

# Daniel Goldman

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

78  
papers

1,570  
citations

21  
h-index

39  
g-index

91  
ext. papers

1,764  
ext. citations

2.7  
avg, IF

4.64  
L-index

#	Paper	IF	Citations
78	Using a Human Circulation Mathematical Model to Simulate the Effects of Hemodialysis and Therapeutic Hypothermia. <i>Applied Sciences (Switzerland)</i> , <b>2022</b> , 12, 307	2.6	2
77	A two-layer continuously distributed capillary O transport model applied to blood flow regulation in resting skeletal muscle.. <i>Journal of Theoretical Biology</i> , <b>2022</b> , 539, 111058	2.3	
76	A two-compartment model of oxygen transport in skeletal muscle using continuously distributed capillaries. <i>Mathematical Biosciences</i> , <b>2021</b> , 333, 108535	3.9	1
75	The capillary fascicle in skeletal muscle: Structural and functional physiology of RBC distribution in capillary networks. <i>Journal of Physiology</i> , <b>2021</b> , 599, 2149-2168	3.9	5
74	Evidence for role of capillaries in regulation of skeletal muscle oxygen supply. <i>Microcirculation</i> , <b>2021</b> , 28, e12699	2.9	3
73	Sensitivity Analysis of a Smooth Muscle Cell Electrophysiological Model. <i>Lecture Notes in Computer Science</i> , <b>2021</b> , 540-550	0.9	
72	The Role of Extra-Coronary Vascular Conditions that Affect Coronary Fractional Flow Reserve Estimation. <i>Lecture Notes in Computer Science</i> , <b>2021</b> , 595-604	0.9	
71	Computational Modelling of the Role of Atrial Fibrillation on Cerebral Blood Perfusion. <i>Lecture Notes in Computer Science</i> , <b>2021</b> , 679-686	0.9	
70	Reply to Letter to the Editor: Perfusion controls muscle glucose uptake by altering the rate of glucose dispersion in vivo. <i>American Journal of Physiology - Endocrinology and Metabolism</i> , <b>2020</b> , 318, E313-E317	6	1
69	Hyperinsulinemia does not cause de novo capillary recruitment in rat skeletal muscle. <i>Microcirculation</i> , <b>2020</b> , 27, e12593	2.9	7
68	A streak length-based method for quantifying red blood cell flow in skeletal muscle arteriolar networks. <i>Microcirculation</i> , <b>2019</b> , 26, e12532	2.9	0
67	Insights on Microvascular Flow Regulation in Microvascular Units: A Computational Modeling Study. <i>FASEB Journal</i> , <b>2019</b> , 33, 684.10	0.9	
66	Endogenous dipeptidyl peptidase IV modulates skeletal muscle arteriolar diameter in rats. <i>Physiological Reports</i> , <b>2018</b> , 6, e13564	2.6	5
65	Computational Assessment of Blood Flow Heterogeneity in Peritoneal Dialysis PatientsSCardiac Ventricles. <i>Frontiers in Physiology</i> , <b>2018</b> , 9, 511	4.6	10
64	The Microvascular Lattice: An Updated Paradigm of Flow Distribution Through Capillary Networks. <i>FASEB Journal</i> , <b>2018</b> , 32, 704.5	0.9	
63	It Does Not Do to Dwell on Single Components and Forget the Importance of Complete Networks: Optimizing an Integrated Hemodynamic Model Derived from Experimental Data. <i>FASEB Journal</i> , <b>2018</b> , 32, 704.8	0.9	
62	Four-Dimensional Microvascular Analysis Reveals That Regenerative Angiogenesis in Ischemic Muscle Produces a Flawed Microcirculation. <i>Circulation Research</i> , <b>2017</b> , 120, 1453-1465	15.7	38

61	Impaired Tissue Oxygenation in Metabolic Syndrome Requires Increased Microvascular Perfusion Heterogeneity. <i>Journal of Cardiovascular Translational Research</i> , <b>2017</b> , 10, 69-81	3.3	16
60	A computational model of the effect of capillary density variability on oxygen transport, glucose uptake, and insulin sensitivity in prediabetes. <i>Microcirculation</i> , <b>2017</b> , 24, e12342	2.9	5
59	Estimating blood flow in skeletal muscle arteriolar trees reconstructed from in vivo data using the Fry approach. <i>Microcirculation</i> , <b>2017</b> , 24, e12378	2.9	1
58	Altered post-capillary and collecting venular reactivity in skeletal muscle with metabolic syndrome. <i>Journal of Physiology</i> , <b>2017</b> , 595, 5159-5174	3.9	8
57	Insidious incrementalism: The silent failure of the microcirculation with increasing peripheral vascular disease risk. <i>Microcirculation</i> , <b>2017</b> , 24, e12332	2.9	4
56	Comprehensive In Situ Analysis of Arteriolar Network Geometry and Topology in Rat Gluteus Maximus Muscle. <i>Microcirculation</i> , <b>2016</b> , 23, 456-67	2.9	4
55	Finite Element Model of Oxygen Transport for the Design of Geometrically Complex Microfluidic Devices Used in Biological Studies. <i>PLoS ONE</i> , <b>2016</b> , 11, e0166289	3.7	4
54	A Microvascular Wall Shear Rate Function Derived From In Vivo Hemodynamic and Geometric Parameters in Continuously Branching Arterioles. <i>Microcirculation</i> , <b>2016</b> , 23, 311-9	2.9	3
53	From one generation to the next: a comprehensive account of sympathetic receptor control in branching arteriolar trees. <i>Journal of Physiology</i> , <b>2015</b> , 593, 3093-108	3.9	15
52	Impact of Incremental Perfusion Loss on Oxygen Transport in a Capillary Network Mathematical Model. <i>Microcirculation</i> , <b>2015</b> , 22, 348-59	2.9	7
51	CaV1.2/CaV3.x channels mediate divergent vasomotor responses in human cerebral arteries. <i>Journal of General Physiology</i> , <b>2015</b> , 145, 405-18	3.4	28
50	Measurement and Analysis of the Dynamics of Erythrocyte Oxygen-Dependent ATP Release. <i>FASEB Journal</i> , <b>2015</b> , 29, LB621	0.9	
49	Hemodynamic consequences of spatially-dependent sympathetic regulation in skeletal muscle arteriolar trees (678.14). <i>FASEB Journal</i> , <b>2014</b> , 28, 678.14	0.9	
48	Identification of L- and T-type Ca <sup>2+</sup> channels in rat cerebral arteries: role in myogenic tone development. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , <b>2013</b> , 304, H58-71	5.2	61
47	Modeling steady state SO <sub>2</sub> -dependent changes in capillary ATP concentration using novel O <sub>2</sub> micro-delivery methods. <i>Frontiers in Physiology</i> , <b>2013</b> , 4, 260	4.6	10
46	Comparison of generated parallel capillary arrays to three-dimensional reconstructed capillary networks in modeling oxygen transport in discrete microvascular volumes. <i>Microcirculation</i> , <b>2013</b> , 20, 748-63	2.9	18
45	A computational model of a microfluidic device to measure the dynamics of oxygen-dependent ATP release from erythrocytes. <i>PLoS ONE</i> , <b>2013</b> , 8, e81537	3.7	6
44	A simple "streak length method" for quantifying and characterizing red blood cell velocity profiles and blood flow in rat skeletal muscle arterioles. <i>Microcirculation</i> , <b>2012</b> , 19, 327-35	2.9	22

43	What is the efficiency of ATP signaling from erythrocytes to regulate distribution of O <sub>2</sub> supply within the microvasculature?. <i>Microcirculation</i> , <b>2012</b> , 19, 440-50	2.9	23
42	Microvascular flow modeling using in vivo hemodynamic measurements in reconstructed 3D capillary networks. <i>Microcirculation</i> , <b>2012</b> , 19, 510-20	2.9	22
41	Mapping 3-D functional capillary geometry in rat skeletal muscle in vivo. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , <b>2012</b> , 302, H654-64	5.2	24
40	Toward a multiscale description of microvascular flow regulation: O <sub>2</sub> -dependent release of ATP from human erythrocytes and the distribution of ATP in capillary networks. <i>Frontiers in Physiology</i> , <b>2012</b> , 3, 246	4.6	18
39	Electrical communication in branching arterial networks. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , <b>2012</b> , 303, H680-92	5.2	23
38	Pre-diabetes augments neuropeptide Y <sub>1</sub> - and $\alpha$ -receptor control of basal hindlimb vascular tone in young ZDF rats. <i>PLoS ONE</i> , <b>2012</b> , 7, e46659	3.7	9
37	The Impact of Arterial Network Structure on Electrical Communication. <i>FASEB Journal</i> , <b>2012</b> , 26, 676.2	0.9	
36	Influence of tissue metabolism and capillary oxygen supply on arteriolar oxygen transport: a computational model. <i>Mathematical Biosciences</i> , <b>2011</b> , 232, 1-10	3.9	17
35	A micro-delivery approach for studying microvascular responses to localized oxygen delivery. <i>Microcirculation</i> , <b>2011</b> , 18, 646-54	2.9	13
34	Defects in oxygen supply to skeletal muscle of prediabetic ZDF rats. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , <b>2010</b> , 298, H1661-70	5.2	45
33	Divergent effects of low-O <sub>2</sub> tension and iloprost on ATP release from erythrocytes of humans with type 2 diabetes: implications for O <sub>2</sub> supply to skeletal muscle. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , <b>2010</b> , 299, H566-73	5.2	34
32	Investigating the hemodynamic parameters involved in microvasculature O <sub>2</sub> regulation in skeletal muscle of Zucker Diabetic Fatty rat exposed to surface hypoxia. <i>FASEB Journal</i> , <b>2010</b> , 24, 973.13	0.9	
31	Efficacy of Parallel Capillary Arrays in Modelling Oxygen Transport in Discrete Microvascular Networks. <i>FASEB Journal</i> , <b>2010</b> , 24, 973.5	0.9	
30	Erythrocytes: oxygen sensors and modulators of vascular tone. <i>Physiology</i> , <b>2009</b> , 24, 107-16	9.8	212
29	MODELING COUPLED DIAMETER AND HEMODYNAMIC OSCILLATIONS IN ARTERIOLAR NETWORKS. <i>FASEB Journal</i> , <b>2009</b> , 23, 948.19	0.9	
28	Characterizing the Response of Skeletal Muscle Microvasculature to Imposed Oxygen Variations. <i>FASEB Journal</i> , <b>2009</b> , 23, 949.8	0.9	
27	Erythrocyte (RBC)-Released ATP and Vascular Control: When it Works and What if it Does Not?. <i>FASEB Journal</i> , <b>2009</b> , 23, 948.5	0.9	
26	A mathematical model of oxygen transport in intact muscle with imposed surface oscillations. <i>Mathematical Biosciences</i> , <b>2008</b> , 213, 18-28	3.9	11

25	Inhibiting nitric oxide overproduction during hypotensive sepsis increases local oxygen consumption in rat skeletal muscle. <i>Critical Care Medicine</i> , <b>2008</b> , 36, 225-31	1.4	41
24	Theoretical models of microvascular oxygen transport to tissue. <i>Microcirculation</i> , <b>2008</b> , 15, 795-811	2.9	110
23	Modeling the hemodynamic response due to vasodilatory signals conducted upstream along the arteriolar tree. <i>FASEB Journal</i> , <b>2008</b> , 22, 1207.6	0.9	
22	Mathematical Model of Tissue Oxygenation in Early Sepsis. <i>FASEB Journal</i> , <b>2008</b> , 22, 1141.19	0.9	
21	Microvascular oxygen transport in obese ZDF rats: an early model of type II diabetes. <i>FASEB Journal</i> , <b>2008</b> , 22, 1141.3	0.9	
20	Mapping Microvascular Network Geometry in 3D. <i>FASEB Journal</i> , <b>2008</b> , 22, 1141.20	0.9	
19	A computational model of oxygen delivery by hemoglobin-based oxygen carriers in three-dimensional microvascular networks. <i>Journal of Theoretical Biology</i> , <b>2007</b> , 248, 657-74	2.3	45
18	Modeling the hemodynamic response in capillaries to an altered tissue oxygen environment. <i>FASEB Journal</i> , <b>2007</b> , 21, A480	0.9	
17	Using mathematical and computational modeling to study dynamic regulation of tissue oxygen delivery. <i>FASEB Journal</i> , <b>2007</b> , 21, A481	0.9	
16	Characterization of Impaired Microvascular Oxygen Delivery in Early Septic Injury. <i>FASEB Journal</i> , <b>2007</b> , 21, A480	0.9	
15	Local regulation of oxygen supply in rat skeletal muscle in vivo: variations in hemodynamic response. <i>FASEB Journal</i> , <b>2007</b> , 21, A481	0.9	2
14	A computational model of oxygen transport in skeletal muscle for sprouting and splitting modes of angiogenesis. <i>Journal of Theoretical Biology</i> , <b>2006</b> , 241, 94-108	2.3	53
13	Effect of decreased O <sub>2</sub> supply on skeletal muscle oxygenation and O <sub>2</sub> consumption during sepsis: role of heterogeneous capillary spacing and blood flow. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , <b>2006</b> , 290, H2277-85	5.2	94
12	Effect of sepsis on skeletal muscle oxygen consumption and tissue oxygenation: interpreting capillary oxygen transport data using a mathematical model. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , <b>2004</b> , 287, H2535-44	5.2	74
11	Modeling of oxygen diffusion from the blood vessels to intracellular organelles. <i>Advances in Experimental Medicine and Biology</i> , <b>2003</b> , 530, 485-95	3.6	19
10	Simulations of capillary network oxygen transport during transient ischemia in the presence and absence of tissue myoglobin. <i>Advances in Experimental Medicine and Biology</i> , <b>2003</b> , 510, 355-9	3.6	2
9	Calculations of oxygen transport by red blood cells and hemoglobin solutions in capillaries. <i>Artificial Cells, Blood Substitutes, and Biotechnology</i> , <b>2002</b> , 30, 157-88		50
8	A computational study of the effect of vasomotion on oxygen transport from capillary networks. <i>Journal of Theoretical Biology</i> , <b>2001</b> , 209, 189-99	2.3	75

7	A computational study of the effect of capillary network anastomoses and tortuosity on oxygen transport. <i>Journal of Theoretical Biology</i> , <b>2000</b> , 206, 181-94	2.3	160
6	Canonical representations of complex vibratory subsystems: time domain Dirichlet to Neumann maps. <i>International Journal of Solids and Structures</i> , <b>2000</b> , 37, 2825-2857	3.1	7
5	Somatic evolution in the immune system: the need for germinal centers for efficient affinity maturation. <i>Journal of Theoretical Biology</i> , <b>1997</b> , 186, 159-71	2.3	12
4	Nth-Order Operator Splitting Schemes and Nonreversible Systems. <i>SIAM Journal on Numerical Analysis</i> , <b>1996</b> , 33, 349-367	2.4	75
3	A novel method for simulating the complex Ginzburg-Landau equation. <i>Quarterly of Applied Mathematics</i> , <b>1995</b> , 53, 315-333	0.7	9
2	The one-dimensional complex Ginzburg-Landau equation in the low dissipation limit. <i>Nonlinearity</i> , <b>1994</b> , 7, 417-439	1.7	5
1	Using a Human Circulation Mathematical Model to Simulate the Effects of Hemodialysis and Therapeutic Hypothermia		1