

Jayajit Das

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/2226671/publications.pdf>

Version: 2024-02-01

50
papers

1,842
citations

361413

20
h-index

276875

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. | 28.9 | 362 |
| 2 | Role of nanoscale antigen organization on B-cell activation probed using DNA origami. <i>Nature Nanotechnology</i> , 2020, 15, 716-723. | 31.5 | 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. | 14.3 | 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. | 7.1 | 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. | 14.3 | 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. | 3.6 | 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. | 7.1 | 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. | 3.6 | 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. | 3.4 | 56 |
| 10 | Pairing computation with experimentation: a powerful coupling for understanding T cell signalling. <i>Nature Reviews Immunology</i> , 2010, 10, 59-71. | 22.7 | 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. | 7.1 | 52 |
| 12 | <sc>NK</sc> cells: tuned by peptide?. <i>Immunological Reviews</i> , 2015, 267, 214-227. | 6.0 | 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. | 0.5 | 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. | 3.0 | 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, . | 4.1 | 30 |
| 16 | A Dendronized Polymer Is a Single-Molecule Glass. <i>Journal of Physical Chemistry B</i> , 2005, 109, 6535-6543. | 2.6 | 28 |
| 17 | Effect of Cross-Linking on the Structure and Thermodynamics of Lamellar Block Copolymers. <i>Macromolecules</i> , 2006, 39, 4848-4859. | 4.8 | 27 |
| 18 | Peptide selectivity discriminates NK cells from KIR2DL2- and KIR2DL3- positive individuals. <i>European Journal of Immunology</i> , 2015, 45, 492-500. | 2.9 | 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, . | 3.6 | 23 |
| 20 | Order-Disorder Transitions in Cross-Linked Block Copolymer Solids. <i>Macromolecules</i> , 2005, 38, 1277-1285. | 4.8 | 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. | 3.4 | 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. | 2.3 | 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, . | 6.0 | 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. | 7.1 | 16 |
| 25 | Dynamic variability in SHP-1 abundance determines natural killer cell responsiveness. <i>Science Signaling</i> , 2021, 14, eabe5380. | 3.6 | 16 |
| 26 | Vortex transport and voltage noise in disordered superconductors. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2003, 318, 48-54. | 2.6 | 15 |
| 27 | Vortex washboard voltage noise in type-II superconductors. <i>European Physical Journal B</i> , 2008, 65, 469-484. | 1.5 | 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, . | 2.9 | 13 |
| 29 | Driven Heisenberg magnets: Nonequilibrium criticality, spatiotemporal chaos and control. <i>Europhysics Letters</i> , 2002, 60, 418-424. | 2.0 | 12 |
| 30 | Self-Assembly of Dendronized Polymers. <i>Journal of Physical Chemistry B</i> , 2009, 113, 13768-13775. | 2.6 | 12 |
| 31 | Host-to-host variation of ecological interactions in polymicrobial infections. <i>Physical Biology</i> , 2015, 12, 016003. | 1.8 | 11 |
| 32 | Multiscale Modeling of Complex Formation and CD80 Depletion during Immune Synapse Development. <i>Biophysical Journal</i> , 2017, 112, 997-1009. | 0.5 | 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. | 4.8 | 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. | 3.4 | 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. | 2.5 | 8 |
| 36 | Dynamics of ordering of Heisenberg spins with torque: Nonconserved case. <i>Physical Review E</i> , 1998, 57, 5069-5078. | 2.1 | 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. | 2.4 | 6 |
| 38 | Ordering dynamics of Heisenberg spins with torque: Crossover, spin waves, and defects. <i>Physical Review E</i> , 2000, 62, 1601-1612. | 2.1 | 5 |
| 39 | Measurement of statistical evidence on an absolute scale following thermodynamic principles. <i>Theory in Biosciences</i> , 2013, 132, 181-194. | 1.4 | 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. | 3.0 | 4 |
| 41 | Data-driven quantification of the robustness and sensitivity of cell signaling networks. <i>Physical Biology</i> , 2013, 10, 066002. | 1.8 | 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. | 3.2 | 4 |
| 43 | Maximum Entropy Estimation of Probability Distribution of Variables in Higher Dimensions from Lower Dimensional Data. <i>Entropy</i> , 2015, 17, 4986-4999. | 2.2 | 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. | 2.4 | 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. | 3.3 | 3 |
| 46 | Determining clinically relevant features in cytometry data using persistent homology. <i>PLoS Computational Biology</i> , 2022, 18, e1009931. | 3.2 | 3 |
| 47 | Limiting Energy Dissipation Induces Glassy Kinetics in Single-Cell High-Precision Responses. <i>Biophysical Journal</i> , 2016, 110, 1180-1190. | 0.5 | 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. | 2.6 | 0 |
| 50 | Stochastic Sequestration Promotes Specificity in Decision Making in Single Cells. <i>Journal of Physical Chemistry B</i> , 2019, 123, 10323-10330. | 2.6 | 0 |