

# Gil Bub

## List of Publications by Year in descending order

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Version: 2024-02-01

62  
papers

1,817  
citations

279487

23  
h-index

288905

40  
g-index

69  
all docs

69  
docs citations

69  
times ranked

2035  
citing authors

#	ARTICLE	IF	CITATIONS
1	KHz-rate volumetric voltage imaging of the whole Zebrafish heart. <i>Biophysical Reports</i> , 2022, 2, 100046.	0.7	11
2	Optogenetic manipulation of cardiac electrical dynamics using sub-threshold illumination: dissecting the role of cardiac alternans in terminating rapid rhythms. <i>Basic Research in Cardiology</i> , 2022, 117, 25.	2.5	18
3	Optogenetic manipulation of cardiac electrical dynamics using sub-threshold illumination: dissecting the role of cardiac alternans in terminating rapid rhythms. <i>Cardiovascular Research</i> , 2022, 118, .	1.8	0
4	Inducibility, but not stability, of atrial fibrillation is increased by NOX2 overexpression in mice. <i>Cardiovascular Research</i> , 2021, 117, 2354-2364.	1.8	18
5	Drift and termination of spiral waves in optogenetically modified cardiac tissue at sub-threshold illumination. <i>ELife</i> , 2021, 10, .	2.8	42
6	Random access parallel microscopy. <i>ELife</i> , 2021, 10, .	2.8	14
7	COSMAS: a lightweight toolbox for cardiac optical mapping analysis. <i>Scientific Reports</i> , 2021, 11, 9147.	1.6	20
8	Novel Optics-Based Approaches for Cardiac Electrophysiology: A Review. <i>Frontiers in Physiology</i> , 2021, 12, 769586.	1.3	6
9	Feasibility of Using Adjunctive Optogenetic Technologies in Cardiomyocyte Phenotyping “from the Single Cell to the Whole Heart. <i>Current Pharmaceutical Biotechnology</i> , 2020, 21, 752-764.	0.9	3
10	Optical Interrogation of Sympathetic Neuronal Effects on Macroscopic Cardiomyocyte Network Dynamics. <i>IScience</i> , 2020, 23, 101334.	1.9	13
11	Long ECGs reveal rich and robust dynamical regimes in patients with frequent ectopy. <i>Chaos</i> , 2020, 30, 113127.	1.0	5
12	Combining tissue engineering and optical imaging approaches to explore interactions along the neuro-cardiac axis. <i>Royal Society Open Science</i> , 2020, 7, 200265.	1.1	2
13	Novel optics-based approaches for cardiac electrophysiology. <i>Progress in Biophysics and Molecular Biology</i> , 2020, 154, 1-2.	1.4	0
14	Universal mechanisms for self-termination of rapid cardiac rhythm. <i>Chaos</i> , 2020, 30, 121107.	1.0	3
15	10.1063/5.0033813.1., 2020, , .		0
16	Double-wave reentry in excitable media. <i>Chaos</i> , 2019, 29, 073103.	1.0	4
17	$\beta^2$ -Adrenergic Receptor Stimulation and Alternans in the Border Zone of a Healed Infarct: An ex vivo Study and Computational Investigation of Arrhythmogenesis. <i>Frontiers in Physiology</i> , 2019, 10, 350.	1.3	24
18	A Software Architecture to Mimic a Ventricular Tachycardia in Intact Murine Hearts by Means of an All-Optical Platform. <i>Methods and Protocols</i> , 2019, 2, 7.	0.9	5

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19	Optogenetic Control of Re-Entrant Waves Demonstrated in Human Induced Stem Cell Derived Cardiomyocytes (hiPSC-CMs). <i>Biophysical Journal</i> , 2019, 116, 100a.	0.2	0
20	Modulation of Cardiac Alternans by Altered Sarcoplasmic Reticulum Calcium Release: A Simulation Study. <i>Frontiers in Physiology</i> , 2018, 9, 1306.	1.3	16
21	Synaptic Plasticity in Cardiac Innervation and Its Potential Role in Atrial Fibrillation. <i>Frontiers in Physiology</i> , 2018, 9, 240.	1.3	25
22	Real-time optical manipulation of cardiac conduction in intact hearts. <i>Journal of Physiology</i> , 2018, 596, 3841-3858.	1.3	42
23	Real-Time Optical Manipulation of Cardiac Conduction in Intact Hearts. <i>Biophysical Journal</i> , 2018, 114, 166a.	0.2	0
24	Optogenetic Control of Heart Rhythm by Selective Stimulation of Cardiomyocytes Derived from Pnmt+ Cells in Murine Heart. <i>Scientific Reports</i> , 2017, 7, 40687.	1.6	42
25	Hypertension-induced remodelling: on the interactions of cardiac risk factors. <i>Journal of Physiology</i> , 2017, 595, 4027-4036.	1.3	49
26	$\beta$ -Adrenergic receptor stimulation inhibits proarrhythmic alternans in postinfarction border zone cardiomyocytes: a computational analysis. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2017, 313, H338-H353.	1.5	28
27	Caveolae in Rabbit Ventricular Myocytes: Distribution and Dynamic Diminution after Cell Isolation. <i>Biophysical Journal</i> , 2017, 113, 1047-1059.	0.2	49
28	Editorial: Recent Developments in Micron-Scale Optical Imaging of Intact, Living Heart and Vasculature. <i>Frontiers in Physiology</i> , 2016, 7, 490.	1.3	0
29	Protection against ventricular fibrillation via cholinergic receptor stimulation and the generation of nitric oxide. <i>Journal of Physiology</i> , 2016, 594, 3981-3992.	1.3	25
30	All-optical control of cardiac excitation: combined high-resolution optogenetic actuation and optical mapping. <i>Journal of Physiology</i> , 2016, 594, 2503-2510.	1.3	59
31	Cocfinn: Automated Wave Tracking in Cultured Cardiac Monolayers. <i>Biophysical Journal</i> , 2016, 111, 1595-1599.	0.2	10
32	Hydroxychloroquine reduces heart rate by modulating the hyperpolarization-activated current $I_f$ : Novel electrophysiological insights and therapeutic potential. <i>Heart Rhythm</i> , 2015, 12, 2186-2194.	0.3	124
33	Macro-micro imaging of cardiac neural circuits in co-cultures from normal and diseased hearts. <i>Journal of Physiology</i> , 2015, 593, 3047-3053.	1.3	4
34	Bringing the living brain into focus. <i>Nature Photonics</i> , 2015, 9, 80-82.	15.6	0
35	Optical control of excitation waves in cardiac tissue. <i>Nature Photonics</i> , 2015, 9, 813-816.	15.6	120
36	Quantifying distortions in two-photon remote focussing microscope images using a volumetric calibration specimen. <i>Frontiers in Physiology</i> , 2014, 5, 384.	1.3	15

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37	A molecular signature of tissues with pacemaker activity in the heart and upper urinary tract involves coexpressed hyperpolarization-activated cation and T-type Ca <sup>2+</sup> channels. <i>FASEB Journal</i> , 2014, 28, 730-739.	0.2	31
38	Spatiotemporal Transitions in Cardiac Neuronal Co-Cultures. <i>Biophysical Journal</i> , 2014, 106, 630a.	0.2	1
39	Detecting cardiac contractile activity in the early mouse embryo using multiple modalities. <i>Frontiers in Physiology</i> , 2014, 5, 508.	1.3	6
40	Electrotonic suppression of early afterdepolarizations in the neonatal rat ventricular myocyte monolayer. <i>Journal of Physiology</i> , 2013, 591, 5357-5364.	1.3	6
41	BURSTING IN CELLULAR AUTOMATA AND CARDIAC ARRHYTHMIAS. , 2013, , 135-145.		1
42	Fast Measurement of Sarcomere Length and Cell Orientation in Langendorff-Perfused Hearts Using Remote Focusing Microscopy. <i>Circulation Research</i> , 2013, 113, 863-870.	2.0	30
43	Optical imaging of arrhythmias in the cardiomyocyte monolayer. <i>Heart Rhythm</i> , 2012, 9, 2077-2082.	0.3	12
44	The Role of Photon Scattering in Voltage-Calcium Fluorescent Recordings of Ventricular Fibrillation. <i>Biophysical Journal</i> , 2011, 101, 307-318.	0.2	9
45	Minimum Information about a Cardiac Electrophysiology Experiment (MICEE): Standardised reporting for model reproducibility, interoperability, and data sharing. <i>Progress in Biophysics and Molecular Biology</i> , 2011, 107, 4-10.	1.4	75
46	Measurement and analysis of sarcomere length in rat cardiomyocytes in situ and in vitro. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2010, 298, H1616-H1625.	1.5	69
47	Temporal pixel multiplexing for simultaneous high-speed, high-resolution imaging. <i>Nature Methods</i> , 2010, 7, 209-211.	9.0	79
48	The pelvis-kidney junction contains HCN3, a hyperpolarization-activated cation channel that triggers ureter peristalsis. <i>Kidney International</i> , 2010, 77, 500-508.	2.6	54
49	Dynamical Mechanism for Subcellular Alternans in Cardiac Myocytes. <i>Circulation Research</i> , 2009, 105, 335-342.	2.0	61
50	An investigation into the role of the optical detection set-up in the recording of cardiac optical mapping signals: A Monte Carlo simulation study. <i>Physica D: Nonlinear Phenomena</i> , 2009, 238, 1008-1018.	1.3	13
51	Early voltage/calcium uncoupling predestinates the duration of ventricular tachyarrhythmias during ischemia/reperfusion. <i>Heart Rhythm</i> , 2009, 6, 1359-1365.	0.3	8
52	The kinetics of spontaneous calcium oscillations and arrhythmogenesis in the in vivo heart during ischemia/reperfusion. <i>Heart Rhythm</i> , 2006, 3, 58-66.	0.3	43
53	Global Organization of Dynamics in Oscillatory Heterogeneous Excitable Media. <i>Physical Review Letters</i> , 2005, 94, 028105.	2.9	93
54	Global organization of dynamics in cultured cardiac monolayers. <i>Chaos</i> , 2004, 14, S14-S14.	1.0	5

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55	Reentrant waves in a ring of embryonic chick ventricular cells imaged with a Ca <sup>2+</sup> sensitive dye. <i>BioSystems</i> , 2003, 71, 71-80.	0.9	24
56	Spontaneous Initiation and Termination of Complex Rhythms in Cardiac Cell Culture. <i>Journal of Cardiovascular Electrophysiology</i> , 2003, 14, S229-S236.	0.8	37
57	Propagation through heterogeneous substrates in simple excitable media models. <i>Chaos</i> , 2002, 12, 747-753.	1.0	41
58	Spiral Wave Generation in Heterogeneous Excitable Media. <i>Physical Review Letters</i> , 2002, 88, 058101.	2.9	157
59	Resetting and Annihilating Reentrant Waves in a Ring of Cardiac Tissue: Theory and Experiment. <i>Progress of Theoretical Physics Supplement</i> , 2000, 139, 83-89.	0.2	14
60	Bursting calcium rotors in cultured cardiac myocyte monolayers. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1998, 95, 10283-10287.	3.3	85
61	BIFURCATIONS IN A DISCONTINUOUS CIRCLE MAP: A THEORY FOR A CHAOTIC CARDIAC ARRHYTHMIA. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 1995, 05, 359-371.	0.7	20
62	The Kinetics of Intracellular Calcium and Arrhythmogenesis in Ischemia/Reperfusion: A Calcium-Centric Mechanism of Arrhythmia. , 0, , 474-484.		0