

Jayajit Das

List of Publications by Year in descending order

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Version: 2024-02-01

50
papers

1,842
citations

361296

20
h-index

276775

41
g-index

60
all docs

60
docs citations

60
times ranked

2402
citing authors

#	ARTICLE	IF	CITATIONS
1	Digital Signaling and Hysteresis Characterize Ras Activation in Lymphoid Cells. <i>Cell</i> , 2009, 136, 337-351.	13.5	362
2	Role of nanoscale antigen organization on B-cell activation probed using DNA origami. <i>Nature Nanotechnology</i> , 2020, 15, 716-723.	15.6	263
3	The Balance between T Cell Receptor Signaling and Degradation at the Center of the Immunological Synapse Is Determined by Antigen Quality. <i>Immunity</i> , 2008, 29, 414-422.	6.6	126
4	Purely stochastic binary decisions in cell signaling models without underlying deterministic bistabilities. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 18958-18963.	3.3	109
5	The Stimulatory Potency of T Cell Antigens Is Influenced by the Formation of the Immunological Synapse. <i>Immunity</i> , 2007, 26, 345-355.	6.6	83
6	Monovalent and Multivalent Ligation of the B Cell Receptor Exhibit Differential Dependence upon Syk and Src Family Kinases. <i>Science Signaling</i> , 2013, 6, ra1.	1.6	73
7	Origin of the sharp boundary that discriminates positive and negative selection of thymocytes. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 528-533.	3.3	59
8	The β Isoform of Diacylglycerol Kinase Plays a Predominant Role in Regulatory T Cell Development and TCR-Mediated Ras Signaling. <i>Science Signaling</i> , 2013, 6, ra102.	1.6	57
9	Decreased Diacylglycerol Metabolism Enhances ERK Activation and Augments CD8+ T Cell Functional Responses. <i>Journal of Biological Chemistry</i> , 2011, 286, 5254-5265.	1.6	56
10	Pairing computation with experimentation: a powerful coupling for understanding T cell signalling. <i>Nature Reviews Immunology</i> , 2010, 10, 59-71.	10.6	55
11	Sensitivity of T cells to antigen and antagonism emerges from differential regulation of the same molecular signaling module. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 5533-5538.	3.3	52
12	<sc>NK</sc> cells: tuned by peptide?. <i>Immunological Reviews</i> , 2015, 267, 214-227.	2.8	45
13	Activation or Tolerance of Natural Killer Cells Is Modulated by Ligand Quality in a Nonmonotonic Manner. <i>Biophysical Journal</i> , 2010, 99, 2028-2037.	0.2	36
14	Positive feedback regulation results in spatial clustering and fast spreading of active signaling molecules on a cell membrane. <i>Journal of Chemical Physics</i> , 2009, 130, 245102.	1.2	30
15	Extracellular DNA and Type IV Pilus Expression Regulate the Structure and Kinetics of Biofilm Formation by Nontypeable <i>Haemophilus influenzae</i> . <i>MBio</i> , 2017, 8, .	1.8	30
16	A Dendronized Polymer Is a Single-Molecule Glass. <i>Journal of Physical Chemistry B</i> , 2005, 109, 6535-6543.	1.2	28
17	Effect of Cross-Linking on the Structure and Thermodynamics of Lamellar Block Copolymers. <i>Macromolecules</i> , 2006, 39, 4848-4859.	2.2	27
18	Peptide selectivity discriminates NK cells from KIR2DL2- and KIR2DL3- positive individuals. <i>European Journal of Immunology</i> , 2015, 45, 492-500.	1.6	26

#	ARTICLE	IF	CITATIONS
19	In silico modeling identifies CD45 as a regulator of IL-2 synergy in the NKG2D-mediated activation of immature human NK cells. <i>Science Signaling</i> , 2017, 10, .	1.6	23
20	Order-Disorder Transitions in Cross-Linked Block Copolymer Solids. <i>Macromolecules</i> , 2005, 38, 1277-1285.	2.2	21
21	Mathematical modelling identifies the role of adaptive immunity as a key controller of respiratory syncytial virus in cotton rats. <i>Journal of the Royal Society Interface</i> , 2019, 16, 20190389.	1.5	19
22	Defining pharyngeal contractile integral during high-resolution manometry in neonates: a neuromotor marker of pharyngeal vigor. <i>Pediatric Research</i> , 2018, 84, 341-347.	1.1	18
23	Non-canonical antagonism of PI3K by the kinase Itpkb delays thymocyte \hat{I}^2 -selection and renders it Notch-dependent. <i>ELife</i> , 2016, 5, .	2.8	17
24	Cell responses only partially shape cell-to-cell variations in protein abundances in <i>Escherichia coli</i> chemotaxis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 18531-18536.	3.3	16
25	Dynamic variability in SHP-1 abundance determines natural killer cell responsiveness. <i>Science Signaling</i> , 2021, 14, eabe5380.	1.6	16
26	Vortex transport and voltage noise in disordered superconductors. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2003, 318, 48-54.	1.2	15
27	Vortex washboard voltage noise in type-II superconductors. <i>European Physical Journal B</i> , 2008, 65, 469-484.	0.6	15
28	<i>In Silico</i> Modeling of Biofilm Formation by Nontypeable <i>Haemophilus influenzae</i> <i>In Vivo</i> . <i>MSphere</i> , 2019, 4, .	1.3	13
29	Driven Heisenberg magnets: Nonequilibrium criticality, spatiotemporal chaos and control. <i>Europhysics Letters</i> , 2002, 60, 418-424.	0.7	12
30	Self-Assembly of Dendronized Polymers. <i>Journal of Physical Chemistry B</i> , 2009, 113, 13768-13775.	1.2	12
31	Host-to-host variation of ecological interactions in polymicrobial infections. <i>Physical Biology</i> , 2015, 12, 016003.	0.8	11
32	Multiscale Modeling of Complex Formation and CD80 Depletion during Immune Synapse Development. <i>Biophysical Journal</i> , 2017, 112, 997-1009.	0.2	11
33	Spatial Clustering of Receptors and Signaling Molecules Regulates NK Cell Response to Peptide Repertoire Changes. <i>Frontiers in Immunology</i> , 2019, 10, 605.	2.2	10
34	Dramatic reduction of dimensionality in large biochemical networks owing to strong pair correlations. <i>Journal of the Royal Society Interface</i> , 2012, 9, 1824-1835.	1.5	9
35	In Silico Modeling of Itk Activation Kinetics in Thymocytes Suggests Competing Positive and Negative IP4 Mediated Feedbacks Increase Robustness. <i>PLoS ONE</i> , 2013, 8, e73937.	1.1	8
36	Dynamics of ordering of Heisenberg spins with torque: Nonconserved case. <i>Physical Review E</i> , 1998, 57, 5069-5078.	0.8	6

#	ARTICLE	IF	CITATIONS
37	Connecting the dots across time: reconstruction of single-cell signalling trajectories using time-stamped data. <i>Royal Society Open Science</i> , 2017, 4, 170811.	1.1	6
38	Ordering dynamics of Heisenberg spins with torque: Crossover, spin waves, and defects. <i>Physical Review E</i> , 2000, 62, 1601-1612.	0.8	5
39	Measurement of statistical evidence on an absolute scale following thermodynamic principles. <i>Theory in Biosciences</i> , 2013, 132, 181-194.	0.6	4
40	Positive feedback produces broad distributions in maximum activation attained within a narrow time window in stochastic biochemical reactions. <i>Journal of Chemical Physics</i> , 2013, 138, 015101.	1.2	4
41	Data-driven quantification of the robustness and sensitivity of cell signaling networks. <i>Physical Biology</i> , 2013, 10, 066002.	0.8	4
42	Spatially resolved in silico modeling of NKG2D signaling kinetics suggests a key role of NKG2D and Vav1 Co-clustering in generating natural killer cell activation. <i>PLoS Computational Biology</i> , 2022, 18, e1010114.	1.5	4
43	Maximum Entropy Estimation of Probability Distribution of Variables in Higher Dimensions from Lower Dimensional Data. <i>Entropy</i> , 2015, 17, 4986-4999.	1.1	3
44	Mutations in bacterial genes induce unanticipated changes in the relationship between bacterial pathogens in experimental otitis media. <i>Royal Society Open Science</i> , 2018, 5, 180810.	1.1	3
45	Data analysis to modeling to building theory in NK cell biology and beyond: How can computational modeling contribute?. <i>Journal of Leukocyte Biology</i> , 2019, 105, 1305-1317.	1.5	3
46	Determining clinically relevant features in cytometry data using persistent homology. <i>PLoS Computational Biology</i> , 2022, 18, e1009931.	1.5	3
47	Limiting Energy Dissipation Induces Glassy Kinetics in Single-Cell High-Precision Responses. <i>Biophysical Journal</i> , 2016, 110, 1180-1190.	0.2	2
48	Physical models in immune signaling. , 2018, , 227-250.		1
49	Dynamics of ordering of isotropic magnets. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1999, 270, 253-262.	1.2	0
50	Stochastic Sequestration Promotes Specificity in Decision Making in Single Cells. <i>Journal of Physical Chemistry B</i> , 2019, 123, 10323-10330.	1.2	0