Joaquim Valls

List of Publications by Year
in descending order

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25 papers	734 citations	567281 15 h-index	610901 24 g-index
25 all docs	25 docs citations	25 times ranked	535 citing authors

#	Article	IF	Citations
1	Spiral waves, chaos and multiple attractors in lattice models of interacting populations. Physics Letters, Section A: General, Atomic and Solid State Physics, 1992, 166, 123-128.	2.1	111
2	INDISIM, An Individual-based Discrete Simulation Model to Study Bacterial Cultures. Journal of Theoretical Biology, 2002, 214, 305-319.	1.7	97
3	Stability and complexity of spatially extended two-species competition. Journal of Theoretical Biology, 1992, 159, 469-480.	1.7	80
4	On structural stability and chaos in biological systems. Journal of Theoretical Biology, 1992, 155, 87-102.	1.7	60
5	Order and chaos in a 2D Lotka-Volterra coupled map lattice. Physics Letters, Section A: General, Atomic and Solid State Physics, 1991, 153, 330-336.	2.1	49
6	Nonequilibrium dynamics in lattice ecosystems: Chaotic stability and dissipative structures. Chaos, 1992, 2, 387-395.	2.5	46
7	Individual-based modelling of bacterial cultures to study the microscopic causes of the lag phase. Journal of Theoretical Biology, 2006, 241, 939-953.	1.7	33
8	Individual-based modelling of carbon and nitrogen dynamics in soils: Parameterization and sensitivity analysis of microbial components. Ecological Modelling, 2011, 222, 1998-2010.	2.5	30
9	Simulation modelling of bacterial growth in yoghurt. International Journal of Food Microbiology, 2002, 73, 415-425.	4.7	24
10	Statistical aspects of biological organization. Journal of Physics and Chemistry of Solids, 1988, 49, 695-700.	4.0	22
11	Evolution and role of corded cell aggregation in Mycobacterium tuberculosis cultures. Tuberculosis, 2013, 93, 690-698.	1.9	22
12	Local Inflammation, Dissemination and Coalescence of Lesions Are Key for the Progression toward Active Tuberculosis: The Bubble Model. Frontiers in Microbiology, 2016, 7, 33.	3.5	22
13	To Achieve an Earlier IFN-Î³ Response Is Not Sufficient to Control Mycobacterium tuberculosis Infection in Mice. PLoS ONE, 2014, 9, e100830.	2.5	19
14	Thermodynamic approach to biomass distribution in ecological systems. Bulletin of Mathematical Biology, 1983, 45, 869-872.	1.9	18
15	Individual based simulations of bacterial growth on agar plates. Physica A: Statistical Mechanics and Its Applications, 2002, 305, 604-618.	2.6	17
16	Self-organized criticality in Monte Carlo simulated ecosystems. Physics Letters, Section A: General, Atomic and Solid State Physics, 1992, 172, 56-61.	2.1	15
17	Individual-based model and simulation of Plasmodium falciparum infected erythrocyte in vitro cultures. Journal of Theoretical Biology, 2007, 248, 448-459.	1.7	12
18	The [extended] maximum entropy formalism and the statistical structure of ecosystems. Bulletin of Mathematical Biology, 1987, 49, 531-538.	1.9	10

#	Article	IF	Citations
19	Effect of the haematocrit layer geometry on Plasmodium falciparum static thin-layer in vitro cultures. Malaria Journal, 2008, 7, 203.	2.3	9
20	Biological adaptation and the mathematical theory of information. Bulletin of Mathematical Biology, 1988, 50, 445-464.	1.9	8
21	Individual-Based Modeling of Tuberculosis in a User-Friendly Interface: Understanding the Epidemiological Role of Population Heterogeneity in a City. Frontiers in Microbiology, 2015, 6, 1564.	3.5	8
22	Modelling the dynamics of tuberculosis lesions in a virtual lung: Role of the bronchial tree in endogenous reinfection. PLoS Computational Biology, 2020, 16, e1007772.	3.2	8
23	Characterization of spatiotemporal chaos from macroscopic measures. Physics Letters, Section A: General, Atomic and Solid State Physics, 1991, 161, 241-246.	2.1	5
24	Modeling tuberculosis in Barcelona. A solution to speed-up agent-based simulations. , 2015, , .		5
25	Nonlinear phenomena and chaos in a Monte Carlo simulated microbial ecosystem. Bulletin of Mathematical Biology, 1992, 54, 939-955.	1.9	4