Linda R Petzold

List of Publications by Year in Descending Order

71 papers	2,085 citations	20 h-index	45 g-index
78 ext. papers	2,592 ext. citations	4.8 avg, IF	5.13 L-index

#	Paper	IF	Citations
71	Identification of dynamic mass-action biochemical reaction networks using sparse Bayesian methods.. *PLoS Computational Biology*, **2022**, 18, e1009830	5	0
70	A positive feedback loop involving the Spa2 SHD domain contributes to focal polarization.. *PLoS ONE*, **2022**, 17, e0263347	3.7	
69	Noise resistant synchronization and collective rhythm switching in a model of animal group locomotion.. *Royal Society Open Science*, **2022**, 9, 211908	3.3	
68	Associations of longitudinal D-Dimer and Factor II on early trauma survival risk. *BMC Bioinformatics*, **2021**, 22, 122	3.6	1
67	Accelerated regression-based summary statistics for discrete stochastic systems via approximate simulators. *BMC Bioinformatics*, **2021**, 22, 339	3.6	
66	Bayesian Inference over the Stiefel Manifold via the Givens Representation. *Bayesian Analysis*, **2021** , 16,	2.3	1
65	Extracellular detection of neuronal coupling. *Scientific Reports*, **2021**, 11, 14733	4.9	1
64	Coordinating cell polarization and morphogenesis through mechanical feedback. *PLoS Computational Biology*, **2021**, 17, e1007971	5	3
63	Epidemiological modeling in StochSS Live!. *Bioinformatics*, **2021**,	7.2	1
62	Experimentally Validated Reconstruction and Analysis of a Genome-Scale Metabolic Model of an Anaerobic Neocallimastigomycota Fungus. *MSystems*, **2021**, 6,	7.6	10
61	An arbitrary Lagrangian Eulerian smoothed particle hydrodynamics (ALE-SPH) method with a boundary volume fraction formulation for fluid-structure interaction. *Engineering Analysis With Boundary Elements*, **2021**, 128, 274-289	2.6	1
60	Computational model of tranexamic acid on urokinase mediated fibrinolysis. *PLoS ONE*, **2020**, 15, e0233640	3.7	2
59	Regulation of CSF and Brain Tissue Sodium Levels by the Blood-CSF and Blood-Brain Barriers During Migraine. *Frontiers in Computational Neuroscience*, **2020**, 14, 4	3.5	5
58	Control over single-cell distribution of G1 lengths by WNT governs pluripotency. *PLoS Biology*, **2019** , 17, e3000453	9.7	6
57	Analysis of the role of thrombomodulin in all-trans retinoic acid treatment of coagulation disorders in cancer patients. *Theoretical Biology and Medical Modelling*, **2019**, 16, 3	2.3	5
56	Sources of intraspecific variation in the collective tempo and synchrony of ant societies. *Behavioral Ecology*, **2019**, 30, 1682-1690	2.3	1
55	Integrating machine learning and multiscale modeling-perspectives, challenges, and opportunities in the biological, biomedical, and behavioral sciences. *Npj Digital Medicine*, **2019**, 2, 115	15.7	127

54	A hybrid smoothed dissipative particle dynamics (SDPD) spatial stochastic simulation algorithm (sSSA) for advection-diffusion-reaction problems. *Journal of Computational Physics*, **2019**, 378, 1-17	4.1	7
53	Validation data for a hybrid smoothed dissipative particle dynamics (SDPD) spatial stochastic simulation algorithm (sSSA) method. *Data in Brief*, **2019**, 22, 11-15	1.2	4
52	Computational Model for Hyperfibrinolytic Onset of Acute Traumatic Coagulopathy. *Annals of Biomedical Engineering*, **2018**, 46, 1173-1182	4.7	4
51	Bayesian inference of elastic properties with resonant ultrasound spectroscopy. *Journal of the Acoustical Society of America*, **2018**, 143, 71	2.2	16
50	Elastic Properties of Novel Co- and CoNi-Based Superalloys Determined through Bayesian Inference and Resonant Ultrasound Spectroscopy. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2018**, 49, 2324-2339	2.3	10
49	Graph-based semi-supervised learning with genomic data integration using condition-responsive genes applied to phenotype classification. *Journal of the American Medical Informatics Association: JAMIA*, **2018**, 25, 99-108	8.6	16
48	Ontogeny of Circadian Rhythms and Synchrony in the Suprachiasmatic Nucleus. *Journal of Neuroscience*, **2018**, 38, 1326-1334	6.6	36
47	Conditions controlling kink crack nucleation out of, and delamination along, a mixed-mode interface crack. *Journal of the Mechanics and Physics of Solids*, **2018**, 121, 480-495	5	8
46	Mechanical feedback coordinates cell wall expansion and assembly in yeast mating morphogenesis. *PLoS Computational Biology*, **2018**, 14, e1005940	5	15
45	Regulation of cell-type-specific transcriptomes by microRNA networks during human brain development. *Nature Neuroscience*, **2018**, 21, 1784-1792	25.5	72
44	In Silico Identification of Microbial Partners to Form Consortia with Anaerobic Fungi. *Processes*, **2018**, 6, 7	2.9	13
43	The effect of cell geometry on polarization in budding yeast. *PLoS Computational Biology*, **2018**, 14, e1006241	5	14
42	Identification of influential proteins in the classical retinoic acid signaling pathway. *Theoretical Biology and Medical Modelling*, **2018**, 15, 16	2.3	14
41	Reaction rates for reaction-diffusion kinetics on unstructured meshes. *Journal of Chemical Physics*, **2017**, 146, 064101	3.9	7
40	Using stochastic epidemiological models to evaluate conservation strategies for endangered amphibians. *Journal of the Royal Society Interface*, **2017**, 14,	4.1	11
39	The Role of Chromatin Density in Cell Population Heterogeneity during Stem Cell Differentiation. *Scientific Reports*, **2017**, 7, 13307	4.9	9
38	Survival Topic Models for Predicting Outcomes for Trauma Patients **2017**,		1
37	Mesoscopic-microscopic spatial stochastic simulation with automatic system partitioning. *Journal of Chemical Physics*, **2017**, 147, 234101	3.9	9

36	MOLNs: A CLOUD PLATFORM FOR INTERACTIVE, REPRODUCIBLE, AND SCALABLE SPATIAL STOCHASTIC COMPUTATIONAL EXPERIMENTS IN SYSTEMS BIOLOGY USING PyURDME. *SIAM Journal of Scientific Computing*, **2016**, 38, C179-C202	2.6	23
35	Reaction rates for a generalized reaction-diffusion master equation. *Physical Review E*, **2016**, 93, 013307	2.4	10
34	High-performance simulation of fracture in idealized brick and mortar composites using adaptive Monte Carlo minimization on the GPU. *International Journal of High Performance Computing Applications*, **2016**, 30, 186-199	1.8	7
33	Macromolecular Crowding Regulates the Gene Expression Profile by Limiting Diffusion. *PLoS Computational Biology*, **2016**, 12, e1005122	5	27
32	Stochastic Simulation Service: Bridging the Gap between the Computational Expert and the Biologist. *PLoS Computational Biology*, **2016**, 12, e1005220	5	37
31	A framework for discrete stochastic simulation on 3D moving boundary domains. *Journal of Chemical Physics*, **2016**, 145, 184113	3.9	15
30	GillesPy: A Python Package for Stochastic Model Building and Simulation. *IEEE Life Sciences Letters*, **2016**, 2, 35-38		21
29	A Multimetric Evaluation of Stratified Random Sampling for Classification: A Case Study. *IEEE Life Sciences Letters*, **2016**, 2, 43-46		1
28	What Drives Consumer Choices? Mining Aspects and Opinions on Large Scale Review Data Using Distributed Representation of Words **2016**,		1
27	Functional network inference of the suprachiasmatic nucleus. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, 4512-7	11.5	39
26	Identification of disease states associated with coagulopathy in trauma. *BMC Medical Informatics and Decision Making*, **2016**, 16, 124	3.6	3
25	Inferring single-cell gene expression mechanisms using stochastic simulation. *Bioinformatics*, **2015**, 31, 1428-35	7.2	27
24	Reaction rates for mesoscopic reaction-diffusion kinetics. *Physical Review E*, **2015**, 91, 023312	2.4	32
23	GPU-based simulations of fracture in idealized brick and mortar composites. *Journal of the Mechanics and Physics of Solids*, **2015**, 80, 68-85	5	31
22	Accuracy of the Michaelis-Menten approximation when analysing effects of molecular noise. *Journal of the Royal Society Interface*, **2015**, 12,	4.1	15
21	Adaptive deployment of model reductions for tau-leaping simulation. *Journal of Chemical Physics*, **2015**, 142, 204108	3.9	3
20	Direct higher order fuzzy rule-based classification system: Application in mortality prediction **2015**,		1
19	The impact of stochastic microstructures on the macroscopic fracture properties of brick and mortar composites. *Extreme Mechanics Letters*, **2015**, 5, 1-9	3.9	17

18	On the Inference of Functional Circadian Networks Using Granger Causality. *PLoS ONE*, **2015**, 10, e0137549	3.7	4
17	The Time Dependent Propensity Function for Acceleration of Spatial Stochastic Simulation of Reaction-Diffusion Systems. *Journal of Computational Physics*, **2014**, 274, 524-549	4.1	9
16	Local error estimates for adaptive simulation of the Reaction-Diffusion Master Equation via operator splitting. *Journal of Computational Physics*, **2014**, 266, 89-100	4.1	12
15	Validity conditions for stochastic chemical kinetics in diffusion-limited systems. *Journal of Chemical Physics*, **2014**, 140, 054111	3.9	19
14	BiP clustering facilitates protein folding in the endoplasmic reticulum. *PLoS Computational Biology*, **2014**, 10, e1003675	5	12
13	The role of dimerisation and nuclear transport in the Hes1 gene regulatory network. *Bulletin of Mathematical Biology*, **2014**, 76, 766-98	2.1	22
12	Perspective: Stochastic algorithms for chemical kinetics. *Journal of Chemical Physics*, **2013**, 138, 170901	3.9	209
11	Spatial stochastic dynamics enable robust cell polarization. *PLoS Computational Biology*, **2013**, 9, e1003139	5	51
10	Reaction-diffusion master equation in the microscopic limit. *Physical Review E*, **2012**, 85, 042901	2.4	50
9	Language and Runtime Support for Automatic Configuration and Deployment of Scientific Computing Software over Cloud Fabrics. *Journal of Grid Computing*, **2012**, 10, 23-46	4.2	12
8	StochKit2: software for discrete stochastic simulation of biochemical systems with events. *Bioinformatics*, **2011**, 27, 2457-8	7.2	158
7	Parallel simulation for a fish schooling model on a general-purpose graphics processing unit. *Concurrency Computation Practice and Experience*, **2009**, 21, 725-737	1.4	18
6	Optimal control of mixing in Stokes fluid flows. *Journal of Fluid Mechanics*, **2007**, 580, 261-281	3.7	75
5	Adaptive explicit-implicit tau-leaping method with automatic tau selection. *Journal of Chemical Physics*, **2007**, 126, 224101	3.9	105
4	Efficient formulation of the stochastic simulation algorithm for chemically reacting systems. *Journal of Chemical Physics*, **2004**, 121, 4059-67	3.9	286
3	Adaptive algorithms for optimal control of time-dependent partial differential-algebraic equation systems. *International Journal for Numerical Methods in Engineering*, **2003**, 57, 1457-1469	2.4	17
2	Improved leap-size selection for accelerated stochastic simulation. *Journal of Chemical Physics*, **2003**, 119, 8229-8234	3.9	285
1	Coordinating cell polarization and morphogenesis through mechanical feedback		1