

# Thierry Emonet

## List of Publications by Year in descending order

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Version: 2024-02-01

62  
papers

5,345  
citations

109137

35  
h-index

123241

61  
g-index

81  
all docs

81  
docs citations

81  
times ranked

5015  
citing authors

#	ARTICLE	IF	CITATIONS
1	Simulations of magneto-convection in the solar photosphere. <i>Astronomy and Astrophysics</i> , 2005, 429, 335-351.	2.1	576
2	High-throughput, subpixel precision analysis of bacterial morphogenesis and intracellular spatio-temporal dynamics. <i>Molecular Microbiology</i> , 2011, 80, 612-627.	1.2	447
3	From molecular noise to behavioural variability in a single bacterium. <i>Nature</i> , 2004, 428, 574-578.	13.7	405
4	Spatial organization of the flow of genetic information in bacteria. <i>Nature</i> , 2010, 466, 77-81.	13.7	334
5	Efficient modeling, simulation and coarse-graining of biological complexity with NFsim. <i>Nature Methods</i> , 2011, 8, 177-183.	9.0	271
6	On the Interaction between Convection and Magnetic Fields. <i>Astrophysical Journal</i> , 2003, 588, 1183-1198.	1.6	222
7	Single-cell quantification of IL-2 response by effector and regulatory T cells reveals critical plasticity in immune response. <i>Molecular Systems Biology</i> , 2010, 6, 437.	3.2	181
8	RodZ, a component of the bacterial core morphogenic apparatus. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 1239-1244.	3.3	156
9	The Physics of Twisted Magnetic Tubes Rising in a Stratified Medium: Two-dimensional Results. <i>Astrophysical Journal</i> , 1998, 492, 804-821.	1.6	147
10	AgentCell: a digital single-cell assay for bacterial chemotaxis. <i>Bioinformatics</i> , 2005, 21, 2714-2721.	1.8	136
11	The Rise of Twisted Magnetic Tubes in a Stratified Medium. <i>Astrophysical Journal</i> , 1996, 472, L53-L56.	1.6	124
12	Intensity Invariant Dynamics and Odor-Specific Latencies in Olfactory Receptor Neuron Response. <i>Journal of Neuroscience</i> , 2013, 33, 6285-6297.	1.7	122
13	Relationship between cellular response and behavioral variability in bacterial chemotaxis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 3304-3309.	3.3	119
14	Regulated tissue fluidity steers zebrafish body elongation. <i>Development (Cambridge)</i> , 2013, 140, 573-582.	1.2	116
15	Functional diversity among sensory receptors in a <i>Drosophila</i> olfactory circuit. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, E2134-43.	3.3	105
16	Real-time RNA profiling within a single bacterium. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005, 102, 9160-9164.	3.3	90
17	Adaptability of non-genetic diversity in bacterial chemotaxis. <i>ELife</i> , 2014, 3, .	2.8	90
18	Understanding Modularity in Molecular Networks Requires Dynamics. <i>Science Signaling</i> , 2009, 2, pe44.	1.6	82

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19	Temporal coding of odor mixtures in an olfactory receptor neuron. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 5075-5080.	3.3	81
20	Olfactory receptor neurons use gain control and complementary kinetics to encode intermittent odorant stimuli. <i>ELife</i> , 2017, 6, .	2.8	80
21	Spatial self-organization resolves conflicts between individuality and collective migration. <i>Nature Communications</i> , 2018, 9, 2177.	5.8	74
22	Hidden Stochastic Nature of a Single Bacterial Motor. <i>Physical Review Letters</i> , 2006, 96, 058105.	2.9	69
23	Interdependence of behavioural variability and response to small stimuli in bacteria. <i>Nature</i> , 2010, 468, 819-823.	13.7	67
24	Limits of Feedback Control in Bacterial Chemotaxis. <i>PLoS Computational Biology</i> , 2014, 10, e1003694.	1.5	65
25	Cell-Fibronectin Interactions Propel Vertebrate Trunk Elongation via Tissue Mechanics. <i>Current Biology</i> , 2013, 23, 1335-1341.	1.8	64
26	Cyclic di-GMP differentially tunes a bacterial flagellar motor through a novel class of CheY-like regulators. <i>ELife</i> , 2017, 6, .	2.8	62
27	Direct Correlation between Motile Behavior and Protein Abundance in Single Cells. <i>PLoS Computational Biology</i> , 2016, 12, e1005041.	1.5	60
28	Non-genetic diversity modulates population performance. <i>Molecular Systems Biology</i> , 2016, 12, 895.	3.2	59
29	Walking <i>Drosophila</i> navigate complex plumes using stochastic decisions biased by the timing of odor encounters. <i>ELife</i> , 2020, 9, .	2.8	59
30	Phenotypic diversity and temporal variability in a bacterial signaling network revealed by single-cell FRET. <i>ELife</i> , 2017, 6, .	2.8	58
31	Modulation of flagellar rotation in surface-attached bacteria: A pathway for rapid surface-sensing after flagellar attachment. <i>PLoS Pathogens</i> , 2019, 15, e1008149.	2.1	57
32	Small-Scale Photospheric Fields: Observational Evidence and Numerical Simulations. <i>Astrophysical Journal</i> , 2001, 560, L197-L200.	1.6	57
33	Stochastic coordination of multiple actuators reduces latency and improves chemotactic response in bacteria. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, 805-810.	3.3	54
34	Behavioral Variability and Phenotypic Diversity in Bacterial Chemotaxis. <i>Annual Review of Biophysics</i> , 2018, 47, 595-616.	4.5	54
35	Polarization of Photospheric Lines from Turbulent Dynamo Simulations. <i>Astrophysical Journal</i> , 2003, 585, 536-552.	1.6	48
36	Minimally invasive determination of mRNA concentration in single living bacteria. <i>Nucleic Acids Research</i> , 2008, 36, e73-e73.	6.5	47

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37	Escherichia coli chemotaxis is information limited. Nature Physics, 2021, 17, 1426-1431.	6.5	42
38	The Her7 node modulates the network topology of the zebrafish segmentation clock via sequestration of the Hes6 hub. Development (Cambridge), 2012, 139, 940-947.	1.2	39
39	Guidelines for visualizing and annotating rule-based models. Molecular BioSystems, 2011, 7, 2779.	2.9	36
40	Feedback between motion and sensation provides nonlinear boost in run-and-tumble navigation. PLoS Computational Biology, 2017, 13, e1005429.	1.5	36
41	Processivity of peptidoglycan synthesis provides a built-in mechanism for the robustness of straight-rod cell morphology. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 10086-10091.	3.3	35
42	Patterned Disordered Cell Motion Ensures Vertebral Column Symmetry. Developmental Cell, 2017, 42, 170-180.e5.	3.1	30
43	Organization of Embryonic Morphogenesis via Mechanical Information. Developmental Cell, 2019, 49, 829-839.e5.	3.1	27
44	Adaptation Dynamics in Densely Clustered Chemoreceptors. PLoS Computational Biology, 2013, 9, e1003230.	1.5	23
45	Adaptive tuning of cell sensory diversity without changes in gene expression. Science Advances, 2020, 6, .	4.7	21
46	Presynaptic GABA Receptors Mediate Temporal Contrast Enhancement in <i>Drosophila</i> Olfactory Sensory Neurons and Modulate Odor-Driven Behavioral Kinetics. ENeuro, 2016, 3, ENEURO.0080-16.2016.	0.9	21
47	Dynamical Determinants of Drug-Inducible Gene Expression in a Single Bacterium. Biophysical Journal, 2006, 90, 3315-3321.	0.2	20
48	Simulation of Solar Magnetoconvection. Symposium - International Astronomical Union, 2003, 210, 157-167.	0.1	16
49	Controlling and measuring dynamic odorant stimuli in the laboratory. Journal of Experimental Biology, 2019, 222, .	0.8	16
50	Collective behavior and nongenetic inheritance allow bacterial populations to adapt to changing environments. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	16
51	Front-end Weber-Fechner gain control enhances the fidelity of combinatorial odor coding. ELife, 2019, 8, .	2.8	15
52	The Zigzag Path of Buoyant Magnetic Tubes and the Generation of Vorticity along Their Periphery. Astrophysical Journal, 2001, 549, 1212-1220.	1.6	14
53	Sensing complementary temporal features of odor signals enhances navigation of diverse turbulent plumes. ELife, 2022, 11, .	2.8	14
54	Equilibrium of Twisted Horizontal Magnetic Flux Tubes. Astrophysical Journal, 1996, 458, 783.	1.6	12

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55	Modeling cellular signaling: taking space into the computation. <i>Nature Methods</i> , 2012, 9, 239-242.	9.0	9
56	A rule from bacteria to balance growth and expansion. <i>Nature</i> , 2019, 575, 602-603.	13.7	9
57	Non-Genetic Diversity in Chemosensing and Chemotactic Behavior. <i>International Journal of Molecular Sciences</i> , 2021, 22, 6960.	1.8	8
58	Fine-Tuning of Chemotactic Response in <i>E. coli</i> Determined by High-Throughput Capillary Assay. <i>Current Microbiology</i> , 2011, 62, 764-769.	1.0	7
59	Magnetoconvection. , 2001, , 173-180.		5
60	A Primed Subpopulation of Bacteria Enables Rapid Expression of the Type 3 Secretion System in <i>Pseudomonas aeruginosa</i> . <i>MBio</i> , 2021, 12, e0083121.	1.8	4
61	Thermal Robustness: Lessons from Bacterial Chemotaxis. <i>Current Biology</i> , 2011, 21, R465-R468.	1.8	3
62	9.16 Systems Immunology: A Primer for Biophysicists. , 2012, , 389-413.		0