Jean Clairambault

List of Publications by Year
in descending order

97 papers	2,394 citations	218381 26 h-index	223531 46 g-index
101 all docs	101 docs citations	101 times ranked	2377 citing authors

#	Article	IF	Citations
1	Circadian Timing in Cancer Treatments. Annual Review of Pharmacology and Toxicology, 2010, 50, 377-421.	4.2	375
2	Emergence of Drug Tolerance in Cancer Cell Populations: An Evolutionary Outcome of Selection, Nongenetic Instability, and Stress-Induced Adaptation. Cancer Research, 2015, 75, 930-939.	0.4	120
3	Heart rate variability in normal sleeping full-term and preterm neonates. Early Human Development, 1992, 28, 169-183.	0.8	111
4	Populational adaptive evolution, chemotherapeutic resistance and multiple anti-cancer therapies. ESAIM: Mathematical Modelling and Numerical Analysis, 2013, 47, 377-399.	0.8	101
5	Modeling the Effects of Space Structure and Combination Therapies on Phenotypic Heterogeneity and Drug Resistance in Solid Tumors. Bulletin of Mathematical Biology, 2015, 77, 1-22.	0.9	96
6	Heart Rate and Heart Rate Variability during Sleep in Small-for-Gestational Age Newborns. Pediatric Research, 1994, 35, 500-504.	1.1	77
7	Enabling multiscale modeling in systems medicine. Genome Medicine, 2014, 6, 21.	3.6	76
8	Applying ecological and evolutionary theory to cancer: a long and winding road. Evolutionary Applications, 2013, 6, 1-10.	1.5	70
9	Heart-rate variability in low-risk prematurely born infants reaching normal term: A comparison with full-term newborns. Early Human Development, 1993, 32, 183-195.	0.8	69
10	Cell population heterogeneity and evolution towards drug resistance in cancer: Biological and mathematical assessment, theoretical treatment optimisation. Biochimica Et Biophysica Acta - General Subjects, 2016, 1860, 2627-2645.	1.1	69
11	An age-and-cyclin-structured cell population model for healthy and tumoral tissues. Journal of Mathematical Biology, 2008, 57, 91-110.	0.8	67
12	The p53 protein and its molecular network: Modelling a missing link between DNA damage and cell fate. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2014, 1844, 232-247.	1.1	60
13	Implications of circadian clocks for the rhythmic delivery of cancer therapeutics. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2008, 366, 3575-3598.	1.6	57
14	A Combined Experimental and Mathematical Approach for Molecular-based Optimization of Irinotecan Circadian Delivery. PLoS Computational Biology, 2011, 7, e1002143.	1.5	57
15	Tracking the evolution of cancer cell populations through the mathematical lens of phenotype-structured equations. Biology Direct, 2016, 11, 43.	1.9	56
16	Asymptotic analysis and optimal control of an integro-differential system modelling healthy and cancer cells exposed to chemotherapy. Journal Des Mathematiques Pures Et Appliquees, 2018, 116, 268-308.	0.8	54
17	Identification of a transient state during the acquisition of temozolomide resistance in glioblastoma. Cell Death and Disease, 2020, 11, 19.	2.7	53
18	Cell plasticity in cancer cell populations. F1000Research, 2020, 9, 635.	0.8	42

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19	Stability analysis of systems with distributed delays and application to hematopoietic cell maturation dynamics. , 2008, , .		41
20	Stability Analysis of Cell Dynamics in Leukemia. Mathematical Modelling of Natural Phenomena, 2012, 7, 203-234.	0.9	40
21	Analysis of a molecular structured population model with possible polynomial growth for the cell division cycle. Mathematical and Computer Modelling, 2008, 47, 699-713.	2.0	35
22	Modelling Physiological and Pharmacological Control on Cell Proliferation to Optimise Cancer Treatments. Mathematical Modelling of Natural Phenomena, 2009, 4, 12-67.	0.9	35
23	The dynamics of p53 in single cells: physiologically based ODE and reactionâ€"diffusion PDE models. Physical Biology, 2014, 11, 045001.	0.8	35
24	Synchronisation and control of proliferation in cycling cell population models with age structure. Mathematics and Computers in Simulation, 2014, 96, 66-94.	2.4	34
25	Modeling oxaliplatin drug delivery to circadian rhythms in drug metabolism and host tolerance. Advanced Drug Delivery Reviews, 2007, 59, 1054-1068.	6.6	33
26	Age-structured cell population model to study the influence of growth factors on cell cycle dynamics. Mathematical Biosciences and Engineering, 2013, 10, 1-17.	1.0	33
27	Improving cancer treatments via dynamical biophysical models. Physics of Life Reviews, 2021, 39, 1-48.	1.5	31
28	Circadian rhythm and tumour growth. Comptes Rendus Mathematique, 2006, 342, 17-22.	0.1	27
29	Optimisation of time-scheduled regimen for anti-cancer drug infusion. ESAIM: Mathematical Modelling and Numerical Analysis, 2005, 39, 1069-1086.	0.8	26
30	Circadian rhythm and cell population growth. Mathematical and Computer Modelling, 2011, 53, 1558-1567.	2.0	23
31	A spatial physiological model for p53 intracellular dynamics. Journal of Theoretical Biology, 2013, 316, 9-24.	0.8	23
32	Linear and non-linear analyses of heart rate variability: a minireview. Cardiovascular Research, 1996, 31, 371-9.	1.8	20
33	An inequality for the Perron and Floquet eigenvalues of monotone differential systems and age structured equations. Comptes Rendus Mathematique, 2007, 345, 549-554.	0.1	19
34	Comparison of Perron and Floquet Eigenvalues in Age Structured Cell Division Cycle Models. Mathematical Modelling of Natural Phenomena, 2009, 4, 183-209.	0.9	19
35	Heart rate and heart rate variability during sleep in small-for-gestational age newborns. Pediatric Research, 1994, 35, 500-5.	1.1	19
36	Physiologically Based Mathematical Models to Optimize Therapies Against Metastatic Colorectal Cancer: A Mini-Review. Current Pharmaceutical Design, 2014, 20, 37-48.	0.9	18

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37	Designing proliferating cell population models with functional targets for control by anti-cancer drugs. Discrete and Continuous Dynamical Systems - Series B, 2013, 18, 865-889.	0.5	18
38	Optimisation of Cancer Drug Treatments Using Cell Population Dynamics. Lecture Notes on Mathematical Modelling in the Life Sciences, 2013, , 265-309.	0.1	15
39	Optimizing cancer pharmacotherapeutics using mathematical modeling and a systems biology approach. Personalized Medicine, 2011, 8, 271-286.	0.8	13
40	Reactionâ€"diffusion systems for spatio-temporal intracellular protein networks: A beginner's guide with two examples. Computational and Structural Biotechnology Journal, 2014, 10, 12-22.	1.9	13
41	Heart rate and heart rate variability, a pharmacological target. Cardiovascular Drugs and Therapy, 1997, 10, 677-685.	1.3	11
42	Modelling the genesis and treatment of cancer: The potential role of physiologically based pharmacodynamics. European Journal of Cancer, 2010, 46, 21-32.	1.3	11
43	Control in dormancy or eradication of cancer stem cells: Mathematical modeling and stability issues. Journal of Theoretical Biology, 2018, 449, 103-123.	0.8	11
44	PERIOD SHIFT INDUCTION BY INTERMITTENT STIMULATION IN ADROSOPHILAMODEL OF PER PROTEIN OSCILLATIONS. Chronobiology International, 2000, 17, 1-14.	0.9	10
45	A Step Toward Optimization of Cancer Therapeutics [Chronobiological Investigations]. IEEE Engineering in Medicine and Biology Magazine, 2008, 27, 20-24.	1.1	10
46	Theoretical optimization of Irinotecan-based anticancer strategies in the case of drug-induced efflux. Applied Mathematics Letters, 2011, 24, 1251-1256.	1.5	10
47	A new model of cell dynamics in Acute Myeloid Leukemia involving distributed delays1. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 55-60.	0.4	10
48	A coupled model for healthy and cancerous cells dynamics in Acute Myeloid Leukemia. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 7529-7534.	0.4	8
49	A Mathematical Model of the Cell Cycle and Its Circadian Control. , 2007, , 239-251.		8
50	Physiologically based modelling of circadian control on cell proliferation. , 2006, 2006, 173-6.		7
51	Stability analysis of PDEs modelling cell dynamics in Acute Myeloid Leukemia. , 2014, , .		7
52	A survey of adaptive cell population dynamics models of emergence of drug resistance in cancer, and open questions about evolution and cancer. Biomath, 2019, 8, .	0.3	7
53	Genotype- or Phenotype-Targeting Anticancer Therapies? Lessons from Tumor Evolutionary Biology. Current Pharmaceutical Design, 2017, 22, 6625-6644.	0.9	7
54	Myocardial determinants in regulation of the heart rate. Journal of Molecular Medicine, 1997, 75, 860-866.	1.7	6

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55	A Systems Biomedicine Approach for Chronotherapeutics Optimization: Focus on the Anticancer Drug Irinotecan. SIMAI Springer Series, 2012, , 301-327.	0.4	6
56	Integrating Biological and Mathematical Models to Explain and Overcome Drug Resistance in Cancer. Part 1: Biological Facts and Studies in Drug Resistance. Current Stem Cell Reports, 2017, 3, 253-259.	0.7	6
57	Adaptive dynamics of hematopoietic stem cells and their supporting stroma: a model and mathematical analysis. Mathematical Biosciences and Engineering, 2019, 16, 4818-4845.	1.0	6
58	Stability Conditions for a System Modeling Cell Dynamics in Leukemia. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 99-102.	0.4	5
59	Can theorems help treat cancer?. Journal of Mathematical Biology, 2013, 66, 1555-1558.	0.8	5
60	Why Is Evolution Important in Cancer and What Mathematics Should Be Used to Treat Cancer? Focus on Drug Resistance. , 2018, , 107-120.		5
61	Proliferation in Cell Population Models with Age Structure. , 2011, , .		4
62	Stability of a delay system coupled to a differential-difference system describing the coexistence of ordinary and mutated hematopoietic stem cells. , 2016, , .		4
63	Integrating Biological and Mathematical Models to Explain and Overcome Drug Resistance in Cancer, Part 2: from Theoretical Biology to Mathematical Models. Current Stem Cell Reports, 2017, 3, 260-268.	0.7	4
64	Analysis of a model of dormancy in cancer as a state of coexistence between tumor and healthy stem cells. , 2017, , .		4
65	Stepping From Modeling Cancer Plasticity to the Philosophy of Cancer. Frontiers in Genetics, 2020, 11, 579738.	1.1	4
66	Physiologically Structured Cell Population Dynamic Models with Applications to Combined Drug Delivery Optimisation in Oncology. Mathematical Modelling of Natural Phenomena, 2016, 11, 45-70.	0.9	3
67	Stability Analysis of a Nonlinear System with Infinite Distributed Delays Describing Cell Dynamics. , 2018, , .		3
68	Reaction-Diffusion-Advection Equation. , 2013, , 1817-1817.		3
69	A synchronous language, SIGNAL: application to heart rate variability and body movements analysis in sleeping newborns. , 0, , .		2
70	Diverse spatio-temporal dynamical patterns of p53 and cell fate decisions. AIP Conference Proceedings, 2016, , .	0.3	2
71	Analysis of Blood Cell Production under Growth Factors Switching * *This work is supported by ALMA-project on the Â«Analysis of Acute Myeloid LeukemiaÂ», Paris-Saclay (France), also in part by the PHC Bosphore 2016 France-Turkey under project numbers 35634QM (France) and EEEAG-115E820	0.5	2
72	Partial Differential Equation (PDE), Models. , 2013, , 1635-1635.		2

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73	Commitment of Mathematicians in Medicine: A Personal Experience, and Generalisations. Acta Biotheoretica, 2011, 59, 201-211.	0.7	1
74	Deterministic Mathematical Modelling for Cancer Chronotherapeutics: Cell Population Dynamics and Treatment Optimization. Modeling and Simulation in Science, Engineering and Technology, 2014, , 265-294.	0.4	1
75	Mathematics of Pharmacokinetics and Pharmacodynamics: Diversity of Topics, Models and Methods. Mathematical Modelling of Natural Phenomena, 2016, 11, 1-8.	0.9	1
76	Introducing Cell-Plasticity Mechanisms into a Class of Cell Population Dynamical Systems. , 2018, , .		1
77	Half-life Time. , 2013, , 876-876.		1
78	Plasticity in Cancer Cell Populations: Biology, Mathematics and Philosophy of Cancer. Lecture Notes in Computer Science, 2020, , 3-9.	1.0	1
79	A real time Heart Rate Variability analysis system using a synchronous language: Signal. , 1992, , .		0
80	Heart rate variability in normal and at risk newborns. , 1992, , .		0
81	Rhythms from Seconds to Days: Part 2 [Chronobiological Investigations]. IEEE Engineering in Medicine and Biology Magazine, 2008, 27, 16-16.	1.1	0
82	Correction for LÃ©vi, Implications of circadian clocks for the rhythmic delivery of cancer therapeutics. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2008, 366, 4665-4666.	1.6	0
83	Modelling targets for anticancer drug control optimization in physiologically structured cell population models. , 2012, , .		0
84	Emergence of cytotoxic resistance in cancer cell populations*. ITM Web of Conferences, 2015, 5, 00009.	0.4	0
85	Introduction to the workshop. ITM Web of Conferences, 2015, 5, 00002.	0.4	0
86	Emergence of cytotoxic resistance in cancer cell populations: Single-cell mechanisms and population-level consequences. AIP Conference Proceedings, 2016, , .	0.3	0
87	Phenotype heterogeneity in cancer cell populations. AIP Conference Proceedings, 2016, , .	0.3	0
88	Preface of the â€œSymposium on Mathematical Models and Methods to investigate Heterogeneity in Cell and Cell Population Biologyâ€• AIP Conference Proceedings, 2016, , .	0.3	0
89	Analysis of a System Describing Proliferative-Quiescent Cell Dynamics. Chinese Annals of Mathematics Series B, 2018, 39, 345-356.	0.2	0
90	Local Asymptotic Stability Conditions for the Positive Equilibrium of a System Modeling Cell Dynamics in Leukemia. Lecture Notes in Control and Information Sciences, 2012, , 187-197.	0.6	0

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91	Law of Mass Action. , 2013, , 1109-1109.		0
92	Maximum Concentration. , 2013, , 1189-1189.		0
93	Phenomenological vs Physiological Modeling. , 2013, , 1697-1698.		0
94	Pharmacokinetic Modeling. , 2013, , 1685-1687.		0
95	Pharmacokinetics-Pharmacodynamics. , 2013, , 1688-1689.		0
96	Abstract 92: Acquisition of temozolomide resistance: Identification of a new drug tolerant stage in glioblastoma cells. , 2017, , .		0
97	Perspectives in cancer treatment. Physics of Life Reviews, 2022, 42, 15-18.	1.5	0