

# Francesco Guerra

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

74  
papers

2,037  
citations

21  
h-index

44  
g-index

75  
ext. papers

2,188  
ext. citations

2.7  
avg, IF

5.07  
L-index

| #  | Paper                                                                                                                                                                                                  | IF  | Citations |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 74 | The Emergence of the Order Parameter in the Interpolating Replica Trick for Disordered Statistical Mechanics Systems. <i>Springer Proceedings in Mathematics and Statistics</i> , <b>2022</b> , 63-86  | 0.2 |           |
| 73 | Enrico Fermi's Discovery of Neutron-Induced Artificial Radioactivity: A Case of "emanation" from Divine Providence. <i>Physics in Perspective</i> , <b>2020</b> , 22, 129-161                          | 0.3 | 0         |
| 72 | The Replica Trick in the Frame of Replica Interpolation. <i>Springer Proceedings in Mathematics and Statistics</i> , <b>2019</b> , 171-191                                                             | 0.2 | 1         |
| 71 | Metastable states in the hierarchical Dyson model drive parallel processing in the hierarchical Hopfield network. <i>Journal of Physics A: Mathematical and Theoretical</i> , <b>2015</b> , 48, 015001 | 2   | 11        |
| 70 | Hierarchical neural networks perform both serial and parallel processing. <i>Neural Networks</i> , <b>2015</b> , 66, 22-35                                                                             | 9.1 | 15        |
| 69 | Energy in self-directed B lymphocytes: A statistical mechanics perspective. <i>Journal of Theoretical Biology</i> , <b>2015</b> , 375, 21-31                                                           | 2.3 | 24        |
| 68 | Topological properties of hierarchical networks. <i>Physical Review E</i> , <b>2015</b> , 91, 062807                                                                                                   | 2.4 | 8         |
| 67 | Retrieval capabilities of hierarchical networks: from Dyson to Hopfield. <i>Physical Review Letters</i> , <b>2015</b> , 114, 028103                                                                    | 7.4 | 40        |
| 66 | Spontaneous Replica Symmetry Breaking and Interpolation Methods for Complex Statistical Mechanics Systems. <i>Lecture Notes in Mathematics</i> , <b>2015</b> , 45-70                                   | 0.4 | 2         |
| 65 | Free-Energy Bounds for Hierarchical Spin Models. <i>Journal of Statistical Physics</i> , <b>2014</b> , 155, 211-222                                                                                    | 1.5 | 9         |
| 64 | Mean field bipartite spin models treated with mechanical techniques. <i>European Physical Journal B</i> , <b>2014</b> , 87, 1                                                                          | 1.2 | 17        |
| 63 | About a solvable mean field model of a Gaussian spin glass. <i>Journal of Physics A: Mathematical and Theoretical</i> , <b>2014</b> , 47, 155002                                                       | 2   | 13        |
| 62 | On quantum and relativistic mechanical analogues in mean-field spin models. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , <b>2014</b> , 470, 20140589   | 2.4 | 11        |
| 61 | When Energy Conservation Seems to Fail: The Prediction of the Neutrino. <i>Science and Education</i> , <b>2014</b> , 23, 1339-1359                                                                     | 2.1 | 4         |
| 60 | Interpolation and Comparison Methods in the Mean Field Spin Glass Model. <i>Springer INdAM Series</i> , <b>2014</b> , 1-12                                                                             | 0.4 | 1         |
| 59 | Enrico Fermi and Ettore Majorana: So Strong, So Different. <i>Springer Proceedings in Physics</i> , <b>2014</b> , 29-39                                                                                | 0.2 |           |
| 58 | The Disappearance and Death of Ettore Majorana. <i>Physics in Perspective</i> , <b>2013</b> , 15, 160-177                                                                                              | 0.3 |           |

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| 57 | Parallel processing in immune networks. <i>Physical Review E</i> , <b>2013</b> , 87, 042701                                                                                             | 2.4 | 9  |
| 56 | The phenomenon of spontaneous replica symmetry breaking in complex statistical mechanics systems. <i>Journal of Physics: Conference Series</i> , <b>2013</b> , 442, 012013              | 0.3 | 3  |
| 55 | The Discovery of Artificial Radioactivity. <i>Physics in Perspective</i> , <b>2012</b> , 14, 33-58                                                                                      | 0.3 | 7  |
| 54 | Multitasking associative networks. <i>Physical Review Letters</i> , <b>2012</b> , 109, 268101                                                                                           | 7.4 | 80 |
| 53 | Interpolating the Sherrington-Kirkpatrick replica trick. <i>Philosophical Magazine</i> , <b>2012</b> , 92, 78-97                                                                        | 1.6 | 14 |
| 52 | How glassy are neural networks?. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , <b>2012</b> , 2012, P07009                                                            | 1.9 | 25 |
| 51 | Can persistent Epstein-Barr virus infection induce chronic fatigue syndrome as a Pavlov reflex of the immune response?. <i>Journal of Biological Dynamics</i> , <b>2012</b> , 6, 740-62 | 2.4 | 12 |
| 50 | Equilibrium statistical mechanics of bipartite spin systems. <i>Journal of Physics A: Mathematical and Theoretical</i> , <b>2011</b> , 44, 245002                                       | 2   | 44 |
| 49 | A thermodynamic perspective of immune capabilities. <i>Journal of Theoretical Biology</i> , <b>2011</b> , 287, 48-63                                                                    | 2.3 | 32 |
| 48 | Replica symmetry breaking in mean-field spin glasses through the Hamilton-Jacobi technique. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , <b>2010</b> , 2010, P09006 | 1.9 | 19 |
| 47 | The Replica Symmetric Approximation of the Analogical Neural Network. <i>Journal of Statistical Physics</i> , <b>2010</b> , 140, 784-796                                                | 1.5 | 40 |
| 46 | COUPLED SELF-OSCILLATING SYSTEMS: THEORY AND APPLICATIONS. <i>International Journal of Modern Physics B</i> , <b>2009</b> , 23, 5505-5514                                               | 1.1 | 2  |
| 45 | Enrico Fermi's Discovery of Neutron-Induced Artificial Radioactivity: The Influence of His Theory of Beta Decay. <i>Physics in Perspective</i> , <b>2009</b> , 11, 379-404              | 0.3 | 7  |
| 44 | Spontaneous Replica Symmetry Breaking in the Mean Field Spin Glass Model <b>2009</b> , 299-311                                                                                          |     | 1  |
| 43 | About the ergodic regime in the analogical Hopfield neural networks: Moments of the partition function. <i>Journal of Mathematical Physics</i> , <b>2008</b> , 49, 125217               | 1.2 | 18 |
| 42 | Mean Field Dilute Ferromagnet: High Temperature and Zero Temperature Behavior. <i>Journal of Statistical Physics</i> , <b>2008</b> , 132, 759-785                                       | 1.5 | 22 |
| 41 | Ettore Majorana's Forgotten Publication on the Thomas-Fermi Model. <i>Physics in Perspective</i> , <b>2008</b> , 10, 56-76                                                              | 0.3 | 3  |
| 40 | Enrico Fermi's Discovery of Neutron-Induced Artificial Radioactivity: Neutrons and Neutron Sources. <i>Physics in Perspective</i> , <b>2006</b> , 8, 255-281                            | 0.3 | 8  |

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|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|
| 39 | Course 5 An introduction to mean field spin glass theory: Methods and results. <i>Les Houches Summer School Proceedings</i> , <b>2006</b> , 243-271                                        |     | 18  |
| 38 | Strong Disorder for a Certain Class of Directed Polymers in a Random Environment. <i>Journal of Theoretical Probability</i> , <b>2006</b> , 19, 134-151                                    | 0.5 | 5   |
| 37 | The Ising--Sherrington-Kirpatrick Model in a Magnetic Field at High Temperature. <i>Journal of Statistical Physics</i> , <b>2005</b> , 120, 147-165                                        | 1.5 | 3   |
| 36 | The High Temperature Region of the VianaBray Diluted Spin Glass Model. <i>Journal of Statistical Physics</i> , <b>2004</b> , 115, 531-555                                                  | 1.5 | 53  |
| 35 | Enrico Fermi's Discovery of Neutron-Induced Artificial Radioactivity: The Recovery of His First Laboratory Notebook. <i>Physics in Perspective</i> , <b>2004</b> , 6, 29-41                | 0.3 | 5   |
| 34 | Some comments on the connection between disordered long range spin glass models and their mean field version. <i>Journal of Physics A</i> , <b>2003</b> , 36, 10987-10995                  |     | 10  |
| 33 | Infinite Volume Limit and Spontaneous Replica Symmetry Breaking in Mean Field Spin Glass Models. <i>Annales Henri Poincare</i> , <b>2003</b> , 4, 441-444                                  | 1.2 | 3   |
| 32 | Broken Replica Symmetry Bounds in the Mean Field Spin Glass Model. <i>Communications in Mathematical Physics</i> , <b>2003</b> , 233, 1-12                                                 | 2   | 299 |
| 31 | Infinite Volume Limit and Spontaneous Replica Symmetry Breaking in Mean Field Spin Glass Models <b>2003</b> , 441-444                                                                      |     |     |
| 30 | The Thermodynamic Limit in Mean Field Spin Glass Models. <i>Communications in Mathematical Physics</i> , <b>2002</b> , 230, 71-79                                                          | 2   | 209 |
| 29 | Central limit theorem for fluctuations in the high temperature region of the Sherrington-Kirpatrick spin glass model. <i>Journal of Mathematical Physics</i> , <b>2002</b> , 43, 6224-6237 | 1.2 | 22  |
| 28 | Quadratic replica coupling in the Sherrington-Kirpatrick mean field spin glass model. <i>Journal of Mathematical Physics</i> , <b>2002</b> , 43, 3704-3716                                 | 1.2 | 48  |
| 27 | Sum rules for the free energy in the mean field spin glass model <b>2001</b> , 161-170                                                                                                     |     | 18  |
| 26 | General properties of overlap probability distributions in disordered spin systems. Towards Parisi ultrametricity. <i>Journal of Physics A</i> , <b>1998</b> , 31, 9149-9155               |     | 123 |
| 25 | ABOUT THE OVERLAP DISTRIBUTION IN MEAN FIELD SPIN GLASS MODELS. <i>International Journal of Modern Physics B</i> , <b>1996</b> , 10, 1675-1684                                             | 1.1 | 84  |
| 24 | Quantum mechanical states as attractors for Nelson processes. <i>Foundations of Physics</i> , <b>1995</b> , 25, 297-315                                                                    | 1.2 | 13  |
| 23 | The lagrangian approach to stochastic variational principles on curved manifolds. <i>Acta Applicandae Mathematicae</i> , <b>1992</b> , 26, 219-236                                         | 1.1 | 13  |
| 22 | Stochastic action of dynamical systems on curved manifolds. The geodesic interpolation. <i>Journal of Mathematical Physics</i> , <b>1990</b> , 31, 639-648                                 | 1.2 | 5   |

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|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|
| 21 | On the connection between the stochastic quantization of the vector-meson field and the Euclidean theory. <i>Physical Review D</i> , <b>1986</b> , 33, 2498-2499                                                  | 4.9 |     |
| 20 | Carlen processes: A new class of diffusions with singular drifts. <i>Lecture Notes in Mathematics</i> , <b>1985</b> , 259-267                                                                                     |     | 2   |
| 19 | Compatibility between the Brownian metric and the kinetic metric in Nelson stochastic quantization. <i>Physical Review D</i> , <b>1985</b> , 31, 2521-2524                                                        | 4.9 | 19  |
| 18 | Discrete stochastic variational principles and quantum mechanics. <i>Physical Review D</i> , <b>1984</b> , 29, 1647-1655                                                                                          | 4.9 | 30  |
| 17 | Stochastic mechanics of spin- $\frac{1}{2}$ particles. <i>Physical Review D</i> , <b>1984</b> , 30, 2579-2584                                                                                                     | 4.9 | 7   |
| 16 | Probability and quantum mechanics the conceptual foundations of stochastic mechanics. <i>Lecture Notes in Mathematics</i> , <b>1984</b> , 134-145                                                                 | 0.4 | 2   |
| 15 | Configuration Spaces for Quantum Spinning Particles. <i>Physical Review Letters</i> , <b>1983</b> , 50, 1715-1718                                                                                                 | 7.4 | 4   |
| 14 | Quantization of dynamical systems and stochastic control theory. <i>Physical Review D</i> , <b>1983</b> , 27, 1774-1786                                                                                           | 4.9 | 173 |
| 13 | Origin of the quantum observable operator algebra in the frame of stochastic mechanics. <i>Physical Review D</i> , <b>1983</b> , 28, 1916-1921                                                                    | 4.9 | 26  |
| 12 | Stochastic quantization of the vector-meson field. <i>Physical Review D</i> , <b>1983</b> , 27, 2912-2915                                                                                                         | 4.9 | 8   |
| 11 | Momentum-position complementarity in stochastic mechanics <b>1982</b> , 208-215                                                                                                                                   |     |     |
| 10 | Structural aspects of stochastic mechanics and stochastic field theory. <i>Physics Reports</i> , <b>1981</b> , 77, 263-312                                                                                        | 7.7 | 231 |
| 9  | Probabilistic ideas in the theory of Fermi fields: Stochastic quantization of the Fermi oscillator. <i>Physical Review D</i> , <b>1981</b> , 23, 1747-1751                                                        | 4.9 | 10  |
| 8  | On the local structure of the Euclidean Dirac field. <i>Journal of Mathematical Physics</i> , <b>1980</b> , 21, 1111-1114                                                                                         | 1.2 | 6   |
| 7  | Note on the Abelian Higgs-Kibble model on a lattice: Absence of spontaneous magnetization. <i>Physical Review D</i> , <b>1978</b> , 17, 1624-1628                                                                 | 4.9 | 28  |
| 6  | Scalar quantum electrodynamics on lattice correlation inequalities and infinite volume limit. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , <b>1977</b> , 68, 255-257 | 4.2 | 7   |
| 5  | External Field Dependence of Magnetization and Long Range Order in Quantum Field Theory <b>1976</b> , 125-146                                                                                                     |     | 1   |
| 4  | Nelson's Symmetry at Work: the Infinite Volume Behavior of the Vacuum for Two-Dimensional Self-Coupled Bose Fields <b>1974</b> , 45-59                                                                            |     |     |

- 3 Bose field theory as classical statistical mechanics. I. The variational principle and the equilibrium equations **1973**, 243-264
- 2 Uniqueness of the Vacuum Energy Density and van Hove Phenomenon in the Infinite-Volume Limit for Two-Dimensional Self-Coupled Bose Fields. *Physical Review Letters*, **1972**, 28, 1213-1215 74 47
- 1 Legendre Structures in Statistical Mechanics for Ordered and Disordered Systems 142-165 3