

# Vivien Kirk

## List of Publications by Year in descending order

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28  
papers

678  
citations

567281

15  
h-index

580821

25  
g-index

28  
all docs

28  
docs citations

28  
times ranked

512  
citing authors

#	ARTICLE	IF	CITATIONS
1	Models of Calcium Signalling. <i>Interdisciplinary Applied Mathematics</i> , 2016, , .	0.3	90
2	On the dynamical structure of calcium oscillations. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 1456-1461.	7.1	81
3	When Shil'nikov Meets Hopf in Excitable Systems. <i>SIAM Journal on Applied Dynamical Systems</i> , 2007, 6, 663-693.	1.6	54
4	Multiple Timescales, Mixed Mode Oscillations and Canards in Models of Intracellular Calcium Dynamics. <i>Journal of Nonlinear Science</i> , 2011, 21, 639-683.	2.1	54
5	Noisy heteroclinic networks. <i>Chaos</i> , 2003, 13, 71-79.	2.5	49
6	Breaking of symmetry in the saddle-node Hopf bifurcation. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1991, 154, 243-248.	2.1	44
7	Merging of resonance tongues. <i>Physica D: Nonlinear Phenomena</i> , 1993, 66, 267-281.	2.8	30
8	Unfolding a Tangent Equilibrium-to-Periodic Heteroclinic Cycle. <i>SIAM Journal on Applied Dynamical Systems</i> , 2009, 8, 1261-1304.	1.6	25
9	Understanding and Distinguishing Three-Time-Scale Oscillations: Case Study in a Coupled Morris-Lecar System. <i>SIAM Journal on Applied Dynamical Systems</i> , 2015, 14, 1518-1557.	1.6	24
10	A bifurcation analysis of calcium buffering. <i>Journal of Theoretical Biology</i> , 2006, 242, 1-15.	1.7	19
11	A mechanism for switching near a heteroclinic network. <i>Dynamical Systems</i> , 2010, 25, 323-349.	0.4	19
12	The effect of symmetry breaking on the dynamics near a structurally stable heteroclinic cycle between equilibria and a periodic orbit. <i>Dynamical Systems</i> , 2008, 23, 43-74.	0.4	18
13	Traveling Waves in a Simplified Model of Calcium Dynamics. <i>SIAM Journal on Applied Dynamical Systems</i> , 2012, 11, 1149-1199.	1.6	18
14	A mathematical model of calcium dynamics in HSY cells. <i>PLoS Computational Biology</i> , 2017, 13, e1005275.	3.2	18
15	Complex oscillations and waves of calcium in pancreatic acinar cells. <i>Physica D: Nonlinear Phenomena</i> , 2005, 200, 303-324.	2.8	17
16	Spike-Adding in a Canonical Three-Time-Scale Model: Superslow Explosion and Folded-Saddle Canards. <i>SIAM Journal on Applied Dynamical Systems</i> , 2018, 17, 1989-2017.	1.6	16
17	Branches of stable three-tori using Hamiltonian methods in hopf bifurcation on a rhombic lattice. <i>Dynamical Systems</i> , 1996, 11, 267-302.	0.7	13
18	Effect of a refractory period on the entrainment of pulse-coupled integrate-and-fire oscillators. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1997, 232, 70-76.	2.1	12

#	ARTICLE	IF	CITATIONS
19	Computing the Stable Manifold of a Saddle Slow Manifold. SIAM Journal on Applied Dynamical Systems, 2018, 17, 350-379.	1.6	12
20	Resonance Bifurcations of Robust Heteroclinic Networks. SIAM Journal on Applied Dynamical Systems, 2012, 11, 1360-1401.	1.6	11
21	Regulation of Electrical Bursting in a Spatiotemporal Model of a GnRH Neuron. Bulletin of Mathematical Biology, 2013, 75, 1941-1960.	1.9	11
22	Effects of quasi-steady-state reduction on biophysical models with oscillations. Journal of Theoretical Biology, 2016, 393, 16-31.	1.7	11
23	A Model of $\text{Ca}^{2+}$ Dynamics in an Accurate Reconstruction of Parotid Acinar Cells. Bulletin of Mathematical Biology, 2019, 81, 1394-1426.	1.9	11
24	Dual mechanisms of $\text{Ca}^{2+}$ oscillations in hepatocytes. Journal of Theoretical Biology, 2020, 503, 110390.	1.7	10
25	A Tale of two receptors. Journal of Theoretical Biology, 2021, 518, 110629.	1.7	4
26	Transient spike adding in the presence of equilibria. European Physical Journal: Special Topics, 2016, 225, 2601-2612.	2.6	3
27	A REMARK ON HETEROCLINIC BIFURCATIONS NEAR STEADY STATE/PITCHFORK BIFURCATIONS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2004, 14, 3855-3869.	1.7	2
28	Process-Oriented Geometric Singular Perturbation Theory and Calcium Dynamics. SIAM Journal on Applied Dynamical Systems, 2022, 21, 982-1029.	1.6	2