

Daniel Coombs

List of Publications by Year in descending order

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74
papers

3,225
citations

126907
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93
all docs

93
docs citations

93
times ranked

3893
citing authors

#	ARTICLE	IF	CITATIONS
1	Quantifying transmissibility of SARS-CoV-2 and impact of intervention within long-term healthcare facilities. Royal Society Open Science, 2022, 9, 211710.	2.4	2
2	Estimating naloxone need in the USA across fentanyl, heroin, and prescription opioid epidemics: a modelling study. Lancet Public Health, The, 2022, 7, e210-e218.	10.0	33
3	Mathematical modeling of COVID-19 in British Columbia: An age-structured model with time-dependent contact rates. Epidemics, 2022, 39, 100559.	3.0	12
4	SARS-CoV-2 seroprevalence among Vancouver public school staff in British Columbia, Canada: a cross-sectional study. BMJ Open, 2022, 12, e057846.	1.9	14
5	Transmission Dynamics of COVID-19. World Scientific Series in Global Healthcare Economics and Public Policy, 2022, , 51-76.	0.1	0
6	Symptomatic and Asymptomatic Transmission of SARS-CoV-2 in K-12 Schools, British Columbia, Canada April to June 2021. Microbiology Spectrum, 2022, 10, .	3.0	6
7	The role of mathematical modelling in aiding public health policy decision-making: A case study of the BC opioid overdose emergency. International Journal of Drug Policy, 2021, 88, 102603.	3.3	3
8	Importance of COVID-19 vaccine efficacy in older age groups. Vaccine, 2021, 39, 2020-2023.	3.8	50
9	How much leeway is there to relax COVID-19 control measures?. Epidemics, 2021, 35, 100453.	3.0	15
10	Examining the dynamics of Epstein-Barr virus shedding in the tonsils and the impact of HIV-1 coinfection on daily saliva viral loads. PLoS Computational Biology, 2021, 17, e1009072.	3.2	9
11	Predicting the impact of clustered risk and testing behaviour patterns on the population-level effectiveness of pre-exposure prophylaxis against HIV among gay, bisexual and other men who have sex with men in Greater Vancouver, Canada. Epidemics, 2020, 30, 100360.	3.0	1
12	Modeling COVID-19 and Its Impacts on U.S. Immigration and Customs Enforcement (ICE) Detention Facilities, 2020. Journal of Urban Health, 2020, 97, 439-447.	3.6	32
13	Diffusion analysis of single particle trajectories in a Bayesian nonparametrics framework. Physical Biology, 2020, 17, 025001.	1.8	9
14	Quantifying the impact of COVID-19 control measures using a Bayesian model of physical distancing. PLoS Computational Biology, 2020, 16, e1008274.	3.2	67
15	First among equals. Physics of Life Reviews, 2019, 28, 92-93.	2.8	17
16	Modelling the combined impact of interventions in averting deaths during a synthetic opioid overdose epidemic. Addiction, 2019, 114, 1602-1613.	3.3	124
17	Stochastic Dynamics of the Latently Infected Cell Reservoir During HIV Infection. Bulletin of Mathematical Biology, 2019, 81, 131-154.	1.9	2
18	Arp2/3 complex-driven spatial patterning of the BCR enhances immune synapse formation, BCR signaling and B cell activation. ELife, 2019, 8, .	6.0	48

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19	Distribution of take-home opioid antagonist kits during a synthetic opioid epidemic in British Columbia, Canada: a modelling study. <i>Lancet Public Health</i> , The, 2018, 3, e218-e225.	10.0	76
20	A novel Bayesian approach to predicting reductions in HIV incidence following increased testing interventions among gay, bisexual and other men who have sex with men in Vancouver, Canada. <i>Journal of the Royal Society Interface</i> , 2018, 15, 20170849.	3.4	6
21	Sustained Reduction in Sexual Behavior that May Pose a Risk of HIV Transmission Following Diagnosis During Early HIV Infection Among Gay Men in Vancouver, British Columbia. <i>AIDS and Behavior</i> , 2018, 22, 2068-2078.	2.7	6
22	Effects of spatiotemporal HSV-2 lesion dynamics and antiviral treatment on the risk of HIV-1 acquisition. <i>PLoS Computational Biology</i> , 2018, 14, e1006129.	3.2	7
23	Applied stretch initiates directional invasion via the action of Rap1 GTPase as a tension sensor. <i>Journal of Cell Science</i> , 2017, 130, 152-163.	2.0	17
24	On the duration of the period between exposure to HIV and detectable infection. <i>Epidemics</i> , 2017, 20, 73-83.	3.0	24
25	Limitations of Qdot labelling compared to directly-conjugated probes for single particle tracking of B cell receptor mobility. <i>Scientific Reports</i> , 2017, 7, 11379.	3.3	26
26	Conditions for eradicating hepatitis C in people who inject drugs: A fibrosis aware model of hepatitis C virus transmission. <i>Journal of Theoretical Biology</i> , 2016, 395, 31-39.	1.7	11
27	<i>In vivo</i> regulation of integrin turnover by outside-in activation. <i>Journal of Cell Science</i> , 2016, 129, 2912-24.	2.0	13
28	<i>In vivo</i> regulation of integrin turnover by outside-in activation. <i>Development (Cambridge)</i> , 2016, 143, e1.1-e1.1.	2.5	0
29	The Impact of Implementing a Test, Treat and Retain HIV Prevention Strategy in Atlanta among Black Men Who Have Sex with Men with a History of Incarceration: A Mathematical Model. <i>PLoS ONE</i> , 2015, 10, e0123482.	2.5	10
30	SIR-Network Model and Its Application to Dengue Fever. <i>SIAM Journal on Applied Mathematics</i> , 2015, 75, 2581-2609.	1.8	39
31	Design Parameters for Granzyme-Mediated Cytotoxic Lymphocyte Target-Cell Killing and Specificity. <i>Biophysical Journal</i> , 2015, 109, 477-488.	0.5	13
32	Toll-like receptor ligands sensitize B-cell receptor signalling by reducing actin-dependent spatial confinement of the receptor. <i>Nature Communications</i> , 2015, 6, 6168.	12.8	79
33	Asymptotic Analysis of First Passage Time Problems Inspired by Ecology. <i>Bulletin of Mathematical Biology</i> , 2015, 77, 83-125.	1.9	55
34	<i>In vivo</i> quantitative analysis of Talin turnover in response to force. <i>Molecular Biology of the Cell</i> , 2015, 26, 4149-4162.	2.1	21
35	Probability of a false-negative HIV antibody test result during the window period: a tool for pre- and post-test counselling. <i>International Journal of STD and AIDS</i> , 2015, 26, 215-224.	1.1	41
36	Assessing the optimal virulence of malaria-targeting mosquito pathogens: a mathematical study of engineered <i>Metarhiziumanisopliae</i> . <i>Malaria Journal</i> , 2014, 13, 11.	2.3	3

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37	Stochastic Analysis of Pre- and Postexposure Prophylaxis against HIV Infection. SIAM Journal on Applied Mathematics, 2013, 73, 904-928.	1.8	45
38	Mechanical force regulates integrin turnover in <i>Drosophila</i> in vivo. Nature Cell Biology, 2012, 14, 935-943.	10.3	85
39	Mechanical Modulation of Receptor-Ligand Interactions at Cell-Cell Interfaces. Biophysical Journal, 2012, 102, 1265-1273.	0.5	68
40	A Review of Mathematical Models for T Cell Receptor Triggering and Antigen Discrimination. , 2011, , 25-45.		10
41	A Biophysical Model of Cell Adhesion Mediated by Immunoadhesin Drugs and Antibodies. PLoS ONE, 2011, 6, e19701.	2.5	3
42	Vaccination against 2009 pandemic H1N1 in a population dynamical model of Vancouver, Canada: timing is everything. BMC Public Health, 2011, 11, 932.	2.9	36
43	Antigen Potency and Maximal Efficacy Reveal a Mechanism of Efficient T Cell Activation. Science Signaling, 2011, 4, ra39.	3.6	71
44	Modeling Effect of a β -Secretase Inhibitor on Amyloid- β Dynamics Reveals Significant Role of an Amyloid Clearance Mechanism. Bulletin of Mathematical Biology, 2011, 73, 230-247.	1.9	10
45	A Stochastic Model of Latently Infected Cell Reactivation and Viral Blip Generation in Treated HIV Patients. PLoS Computational Biology, 2011, 7, e1002033.	3.2	68
46	Dependence of T Cell Antigen Recognition on T Cell Receptor-Peptide MHC Confinement Time. Immunity, 2010, 32, 163-174.	14.3	214
47	The space and time frames of T cell activation at the immunological synapse. FEBS Letters, 2010, 584, 4851-4857.	2.8	37
48	Dynamic Regulation of CD45 Lateral Mobility by the Spectrin-Ankyrin Cytoskeleton of T Cells*. Journal of Biological Chemistry, 2010, 285, 11392-11401.	3.4	47
49	A Hidden Markov Model for Single Particle Tracks Quantifies Dynamic Interactions between LFA-1 and the Actin Cytoskeleton. PLoS Computational Biology, 2009, 5, e1000556.	3.2	113
50	A Role for Rebinding in Rapid and Reliable T Cell Responses to Antigen. PLoS Computational Biology, 2009, 5, e1000578.	3.2	63
51	Diffusion on a Sphere with Localized Traps: Mean First Passage Time, Eigenvalue Asymptotics, and Fekete Points. SIAM Journal on Applied Mathematics, 2009, 70, 302-332.	1.8	94
52	Analysis of membrane-localized binding kinetics with FRAP. European Biophysics Journal, 2008, 37, 627-638.	2.2	18
53	Analysis of Serial Engagement and Peptide-MHC Transport in T Cell Receptor Microclusters. Biophysical Journal, 2008, 94, 3447-3460.	0.5	28
54	Improving parameter estimation for cell surface FRAP data. Journal of Proteomics, 2008, 70, 1224-1231.	2.4	11

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55	Effects of Intracellular Calcium and Actin Cytoskeleton on TCR Mobility Measured by Fluorescence Recovery. PLoS ONE, 2008, 3, e3913.	2.5	41
56	Kinetic Proofreading Model. Advances in Experimental Medicine and Biology, 2008, 640, 82-94.	1.6	16
57	Quantification and Modeling of Tripartite CD2-, CD58FC Chimera (Alefcept)-, and CD16-mediated Cell Adhesion. Journal of Biological Chemistry, 2007, 282, 34748-34757.	3.4	23
58	Evaluating the importance of within- and between-host selection pressures on the evolution of chronic pathogens. Theoretical Population Biology, 2007, 72, 576-591.	1.1	120
59	Modeling Within-Host Evolution of HIV: Mutation, Competition and Strain Replacement. Bulletin of Mathematical Biology, 2007, 69, 2361-2385.	1.9	51
60	Evolution of virulence: Interdependence, constraints, and selection using nested models. Theoretical Population Biology, 2006, 69, 145-153.	1.1	128
61	Analysis of Peptide/MHC-Induced TCR Downregulation: Deciphering the Triggering Kinetics. Cell Biochemistry and Biophysics, 2006, 46, 101-112.	1.8	15
62	A Theoretical and Experimental Study of Competition Between Solution and Surface Receptors for Ligand in a Biacore Flow Cell. Bulletin of Mathematical Biology, 2006, 68, 1125-1150.	1.9	11
63	T cell activation: Kinetic proofreading, serial engagement and cell adhesion. Journal of Computational and Applied Mathematics, 2005, 184, 121-139.	2.0	25
64	T cell receptor binding kinetics required for T cell activation depend on the density of cognate ligand on the antigen-presenting cell. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 4824-4829.	7.1	151
65	Optimizing within-host viral fitness: infected cell lifespan and virion production rate. Journal of Theoretical Biology, 2004, 229, 281-288.	1.7	89
66	Effects of the Geometry of the Immunological Synapse on the Delivery of Effector Molecules. Biophysical Journal, 2004, 87, 2215-2220.	0.5	38
67	Equilibrium Thermodynamics of Cell-Cell Adhesion Mediated by Multiple Ligand-Receptor Pairs. Biophysical Journal, 2004, 86, 1408-1423.	0.5	85
68	An Age-Structured Model of HIV Infection that Allows for Variations in the Production Rate of Viral Particles and the Death Rate of Productively Infected Cells. Mathematical Biosciences and Engineering, 2004, 1, 267-288.	1.9	120
69	Optimal viral production. Bulletin of Mathematical Biology, 2003, 65, 1003-1023.	1.9	23
70	Periodic Chirality Transformations Propagating On Bacterial Flagella. Physical Review Letters, 2002, 89, 118102.	7.8	38
71	Activated TCRs remain marked for internalization after dissociation from pMHC. Nature Immunology, 2002, 3, 926-931.	14.5	103
72	Calculations Show Substantial Serial Engagement of T Cell Receptors. Biophysical Journal, 2001, 80, 606-612.	0.5	63

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73	The influence of transport on the kinetics of binding to surface receptors: application to cells and BIAcore. Journal of Molecular Recognition, 1999, 12, 293-299.	2.1	92
74	The influence of transport on the kinetics of binding to surface receptors: application to cells and BIAcore. Journal of Molecular Recognition, 1999, 12, 293-299.	2.1	2