

# Olivier C Martin

## List of Publications by Year in descending order

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149  
papers

7,074  
citations

93792

39  
h-index

81351

76  
g-index

158  
all docs

158  
docs citations

158  
times ranked

6968  
citing authors

#	ARTICLE	IF	CITATIONS
1	Quantitative modelling of fine-scale variations in the <i>Arabidopsis thaliana</i> crossover landscape. <i>Quantitative Plant Biology</i> , 2022, 3, .	0.8	2
2	A preference for link operator functions can drive Boolean biological networks towards critical dynamics. <i>Journal of Biosciences</i> , 2022, 47, 1.	0.5	0
3	Minimum complexity drives regulatory logic in Boolean models of living systems. , 2022, 1, .		14
4	Enhancing backcross programs through increased recombination. <i>Genetics Selection Evolution</i> , 2021, 53, 25.	1.2	12
5	Plant roots sense soil compaction through restricted ethylene diffusion. <i>Science</i> , 2021, 371, 276-280.	6.0	145
6	CNVmap: A Method and Software To Detect and Map Copy Number Variants from Segregation Data. <i>Genetics</i> , 2020, 214, 561-576.	1.2	1
7	Development of new genetic resources for faba bean ( <i>Vicia faba</i> L.) breeding through the discovery of gene-based SNP markers and the construction of a high-density consensus map. <i>Scientific Reports</i> , 2020, 10, 6790.	1.6	46
8	Recombination suppression in heterozygotes for a pericentric inversion induces the interchromosomal effect on crossovers in <i>Arabidopsis</i> . <i>Plant Journal</i> , 2019, 100, 1163-1175.	2.8	11
9	Probabilities of Multilocus Genotypes in SIB Recombinant Inbred Lines. <i>Frontiers in Genetics</i> , 2019, 10, 833.	1.1	0
10	Iterated Local Search: Framework and Applications. <i>Profiles in Operations Research</i> , 2019, , 129-168.	0.3	94
11	Assessing by Modeling the Consequences of Increased Recombination in Recurrent Selection of <i>Oryza sativa</i> and <i>Brassica rapa</i> . <i>G3: Genes, Genomes, Genetics</i> , 2019, 9, 4169-4181.	0.8	9
12	High-throughput measurement of recombination rates and genetic interference in <i>Saccharomyces cerevisiae</i> . <i>Yeast</i> , 2018, 35, 431-442.	0.8	4
13	Feedback between environment and traits under selection in a seasonal environment: consequences for experimental evolution. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2018, 285, 20180284.	1.2	7
14	Responses to auxin signals: an operating principle for dynamical sensitivity yet high resilience. <i>Royal Society Open Science</i> , 2018, 5, 172098.	1.1	6
15	Role of <i>Cis</i> , <i>Trans</i> , and Inbreeding Effects on Meiotic Recombination in <i>Saccharomyces cerevisiae</i> . <i>Genetics</i> , 2018, 210, 1213-1226.	1.2	4
16	Haldane, Waddington and recombinant inbred lines: extension of their work to any number of genes. <i>Journal of Genetics</i> , 2017, 96, 795-800.	0.4	3
17	Amplifying recombination genome-wide and reshaping crossover landscapes in Brassicas. <i>PLoS Genetics</i> , 2017, 13, e1006794.	1.5	43
18	Phenotypic innovation through recombination in genome-scale metabolic networks. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2016, 283, 20161536.	1.2	13

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19	Network architectures and operating principles. <i>Physics of Life Reviews</i> , 2016, 17, 168-171.	1.5	0
20	Short relaxation times but long transient times in both simple and complex reaction networks. <i>Journal of the Royal Society Interface</i> , 2016, 13, 20160388.	1.5	4
21	Drivers of structural features in gene regulatory networks: From biophysical constraints to biological function. <i>Physics of Life Reviews</i> , 2016, 17, 124-158.	1.5	10
22	Constrained Allocation Flux Balance Analysis. <i>PLoS Computational Biology</i> , 2016, 12, e1004913.	1.5	136
23	Statistical Physics Methods Provide the Exact Solution to a Long-Standing Problem of Genetics. <i>Physical Review Letters</i> , 2015, 114, 238101.	2.9	5
24	Recombination patterns in maize reveal limits to crossover homeostasis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 15982-15987.	3.3	49
25	Modelling the emergence of polarity patterns for the intercellular transport of auxin in plants. <i>Journal of the Royal Society Interface</i> , 2015, 12, 20141223.	1.5	6
26	Crossover Localisation Is Regulated by the Neddylation Posttranslational Regulatory Pathway. <i>PLoS Biology</i> , 2014, 12, e1001930.	2.6	39
27	Crossover rate between homologous chromosomes and interference are regulated by the addition of specific unpaired chromosomes in <i>Arabidopsis thaliana</i> . <i>New Phytologist</i> , 2014, 201, 645-656.	3.5	45
28	Combined fluorescent and electron microscopic imaging unveils the specific properties of two classes of meiotic crossovers. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 13415-13420.	3.3	60
29	Historical contingency and the gradual evolution of metabolic properties in central carbon and genome-scale metabolisms. <i>BMC Systems Biology</i> , 2014, 8, 48.	3.0	10
30	Intraspecific variation of recombination rate in maize. <i>Genome Biology</i> , 2013, 14, R103.	13.9	176
31	Network function shapes network structure: the case of the Arabidopsis flower organ specification genetic network. <i>Molecular BioSystems</i> , 2013, 9, 1726.	2.9	17
32	Hot Regions of Noninterfering Crossovers Coexist with a Nonuniformly Interfering Pathway in <i>Arabidopsis thaliana</i> . <i>Genetics</i> , 2013, 195, 769-779.	1.2	17
33	Shining fresh light on the evolution of photosynthesis. <i>ELife</i> , 2013, 2, e01403.	2.8	2
34	Phenotypic robustness can increase phenotypic variability after nongenetic perturbations in gene regulatory circuits. <i>Journal of Evolutionary Biology</i> , 2011, 24, 1284-1297.	0.8	38
35	CODA (crossover distribution analyzer): quantitative characterization of crossover position patterns along chromosomes. <i>BMC Bioinformatics</i> , 2011, 12, 27.	1.2	29
36	Environmental versatility promotes modularity in genome-scale metabolic networks. <i>BMC Systems Biology</i> , 2011, 5, 135.	3.0	16

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37	Phenotypic plasticity can facilitate adaptive evolution in gene regulatory circuits. <i>BMC Evolutionary Biology</i> , 2011, 11, 5.	3.2	86
38	Distribution of Parental Genome Blocks in Recombinant Inbred Lines. <i>Genetics</i> , 2011, 189, 645-654.	1.2	10
39	Motifs emerge from function in model gene regulatory networks. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 17263-17268.	3.3	69
40	Genome-Wide Crossover Distribution in <i>Arabidopsis thaliana</i> Meiosis Reveals Sex-Specific Patterns along Chromosomes. <i>PLoS Genetics</i> , 2011, 7, e1002354.	1.5	221
41	Randomizing Genome-Scale Metabolic Networks. <i>PLoS ONE</i> , 2011, 6, e22295.	1.1	14
42	A Large Maize ( <i>Zea mays</i> L.) SNP Genotyping Array: Development and Germplasm Genotyping, and Genetic Mapping to Compare with the B73 Reference Genome. <i>PLoS ONE</i> , 2011, 6, e28334.	1.1	523
43	Genotype networks in metabolic reaction spaces. <i>BMC Systems Biology</i> , 2010, 4, 30.	3.0	49
44	Challenges in experimental data integration within genome-scale metabolic models. <i>Algorithms for Molecular Biology</i> , 2010, 5, 20.	0.3	1
45	Iterated Local Search: Framework and Applications. <i>Profiles in Operations Research</i> , 2010, , 363-397.	0.3	246
46	QUANTIFYING SLOW EVOLUTIONARY DYNAMICS IN RNA FITNESS LANDSCAPES. <i>Journal of Bioinformatics and Computational Biology</i> , 2010, 08, 1027-1040.	0.3	3
47	Two Types of Meiotic Crossovers Coexist in Maize. <i>Plant Cell</i> , 2010, 21, 3915-3925.	3.1	53
48	Return probabilities and hitting times of random walks on sparse Erdős-Rényi graphs. <i>Physical Review E</i> , 2010, 81, 031111.	0.8	9
49	Spatial and Topological Organization of DNA Chains Induced by Gene Co-localization. <i>PLoS Computational Biology</i> , 2010, 6, e1000678.	1.5	73
50	Distribution of essential interactions in model gene regulatory networks under mutation-selection balance. <i>Physical Review E</i> , 2010, 82, 011908.	0.8	15
51	Detailed Recombination Studies Along Chromosome 3B Provide New Insights on Crossover Distribution in Wheat ( <i>Triticum aestivum</i> L.). <i>Genetics</i> , 2009, 181, 393-403.	1.2	157
52	In response to comment on "A congruence index for testing topological similarity between trees". <i>Bioinformatics</i> , 2009, 25, 150-151.	1.8	6
53	Effects of Recombination on Complex Regulatory Circuits. <i>Genetics</i> , 2009, 183, 673-684.	1.2	48
54	Neutral network sizes of biological RNA molecules can be computed and are not atypically small. <i>BMC Bioinformatics</i> , 2008, 9, 464.	1.2	65

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55	Multifunctionality and Robustness Trade-Offs in Model Genetic Circuits. <i>Biophysical Journal</i> , 2008, 94, 2927-2937.	0.2	27
56	Adaptive networks of trading agents. <i>Physical Review E</i> , 2008, 78, 046106.	0.8	4
57	A congruence index for testing topological similarity between trees. <i>Bioinformatics</i> , 2007, 23, 3119-3124.	1.8	176
58	Innovation and robustness in complex regulatory gene networks. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 13591-13596.	3.3	305
59	Robustness Can Evolve Gradually in Complex Regulatory Gene Networks with Varying Topology. <i>PLoS Computational Biology</i> , 2007, 3, e15.	1.5	318
60	Sex-Specific Crossover Distributions and Variations in Interference Level along <i>Arabidopsis thaliana</i> Chromosome 4. <i>PLoS Genetics</i> , 2007, 3, e106.	1.5	123
61	Population size effects in evolutionary dynamics on neutral networks and toy landscapes. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2007, 2007, P05011-P05011.	0.9	6
62	Network of inherent structures in spin glasses: Scaling and scale-free distributions. <i>Physical Review E</i> , 2007, 76, 051107.	0.8	18
63	Patterns of Recombination and MLH1 Foci Density Along Mouse Chromosomes: Modeling Effects of Interference and Obligate Chiasma. <i>Genetics</i> , 2007, 176, 1453-1467.	1.2	22
64	Sinusoidal swinging dynamics of the telomere repair and cell growth activation functions of telomerase in rat liver cancer cells. <i>FEBS Letters</i> , 2007, 581, 125-130.	1.3	3
65	Magnetic exponents of two-dimensional Ising spin glasses. <i>Physical Review B</i> , 2007, 76, .	1.1	4
66	New structural variation in evolutionary searches of RNA neutral networks. <i>BioSystems</i> , 2007, 90, 475-485.	0.9	29
67	Temperature chaos in two-dimensional Ising spin glasses with binary couplings: a further case for universality. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2006, 2006, L10001-L10001.	0.9	16
68	Finite-size scaling in Villain's fully frustrated model and singular effects of plaquette disorder. <i>Europhysics Letters</i> , 2006, 73, 779-785.	0.7	8
69	Two- and Three-Locus Tests for Linkage Analysis Using Recombinant Inbred Lines. <i>Genetics</i> , 2006, 173, 451-459.	1.2	21
70	From simple to complex networks: Inherent structures, barriers, and valleys in the context of spin glasses. <i>Physical Review E</i> , 2006, 73, 036110.	0.8	18
71	Statistics of the number of minima in a random energy landscape. <i>Physical Review E</i> , 2006, 74, 061112.	0.8	11
72	Strong Universality and Algebraic Scaling in Two-Dimensional Ising Spin Glasses. <i>Physical Review Letters</i> , 2006, 96, 237205.	2.9	58

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73	Low T scaling in the binary 2d spin glass. Biophysical Chemistry, 2005, 115, 109-114.	1.5	0
74	Random multi-index matching problems. Journal of Statistical Mechanics: Theory and Experiment, 2005, 2005, P09006-P09006.	0.9	19
75	Spatial correlation functions in three-dimensional Ising spin glasses. Physical Review B, 2005, 72, .	1.1	11
76	Thermodynamics of 2D Ising Spin Glasses with Binary Couplings on Large Lattices Using Exact Computations of Partition Functions. Progress of Theoretical Physics Supplement, 2005, 157, 17-24.	0.2	0
77	Frozen Glass Phase in the Multi-index Matching Problem. Physical Review Letters, 2004, 93, 217205.	2.9	19
78	Critical Thermodynamics of the Two-Dimensional $\pm$ Ising Spin Glass. Physical Review Letters, 2004, 92, 117202.	2.9	37
79	Toward a Theory of Marker-Assisted Gene Pyramiding. Genetics, 2004, 168, 513-523.	1.2	156
80	Large deviations in spin-glass ground-state energies. European Physical Journal B, 2004, 41, 365-375.	0.6	33
81	Glass models on Bethe lattices. European Physical Journal B, 2003, 37, 55-78.	0.6	123
82	Iterated Local Search. , 2003, , 320-353.		461
83	Energy exponents and corrections to scaling in Ising spin glasses. Physical Review B, 2003, 68, .	1.1	84
84	Local excitations of a spin glass in a magnetic field. Physical Review B, 2003, 68, .	1.1	13
85	Scalings of Domain Wall Energies in Two Dimensional Ising Spin Glasses. Physical Review Letters, 2003, 91, 087201.	2.9	58
86	Temperature Chaos, Rejuvenation, and Memory in Migdal-Kadanoff Spin Glasses. Physical Review Letters, 2003, 91, 097201.	2.9	23
87	Absence of an Equilibrium Ferromagnetic Spin-Glass Phase in Three Dimensions. Physical Review Letters, 2002, 89, 267202.	2.9	8
88	Discreteness and entropic fluctuations in generalized-random-energy-model-like systems. Physical Review B, 2002, 66, .	1.1	2
89	Temperature chaos in a replica-symmetry-broken spin glass model – A hierarchical model with temperature chaos. Europhysics Letters, 2002, 60, 316-322.	0.7	6
90	Non-compact local excitations in spin-glasses. Europhysics Letters, 2002, 58, 321-327.	0.7	20

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91	Chaotic temperature dependence in a model of spin glasses. European Physical Journal B, 2002, 28, 199-208.	0.6	34
92	Iterated Local Search. SSRN Electronic Journal, 2001, , .	0.4	9
93	Discrete energy landscapes and replica symmetry breaking at zero temperature. Europhysics Letters, 2001, 53, 749-755.	0.7	12
94	Statistical mechanics methods and phase transitions in optimization problems. Theoretical Computer Science, 2001, 265, 3-67.	0.5	130
95	Zero-Temperature Responses of a 3D Spin Glass in a Magnetic Field. Physical Review Letters, 2001, 87, 197204.	2.9	36
96	Equilibrium valleys in spin glasses at low temperature. Physical Review B, 2001, 64, .	1.1	3
97	Hierarchical approach for computing spin glass ground states. Physical Review E, 2001, 64, 056704.	0.8	25
98	Large-scale low-energy excitations in 3-d spin glasses. European Physical Journal B, 2000, 18, 467-477.	0.6	30
99	A geometrical picture for finite-dimensional spin glasses. Europhysics Letters, 2000, 49, 794-800.	0.7	30
100	Spin and Link Overlaps in Three-Dimensional Spin Glasses. Physical Review Letters, 2000, 85, 3013-3016.	2.9	136
101	Houdayer and Martin Reply:. Physical Review Letters, 2000, 84, 1057-1057.	2.9	6
102	Ising Spin Glasses in a Magnetic Field. Physical Review Letters, 1999, 82, 4934-4937.	2.9	39
103	Renormalization for Discrete Optimization. Physical Review Letters, 1999, 83, 1030-1033.	2.9	39
104	The Stochastic Traveling Salesman Problem: Finite Size Scaling and the Cavity Prediction. Journal of Statistical Physics, 1999, 94, 739-758.	0.5	32
105	Cut Size Statistics of Graph Bisection Heuristics. SIAM Journal on Optimization, 1999, 10, 231-251.	1.2	30
106	Scaling Universalities of $k$ th-Nearest Neighbor Distances on Closed Manifolds. Advances in Applied Mathematics, 1998, 21, 424-436.	0.4	24
107	Comparing mean field and Euclidean matching problems. European Physical Journal B, 1998, 6, 383-393.	0.6	28
108	Droplet Phenomenology and Mean Field in a Frustrated Disordered System. Physical Review Letters, 1998, 81, 2554-2557.	2.9	11

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109	Mean Field and Corrections for the Euclidean Minimum Matching Problem. Physical Review Letters, 1997, 79, 167-170.	2.9	7
110	Combining simulated annealing with local search heuristics. Annals of Operations Research, 1996, 63, 57-75.	2.6	146
111	A numerical study of persistence length effects on DNA conformation in sequencing electrophoresis. Electrophoresis, 1996, 17, 1420-1424.	1.3	2
112	Finite Size and Dimensional Dependence in the Euclidean Traveling Salesman Problem. Physical Review Letters, 1996, 76, 1188-1191.	2.9	77
113	Partitioning of unstructured meshes for load balancing. Concurrency and Computation: Practice and Experience, 1995, 7, 303-314.	0.6	30
114	Memory capacity in large idiotypic networks. Bulletin of Mathematical Biology, 1995, 57, 109-136.	0.9	2
115	Finite population-size effects in projection Monte Carlo methods. Physical Review E, 1995, 51, 3679-3693.	0.8	18
116	PROJECTION MONTE CARLO METHODS: AN ALGORITHMIC ANALYSIS. International Journal of Modern Physics C, 1995, 06, 693-723.	0.8	8
117	Pairing Hamiltonian by a path integral Monte Carlo procedure. Physical Review C, 1993, 47, 2610-2615.	1.1	18
118	Large-step markov chains for the TSP incorporating local search heuristics. Operations Research Letters, 1992, 11, 219-224.	0.5	176
119	Discrete velocities for solitary-wave solutions selected by self-induced transparency. Physical Review A, 1991, 43, 1549-1563.	1.0	18
120	Asymptotics of Partial Differential Equations and the Renormalisation Group. NATO ASI Series Series B: Physics, 1991, , 375-383.	0.2	10
121	Solitary-Waves in Self-Induced Transparency. NATO ASI Series Series B: Physics, 1991, , 327-336.	0.2	2
122	Critical dynamics of one-dimensional irreversible systems. Physica D: Nonlinear Phenomena, 1990, 45, 345-354.	1.3	2
123	Position space calculation of a two-loop lattice diagram. Journal of Physics A, 1990, 23, 1575-1587.	1.6	3
124	Solitary-wave velocity selection in self-induced transparency. Physical Review Letters, 1990, 65, 2638-2641.	2.9	11
125	Anomalous dimensions and the renormalization group in a nonlinear diffusion process. Physical Review Letters, 1990, 64, 1361-1364.	2.9	128
126	Intermediate asymptotics and renormalization group theory. Journal of Scientific Computing, 1989, 4, 355-372.	1.1	121



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127	Random walks for on-lattice DLA simulations. Journal of Physics A, 1988, 21, 827-832.	1.6	2
128	Saffman-Taylor fingers with anisotropic surface tension. Physical Review A, 1987, 35, 3989-3992.	1.0	67
129	Origin of sidebranching in dendritic growth. Physical Review A, 1987, 35, 1382-1390.	1.0	45
130	Strongly coupled QCD with a Euclidean version of the SLAC derivative. Nuclear Physics B, 1987, 279, 684-710.	0.9	2
131	A comparison of Langevin and microcanonical simulations for fermions. Nuclear Physics B, 1987, 280, 497-509.	0.9	4
132	Fast evaluation of lattice Green functions. Journal of Physics A, 1987, 20, 5095-5111.	1.6	9
133	Systematic errors in Monte Carlo methods for fermions. Nuclear Physics B, 1986, 264, 89-98.	0.9	9
134	Computer techniques for lattice gauge theories. Computer Physics Communications, 1986, 40, 173-179.	3.0	1
135	Hadronic matrix elements at strong coupling. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1986, 174, 94-98.	1.5	8
136	Gauge-invariant spin glasses. Physical Review B, 1986, 34, 301-305.	1.1	5
137	Novel ordering in the XY spin glass. Physical Review B, 1986, 34, 2032-2034.	1.1	0
138	Random walks on the Sierpinski Gasket. Journal De Physique, 1986, 47, 1663-1669.	1.8	3
139	Lyapunov exponents of stochastic dynamical systems. Journal of Statistical Physics, 1985, 41, 249-261.	0.5	18
140	Seeing asymptotic freedom in SU(3) lattice gauge theory. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1985, 153, 87-91.	1.5	24
141	Reducing the number of flavors in the microcanonical method. Physical Review D, 1985, 31, 435-437.	1.6	21
142	Scaling in lattice QCD with Kogut-Susskind fermions. Physical Review D, 1985, 31, 1768-1770.	1.6	1
143	Correlated subtractions for computer simulations. Nuclear Physics B, 1985, 251, 425-438.	0.9	2
144	The quark model on the lattice. Nuclear Physics B, 1985, 261, 79-103.	0.9	11

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145	Algebraic properties of cellular automata. <i>Communications in Mathematical Physics</i> , 1984, 93, 219-258.	1.0	305
146	Chiral symmetry breaking in strongly coupled lattice gauge theory. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1983, 131, 419-422.	1.5	20
147	Mesons and baryons at large N and strong coupling. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1983, 130, 411-414.	1.5	11
148	The Schwinger model via a local Monte Carlo algorithm. <i>Nuclear Physics B</i> , 1982, 203, 297-310.	0.9	23
149	Monte Carlo estimates of the mass gap of the O(2) and O(3) spin models in 1+1 dimensions. <i>Nuclear Physics B</i> , 1982, 205, 188-220.	0.9	86