# Jean-Pierre Nadal

List of Publications by Year
in descending order



| 70 | 2,377 | 304743 22 | 223800 46 |
|---|---|---|---|
| papers | citations | h-index | g-index |

| 74 | 74 | 74 | 1793 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Mutual Information, Fisher Information, and Population Coding. Neural Computation, 1998, 10, 1731-1757. | 2.2 | 277 |
| 2 | Manifesto of computational social science. European Physical Journal: Special Topics, 2012, 214, 325-346. | 2.6 | 266 |
| 3 | Optimal Information Storage and the Distribution of Synaptic Weights. Neuron, 2004, 43, 745-757. | 8.1 | 186 |
| 4 | Nonlinear neurons in the low-noise limit: a factorial code maximizes information transfer. Network: Computation in Neural Systems, 1994, 5, 565-581. | 3.6 | 173 |
| 5 | What can we learn from synaptic weight distributions?. Trends in Neurosciences, 2007, 30, 622-629. | 8.6 | 147 |
| 6 | Nonlinear neurons in the low-noise limit: a factorial code maximizes information transfer. Network: Computation in Neural Systems, 1994, 5, 565-581. | 3.6 | 122 |
| 7 | The acquisition of allophonic rules: Statistical learning with linguistic constraints. Cognition, 2006, 101, B31-B41. | 2.2 | 97 |
| 8 | Phase diagram of a Schelling segregation model. European Physical Journal B, 2009, 70, 293-304. | 1.5 | 82 |
| 9 | Self-Similarity Properties of Natural Images Resemble Those of Turbulent Flows. Physical Review Letters, 1998, 80, 1098-1101. | 7.8 | 75 |
| 10 | Information storage in sparsely coded memory nets. Network: Computation in Neural Systems, 1990, 1, 61-74. | 3.6 | 60 |
| 11 | Independent component analysis of multivariate time series: Application to the tropical SST variability. Journal of Geophysical Research, 2000, 105, 17437-17455. | 3.3 | 55 |
| 12 | Multiple equilibria in a monopoly market with heterogeneous agents and externalities. Quantitative Finance, 2005, 5, 557-568. | 1.7 | 52 |
| 13 | Self-organised critical hot spots of criminal activity. European Journal of Applied Mathematics, 2010, 21, 371-399. | 2.9 | 51 |
| 14 | DISCRETE CHOICES UNDER SOCIAL INFLUENCE: GENERIC PROPERTIES. Mathematical Models and Methods in Applied Sciences, 2009, 19, 1441-1481. | 3.3 | 41 |
| 15 | Epidemiological modelling of the 2005 French riots: a spreading wave and the role of contagion. Scientific Reports, 2018, 8, 107. | 3.3 | 41 |
| 16 | Cerebellar learning using perturbations. ELife, 2018, 7, . | 6.0 | 41 |
| 17 | Storage of Correlated Patterns in Standard and Bistable Purkinje Cell Models. PLoS Computational Biology, 2012, 8, e1002448. | 3.2 | 40 |
| 18 | Heterogeneity and feedback in an agent-based market model. Journal of Physics Condensed Matter, 2005, 17, S1259-S1268. | 1.8 | 38 |

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|---|---|---|---|
| 19 | Schelling segregation in an open city: A kinetically constrained Blume-Emery-Griffiths spin-1 system. Physical Review E, 2010, 81, 066120. | 2.1 | 33 |
| 20 | Redundancy Reduction and Independent Component Analysis: Conditions on Cumulants and Adaptive Approaches. Neural Computation, 1997, 9, 1421-1456. | 2.2 | 27 |
| 21 | Seller's dilemma due to social interactions between customers. Physica A: Statistical Mechanics and Its Applications, 2005, 356, 628-640. | 2.6 | 27 |
| 22 | Crime and punishment: the economic burden of impunity. European Physical Journal B, 2009, 68, 133-144. | 1.5 | 26 |
| 23 | MATHEMATICS AND COMPLEXITY IN LIFE AND HUMAN SCIENCES. Mathematical Models and Methods in Applied Sciences, 2010, 20, 1391-1395. | 3.3 | 26 |
| 24 | Information storage in sparsely coded memory nets. Network: Computation in Neural Systems, 1990, 1, 61-74. | 3.6 | 23 |
| 25 | A model of riots dynamics: Shocks, diffusion and thresholds. Networks and Heterogeneous Media, 2015, 10, 443-475. | 1.1 | 23 |
| 26 | Information processing by a perceptron in an unsupervised learning task. Network: Computation in Neural Systems, 1993, 4, 295-312. | 3.6 | 22 |
| 27 | Identifying genes from up-down properties of microarray expression series. Bioinformatics, 2005, 21, 3859-3864. | 4.1 | 22 |
| 28 | Neural coding of categories: information efficiency and optimal population codes. Journal of Computational Neuroscience, 2008, 25, 169-187. | 1.0 | 21 |
| 29 | Residential income segregation: A behavioral model of the housing market. Journal of Economic Behavior and Organization, 2019, 159, 15-35. | 2.0 | 21 |
| 30 | Nonlinear feedforward networks with stochastic outputs: infomax implies redundancy reduction. Network: Computation in Neural Systems, 1998, 9, 207-217. | 3.6 | 19 |
| 31 | Social Interactions in Economic Theory: An Insight from Statistical Mechanics. , 2004, , 335-358. | | 18 |
| 32 | TRIO LEARNING: A NEW STRATEGY FOR BUILDING HYBRID NEURAL TREES. International Journal of Neural Systems, 1994, 05, 259-274. | 5.2 | 17 |
| 33 | Perceptual Decision-Making: Biases in Post-Error Reaction Times Explained by Attractor Network Dynamics. Journal of Neuroscience, 2019, 39, 833-853. | 3.6 | 17 |
| 34 | Modeling urban housing market dynamics: Can the socio-spatial segregation preserve some social diversity?. Journal of Economic Dynamics and Control, 2013, 37, 1300-1321. | 1.6 | 16 |
| 35 | Between Order and Disorder: A â€˜Weak Lawâ€™ on Recent Electoral Behavior among Urban Voters?. PLoS ONE, 2012, 7, e39916. | 2.5 | 15 |
| 36 | Perception of categories: From coding efficiency to reaction times. Brain Research, 2012, 1434, 47-61. | 2.2 | 14 |

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|---|---|---|---|
| 37 | Orientational minimal redundancy wavelets: from edge detection to perception. Vision Research, 2003, 43, 1061-1079. | 1.4 | 12 |
| 38 | Maximization of mutual information in a linear noisy network: a detailed study. Network: Computation in Neural Systems, 1995, 6, 449-468. | 3.6 | 11 |
| 39 | On the storage capacity with sign-constrained synaptic couplings. Network: Computation in Neural Systems, 1990, 1, 463-466. | 3.6 | 10 |
| 40 | Collective states in social systems with interacting learning agents. Physica A: Statistical Mechanics and Its Applications, 2008, 387, 4903-4916. | 2.6 | 10 |
| 41 | Maximization of mutual information in a linear noisy network: a detailed study. Network: Computation in Neural Systems, 1995, 6, 449-468. | 3.6 | 10 |
| 42 | Blind source separation with time-dependent mixtures. Signal Processing, 2000, 80, 2187-2194. | 3.7 | 7 |
| 43 | Disentangling collective trends from local dynamics. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 7629-7634. | 7.1 | 7 |
| 44 | Modelling the individual and collective dynamics of the propensity to offend. European Journal of Applied Mathematics, 2010, 21, 421-440. | 2.9 | 7 |
| 45 | Chapter 8 Choice under Social Influence: Effects of Learning Behaviours on the Collective Dynamics. Contributions To Economic Analysis, 2006, 280, 177-203. | 0.1 | 6 |
| 46 | Entanglement Between Demand and Supply in Markets with Bandwagon Goods. Journal of Statistical Physics, 2013, 151, 494-522. | 1.2 | 6 |
| 47 | A network model of the coupling of ion channels with secondary messenger in cell signalling. Network: Computation in Neural Systems, 1992, 3, 393-406. | 3.6 | 5 |
| 48 | Information processing by a noisy binary channel. Network: Computation in Neural Systems, 1997, 8, 405-424. | 3.6 | 4 |
| 49 | Modeling memory: what do we learn from attractor neural networks?. Comptes Rendus De L'AcadÃ©mie Des Sciences SÃ©rie 3, Sciences De La Vie, 1998, 321, 249-252. | 0.8 | 4 |
| 50 | Unsupervised and supervised learning:â€,â€,Mutual information between parameters and observations. Physical Review E, 1999, 59, 3344-3360. | 2.1 | 4 |
| 51 | Nonlinear neural network dynamics accounts for human confidence in a sequence of perceptual decisions. Scientific Reports, 2020, 10, 7940. | 3.3 | 4 |
| 52 | Formal Neural Networks: From Supervised to Unsupervised Learning. , 1994, , 147-166. | | 4 |
| 53 | A model for a multi-class classification machine. Physica A: Statistical Mechanics and Its Applications, 1992, 185, 428-432. | 2.6 | 3 |
| 54 | Modelling collective phenomena in neuroscience. Interdisciplinary Science Reviews, 2007, 32, 177-184. | 1.4 | 3 |

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| 55 | On the storage capacity with sign-constrained synaptic couplings. Network: Computation in Neural Systems, 1990, 1, 463-466. | 3.6 | 3 |
| 56 | Categorical Perception: A Groundwork for Deep Learning. Neural Computation, 2021, , 1-39. | 2.2 | 3 |
| 57 | NEURAL NETWORKS AS OPTIMAL INFORMATION PROCESSORS. International Journal of Modern Physics C, 1994, 05, 855-862. | 1.7 | 2 |
| 58 | Neuroscience and computation. Journal of Physiology (Paris), 2003, 97, 387-390. | 2.1 | 2 |
| 59 | Residential Income Segregation: A Behavioral Model of the Housing Market. SSRN Electronic Journal, 2017, , . | 0.4 | 2 |
| 60 | Confidence-Controlled Hebbian Learning Efficiently Extracts Category Membership From Stimuli Encoded in View of a Categorization Task. Neural Computation, 2022, 34, 45-77. | 2.2 | 2 |
| 61 | Asymptotic performances of a constructive algorithm. Neural Processing Letters, 1995, 2, 1-4. | 3.2 | 1 |
| 62 | Analyse de sÃ©ries temporelles gÃ©ophysiques et thÃ©orie de l'information: L'analyse en composantes indÃ©pendantes. Comptes Rendus De L'AcadÃ©mie Des Sciences Earth & Planetary Sciences SÃ©rie II, Sciences De La Terre Et Des PlanÃ¨tes =, 1999, 328, 569-575. | 0.2 | 1 |
| 63 | Rigorous Bounds to Retarded Learning. Physical Review Letters, 2002, 88, 099801. | 7.8 | 1 |
| 64 | Pre-attentive segmentation of oriented textures. Journal of Geophysics and Engineering, 2004, 1, 312-326. | 1.4 | 1 |
| 65 | Manifesto de CiÃªncia Social Computacional. MediaÃ§Ãµes: Revista De CiÃªncias Sociais, 2013, 18, 20. | 0.1 | 1 |
| 66 | Pricing of Goods with Bandwagon Properties: The Curse of Coordination. New Economic Windows, 2014, , 229-232. | 1.0 | 1 |
| 67 | Categorical perception in monkeys: modeling implicit learning of discrete categories. BMC Neuroscience, 2013, 14, P288. | 1.9 | 0 |
| 68 | Modeling Language Change: The Pitfall of Grammaticalization. Lecture Notes in Morphogenesis, 2017, , 49-72. | 0.2 | 0 |
| 69 | An Algorithm for Image Representation as Independent Levels of Resolution. Lecture Notes in Computer Science, 2002, , 1213-1218. | 1.3 | 0 |
| 70 | ComplexitÃ© du codage neuronal. , 2014, , . | | 0 |