Jayajit Das

List of Publications by Year in descending order

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	Determining clinically relevant features in cytometry data using persistent homology. PLoS Computational Biology, 2022, 18, e1009931.	1.5	3
2	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. PLoS Computational Biology, 2022, 18, e1010114.	1.5	4
3	Dynamic variability in SHP-1 abundance determines natural killer cell responsiveness. Science Signaling, 2021, 14, eabe5380.	1.6	16
4	Role of nanoscale antigen organization on B-cell activation probed using DNA origami. Nature Nanotechnology, 2020, 15, 716-723.	15.6	263
5	In Silico Modeling of Biofilm Formation by Nontypeable Haemophilus influenzae In Vivo. MSphere, 2019, 4, .	1.3	13
6	Data analysis to modeling to building theory in NK cell biology and beyond: How can computational modeling contribute?. Journal of Leukocyte Biology, 2019, 105, 1305-1317.	1.5	3
7	Spatial Clustering of Receptors and Signaling Molecules Regulates NK Cell Response to Peptide Repertoire Changes. Frontiers in Immunology, 2019, 10, 605.	2.2	10
8	Stochastic Sequestration Promotes Specificity in Decision Making in Single Cells. Journal of Physical Chemistry B, 2019, 123, 10323-10330.	1.2	0
9	Mathematical modelling identifies the role of adaptive immunity as a key controller of respiratory syncytial virus in cotton rats. Journal of the Royal Society Interface, 2019, 16, 20190389.	1.5	19
10	Mutations in bacterial genes induce unanticipated changes in the relationship between bacterial pathogens in experimental otitis media. Royal Society Open Science, 2018, 5, 180810.	1.1	3
11	Defining pharyngeal contractile integral during high-resolution manometry in neonates: a neuromotor marker of pharyngeal vigor. Pediatric Research, 2018, 84, 341-347.	1.1	18
12	Physical models in immune signaling. , 2018, , 227-250.		1
13	Multiscale Modeling of Complex Formation and CD80 Depletion during Immune Synapse Development. Biophysical Journal, 2017, 112, 997-1009.	0.2	11
14	Connecting the dots across time: reconstruction of single-cell signalling trajectories using time-stamped data. Royal Society Open Science, 2017, 4, 170811.	1.1	6
15	In silico modeling identifies CD45 as a regulator of IL-2 synergy in the NKG2D-mediated activation of immature human NK cells. Science Signaling, 2017, 10, .	1.6	23
16	Extracellular DNA and Type IV Pilus Expression Regulate the Structure and Kinetics of Biofilm Formation by Nontypeable Haemophilus influenzae. MBio, 2017, 8, .	1.8	30
17	Limiting Energy Dissipation Induces Glassy Kinetics in Single-Cell High-Precision Responses. Biophysical Journal, 2016, 110, 1180-1190.	0.2	2
18	Non-canonical antagonism of PI3K by the kinase Itpkb delays thymocyte Î²-selection and renders it Notch-dependent. ELife, 2016, 5, .	2.8	17

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19	<scp>NK</scp> cells: tuned by peptide?. Immunological Reviews, 2015, 267, 214-227.	2.8	45
20	Maximum Entropy Estimation of Probability Distribution of Variables in Higher Dimensions from Lower Dimensional Data. Entropy, 2015, 17, 4986-4999.	1.1	3
21	Host-to-host variation of ecological interactions in polymicrobial infections. Physical Biology, 2015, 12, 016003.	0.8	11
22	Peptide selectivity discriminates NK cells from KIR2DL2â€•and KIR2DL3â€•positive individuals. European Journal of Immunology, 2015, 45, 492-500.	1.6	26
23	Measurement of statistical evidence on an absolute scale following thermodynamic principles. Theory in Biosciences, 2013, 132, 181-194.	0.6	4
24	The Î¶ Isoform of Diacylglycerol Kinase Plays a Predominant Role in Regulatory T Cell Development and TCR-Mediated Ras Signaling. Science Signaling, 2013, 6, ra102.	1.6	57
25	Positive feedback produces broad distributions in maximum activation attained within a narrow time window in stochastic biochemical reactions. Journal of Chemical Physics, 2013, 138, 015101.	1.2	4
26	Monovalent and Multivalent Ligation of the B Cell Receptor Exhibit Differential Dependence upon Syk and Src Family Kinases. Science Signaling, 2013, 6, ra1.	1.6	73
27	Data-driven quantification of the robustness and sensitivity of cell signaling networks. Physical Biology, 2013, 10, 066002.	0.8	4
28	Cell responses only partially shape cell-to-cell variations in protein abundances in Escherichia coli chemotaxis. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 18531-18536.	3.3	16
29	In Silico Modeling of Itk Activation Kinetics in Thymocytes Suggests Competing Positive and Negative IP4 Mediated Feedbacks Increase Robustness. PLoS ONE, 2013, 8, e73937.	1.1	8
30	Dramatic reduction of dimensionality in large biochemical networks owing to strong pair correlations. Journal of the Royal Society Interface, 2012, 9, 1824-1835.	1.5	9
31	Decreased Diacylglycerol Metabolism Enhances ERK Activation and Augments CD8+ T Cell Functional Responses. Journal of Biological Chemistry, 2011, 286, 5254-5265.	1.6	56
32	Pairing computation with experimentation: a powerful coupling for understanding T cell signalling. Nature Reviews Immunology, 2010, 10, 59-71.	10.6	55
33	Activation or Tolerance of Natural Killer Cells Is Modulated by Ligand Quality in a Nonmonotonic Manner. Biophysical Journal, 2010, 99, 2028-2037.	0.2	36
34	Origin of the sharp boundary that discriminates positive and negative selection of thymocytes. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 528-533.	3.3	59
35	Positive feedback regulation results in spatial clustering and fast spreading of active signaling molecules on a cell membrane. Journal of Chemical Physics, 2009, 130, 245102.	1.2	30
36	Digital Signaling and Hysteresis Characterize Ras Activation in Lymphoid Cells. Cell, 2009, 136, 337-351.	13.5	362

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37	Self-Assembly of Dendronized Polymers. Journal of Physical Chemistry B, 2009, 113, 13768-13775.	1.2	12
38	Vortex washboard voltage noise in type-II superconductors. European Physical Journal B, 2008, 65, 469-484.	0.6	15
39	The Balance between T Cell Receptor Signaling and Degradation at the Center of the Immunological Synapse Is Determined by Antigen Quality. Immunity, 2008, 29, 414-422.	6.6	126
40	Sensitivity of T cells to antigen and antagonism emerges from differential regulation of the same molecular signaling module. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 5533-5538.	3.3	52
41	Purely stochastic binary decisions in cell signaling models without underlying deterministic bistabilities. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 18958-18963.	3.3	109
42	The Stimulatory Potency of T Cell Antigens Is Influenced by the Formation of the Immunological Synapse. Immunity, 2007, 26, 345-355.	6.6	83
43	Effect of Cross-Linking on the Structure and Thermodynamics of Lamellar Block Copolymers. Macromolecules, 2006, 39, 4848-4859.	2.2	27
44	A Dendronized Polymer Is a Single-Molecule Glassâ€. Journal of Physical Chemistry B, 2005, 109, 6535-6543.	1.2	28
45	Orderâ˜Disorder Transitions in Cross-Linked Block Copolymer Solids. Macromolecules, 2005, 38, 1277-1285.	2.2	21
46	Vortex transport and voltage noise in disordered superconductors. Physica A: Statistical Mechanics and Its Applications, 2003, 318, 48-54.	1.2	15
47	Driven Heisenberg magnets: Nonequilibrium criticality, spatiotemporal chaos and control. Europhysics Letters, 2002, 60, 418-424.	0.7	12
48	Ordering dynamics of Heisenberg spins with torque: Crossover, spin waves, and defects. Physical Review E, 2000, 62, 1601-1612.	0.8	5
49	Dynamics of ordering of isotropic magnets. Physica A: Statistical Mechanics and Its Applications, 1999, 270, 253-262.	1.2	0
50	Dynamics of ordering of Heisenberg spins with torque: Nonconserved case. Physical Review E, 1998, 57, 5069-5078.	0.8	6