of Chemical Physics</i> , <b>1999</b> , 110, 1726-1734	3.9	77
98	Effective potential in glassy systems: theory and simulations. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>1998</b> , 261, 317-339	3.3	76
97	A ferromagnet with a glass transition. <i>Europhysics Letters</i> , <b>2001</b> , 55, 465-471	1.6	76
96	Analytic determination of dynamical and mosaic length scales in a Kac glass model. <i>Journal of Physics A: Mathematical and Theoretical</i> , <b>2007</b> , 40, F251-F257	2	74
95	On mean field glassy dynamics out of equilibrium. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>1994</b> , 210, 48-72	3.3	74

94	Error threshold in simple landscapes. <i>Journal of Physics A</i> , <b>1997</b> , 30, 4481-4487		70
93	Glass transition and effective potential in the hypernetted chain approximation. <i>Journal of Physics A</i> , <b>1998</b> , 31, L163-L169		70
92	Fluctuation-dissipation ratio in three-dimensional spin glasses. <i>Journal of Statistical Physics</i> , <b>1995</b> , 79, 749-758	1.5	69
91	Temperature evolution and bifurcations of metastable states in mean-field spin glasses, with connections with structural glasses. <i>Journal of Physics A</i> , <b>1997</b> , 30, 5593-5612		67
90	The simplest model of jamming. <i>Journal of Physics A: Mathematical and Theoretical</i> , <b>2016</b> , 49, 145001	2	65
89	On dynamical correlations in supercooled liquids. <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , <b>1999</b> , 79, 1827-1831		57
88	Partial annealing and overfrustration in disordered systems. <i>Journal of Physics A</i> , <b>1994</b> , 27, 2351-2365		57
87	Universality of the SAT-UNSAT (jamming) threshold in non-convex continuous constraint satisfaction problems. <i>SciPost Physics</i> , <b>2017</b> , 2,	6.1	57
86	Exact solutions for diluted spin glasses and optimization problems. <i>Physical Review Letters</i> , <b>2001</b> , 87, 127209	7.4	54
85	Quantitative field theory of the glass transition. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2012</b> , 109, 18725-30	11.5	50
84	The replica method on and off equilibrium. <i>Journal De Physique, I</i> , <b>1992</b> , 2, 1869-1880		42
83	Replica bounds for diluted non-Poissonian spin systems. <i>Journal of Physics A</i> , <b>2003</b> , 36, 10967-10985		40
82	Mean-field avalanches in jammed spheres. <i>Physical Review E</i> , <b>2017</b> , 95, 022139	2.4	39
81	Hierarchical random energy model of a spin glass. <i>Physical Review Letters</i> , <b>2010</b> , 104, 127206	7.4	39
80	Dynamic phase transition for decoding algorithms. <i>Physical Review E</i> , <b>2002</b> , 66, 046120	2.4	33
79	Fragile-glass behavior of a short-range p-spin model. <i>Physical Review B</i> , <b>1996</b> , 54, 9756-9764	3.3	33
78	First steps of a nucleation theory in disordered systems. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , <b>2005</b> , 2005, P04001	1.9	32
77	Dynamical Solution of a Model without Energy Barriers. <i>Europhysics Letters</i> , <b>1995</b> , 31, 507-512	1.6	32

76	A minimal stochastic model for influenza evolution. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , <b>2005</b> , 2005, P07008-P07008	1.9	30
75	Kob-Andersen model: a nonstandard mechanism for the glassy transition. <i>Physical Review E</i> , <b>2002</b> , 65, 021506	2.4	30
74	Gardner physics in amorphous solids and beyond. <i>Journal of Chemical Physics</i> , <b>2019</b> , 151, 010901	3.9	29
73	Metastable states, relaxation times and free-energy barriers in finite-dimensional glassy systems. <i>Europhysics Letters</i> , <b>2006</b> , 73, 492-498	1.6	28
72	Universality classes of critical points in constrained glasses. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , <b>2013</b> , 2013, P11012	1.9	27
71	An evolutionary version of the random energy model. <i>Journal of Physics A</i> , <b>1993</b> , 26, L1195-L1199		27
70	Overlap interfaces in hierarchical spin-glass models. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , <b>2009</b> , 2009, P02002	1.9	25
69	Finite-range spin glasses in the Kac limit: free energy and local observables. <i>Journal of Physics A</i> , <b>2004</b> , 37, 7433-7446		23
68	Kac limit for finite-range spin glasses. <i>Physical Review Letters</i> , <b>2004</b> , 92, 030602	7.4	23
67	Glassy mean-field dynamics of the backgammon model. <i>Journal of Statistical Physics</i> , <b>1996</b> , 85, 131-150	1.5	22
66	Static replica approach to critical correlations in glassy systems. <i>Journal of Chemical Physics</i> , <b>2013</b> , 138, 12A540	3.9	21
65	Spectral statistics of instantaneous normal modes in liquids and random matrices. <i>Physical Review E</i> , <b>2001</b> , 64, 016305	2.4	21
64	On chaos in mean-field spin glasses. <i>Journal of Physics A</i> , <b>1995</b> , 28, 2499-2513		21
63	Relaxation processes and entropic traps in the Backgammon model. <i>Journal of Physics A</i> , <b>1997</b> , 30, L359-L365		20
62	The jamming transition in high dimension: an analytical study of the TAP equations and the effective thermodynamic potential. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , <b>2016</b> , 2016, 093301	1.9	19
61	Perceptron beyond the limit of capacity. <i>Journal De Physique</i> , <b>1989</b> , 50, 121-134		19
60	Using affinity propagation for identifying subspecies among clonal organisms: lessons from M. tuberculosis. <i>BMC Bioinformatics</i> , <b>2011</b> , 12, 224	3.6	17
59	Jamming in Multilayer Supervised Learning Models. <i>Physical Review Letters</i> , <b>2019</b> , 123, 160602	7.4	14

58	Identifying relevant positions in proteins by Critical Variable Selection. <i>Molecular BioSystems</i> , <b>2016</b> , 12, 2147-58		13
57	Glassy critical points and the random field Ising model. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , <b>2013</b> , 2013, L02001	1.9	13
56	Random heteropolymer dynamics. <i>Physical Review E</i> , <b>2001</b> , 64, 051910	2.4	13
55	Critical Jammed Phase of the Linear Perceptron. <i>Physical Review Letters</i> , <b>2019</b> , 123, 115702	7.4	11
54	Rethinking Mean-Field Glassy Dynamics and Its Relation with the Energy Landscape: The Surprising Case of the Spherical Mixed p-Spin Model. <i>Physical Review X</i> , <b>2020</b> , 10,	9.1	11
53	Non-neutral theory of biodiversity. <i>Europhysics Letters</i> , <b>2009</b> , 87, 28001	1.6	11
52	Number partitioning as a random energy model. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , <b>2004</b> , 2004, P04003	1.9	11
51	Non trivial overlap distributions at zero temperature. <i>European Physical Journal B</i> , <b>2000</b> , 18, 485-491	1.2	11
50	Ultrametricity in three-dimensional edwards-anderson spin glasses. <i>Physical Review E</i> , <b>2000</b> , 61, 1121-4	2.4	11
49	Free-Energy Cost for Ultrametricity Violations in Spin Glasses. <i>Europhysics Letters</i> , <b>1993</b> , 22, 405-411	1.6	11
48	On the Computation of Static Expectation Values from Dynamics in Spin Glasses. <i>Europhysics Letters</i> , <b>1992</b> , 20, 197-203	1.6	10
47	Constraint satisfaction mechanisms for marginal stability and criticality in large ecosystems. <i>Physical Review E</i> , <b>2019</b> , 99, 010401	2.4	10
46	Quasi-equilibrium in glassy dynamics: a liquid theory approach. <i>Journal of Physics A: Mathematical and Theoretical</i> , <b>2015</b> , 48, 19FT01	2	9
45	Shortest node-disjoint paths on random graphs. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , <b>2014</b> , 2014, P07009	1.9	9
44	Quasi-equilibrium in glassy dynamics: an algebraic view. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , <b>2013</b> , 2013, P02003	1.9	9
43	Mosaic length and finite interaction-range effects in a one-dimensional random energy model. <i>Journal of Physics A: Mathematical and Theoretical</i> , <b>2008</b> , 41, 324011	2	9
42	Closure of macroscopic laws in disordered spin systems: a toy model. <i>Journal of Physics A</i> , <b>1994</b> , 27, 6947-6954	9	
41	Ultrametricity in an Inhomogeneous Simplest Spin Glass Model. <i>Europhysics Letters</i> , <b>1992</b> , 17, 5-9	1.6	9

40	The Edge-Disjoint Path Problem on Random Graphs by Message-Passing. <i>PLoS ONE</i> , <b>2015</b> , 10, e0145222	3.7	9
39	Finite-size critical fluctuations in microscopic models of mode-coupling theory. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , <b>2013</b> , 2013, P02025	1.9	8
38	On the tail of the overlap probability distribution in the Sherrington-Kirkpatrick model. <i>Journal of Physics A</i> , <b>2003</b> , 36, 15-27		8
37	A field-theoretical approach to the spin glass transition: models with long but finite interaction range. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , <b>2005</b> , 2005, P01008	1.9	8
36	Basins of attraction of metastable states of the spherical p-spin model. <i>Journal of Physics A</i> , <b>1998</b> , 31, L119-L127		8
35	Critical properties of a three-dimensional p-spin model. <i>European Physical Journal B</i> , <b>1999</b> , 8, 417-422	1.2	8
34	Impact of jamming criticality on low-temperature anomalies in structural glasses. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2019</b> , 116, 13768-13773	11.5	7
33	Surface tension in Kac glass models. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , <b>2010</b> , 2010, P04008	1.9	7
32	Ising model with memory: coarsening and persistence properties. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , <b>2008</b> , 2008, P07006	1.9	7
31	Dynamical arrest in a geometric model for the glass transition. <i>Europhysics Letters</i> , <b>2003</b> , 64, 302-308	1.6	7
30	A note on weakly discontinuous dynamical transitions. <i>Journal of Chemical Physics</i> , <b>2013</b> , 138, 064504	3.9	6
29	Modeling microevolution in a changing environment: the evolving quasispecies and the diluted champion process. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , <b>2011</b> , 2011, P08022	1.9	6
28	On the Dynamics of Kac p-Spin Glasses. <i>Journal of Statistical Physics</i> , <b>2007</b> , 126, 765-780	1.5	6
27	Local spin glass order in 1D. <i>Europhysics Letters</i> , <b>2006</b> , 75, 385-391	1.6	6
26	Critical energy landscape of linear soft spheres. <i>SciPost Physics</i> , <b>2020</b> , 9,	6.1	6
25	Prosopagnosia in high capacity neural networks storing uncorrelated classes. <i>Journal De Physique</i> , <b>1990</b> , 51, 387-408		6
24	Dynamics and termination cost of spatially coupled mean-field models. <i>Physical Review E</i> , <b>2014</b> , 89, 012102	10.4	5
23	THE KAC LIMIT FOR DILUTED SPIN GLASSES. <i>International Journal of Modern Physics B</i> , <b>2004</b> , 18, 675-679	1.1	5

22	Quasiequilibrium during aging of the two-dimensional Edwards-Anderson model. <i>Physical Review E</i> , <b>2003</b> , 68, 066128	2.4	5
21	Series expansion of the off-equilibrium mode coupling equations. <i>Journal of Physics A</i> , <b>1995</b> , 28, 5437-5443		5
20	Self-averaging Identities for Random Spin Systems <b>2009</b> , 123-142		5
19	A Note on the Guerra and Talagrand Theorems for Mean Field Spin Glasses: The Simple Case of Spherical Models. <i>Journal of Statistical Physics</i> , <b>2006</b> , 122, 313-332	1.5	4
18	Crossover behavior of a one-dimensional random energy model. <i>Physical Review E</i> , <b>1998</b> , 58, 5455-5460	2.4	3
17	Large deviations of glassy effective potentials. <i>Journal of Physics A: Mathematical and Theoretical</i> , <b>2020</b> , 53, 485002	2	3
16	Matrix product algorithm for stochastic dynamics on networks applied to nonequilibrium Glauber dynamics. <i>Physical Review E</i> , <b>2018</b> , 97, 010104	2.4	2
15	Random-diluted triangular plaquette model: Study of phase transitions in a kinetically constrained model. <i>Physical Review E</i> , <b>2016</b> , 93, 032601	2.4	2
14	Correction for Franz et al., Quantitative field theory of the glass transition. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2013</b> , 110, 11211-11211	11.5	2
13	How glasses explore configuration space. <i>Journal of Physics Condensed Matter</i> , <b>2003</b> , 15, S881-S890	1.8	2
12	Delocalization transition in low energy excitation modes of vector spin glasses. <i>SciPost Physics</i> , <b>2022</b> , 12,	6.1	2
11	New analysis of the free energy cost of interfaces in spin glasses. <i>Journal of Physics A: Mathematical and Theoretical</i> , <b>2019</b> , 52, 294001	2	1
10	Quasi equilibrium construction for the long time limit of glassy dynamics. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , <b>2015</b> , 2015, P10010	1.9	1
9	Overlap properties and adsorption transition of two Hamiltonian paths. <i>European Physical Journal B</i> , <b>1999</b> , 11, 463-468	1.2	1
8	Memorizing polymers shapes and permutations. <i>Journal of Physics A</i> , <b>1992</b> , 25, 6631-6648		1
7	Gradient descent dynamics in the mixed p-spin spherical model: finite-size simulations and comparison with mean-field integration. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , <b>2021</b> , 2021, 033302	1.9	1
6	Linear low energy excitations in fully-connected models of glasses. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , <b>2022</b> , 2022, 053302	1.9	1
5	Surfing on minima of isostatic landscapes: avalanches and unjamming transition. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , <b>2021</b> , 2021, 023208	1.9	0

- 4 Spin glass models with Kac interactions. *European Physical Journal B*, **2008**, 64, 557-561 1.2
- 3 Effective potentials in glassy systems. *The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties*, **1998**, 77, 239-243
- 2 On pre-asymptotic aging in finite dimensional spin glasses. **2004**, 119-128
- 1 Some Thoughts on the Ontogenesis in B-Cell Immune Networks. *Springer Proceedings in Mathematics and Statistics*, **2014**, 71-79 0.2