

# Donald P Gaver

## List of Publications by Year in descending order

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46  
papers

2,093  
citations

279798

23  
h-index

243625

44  
g-index

46  
all docs

46  
docs citations

46  
times ranked

1401  
citing authors

#	ARTICLE	IF	CITATIONS
1	Learning Environments and Evidence-Based Practices in Bioengineering and Biomedical Engineering. Biomedical Engineering Education, 2022, 2, 1-16.	0.7	6
2	1483: EXCESSIVE DYNAMIC AND STATIC STRAIN ACT SYNERGISTICALLY TO INCREASE LUNG INFLAMMATION. Critical Care Medicine, 2022, 50, 745-745.	0.9	0
3	Electric Cell-Substrate Impedance Sensing (ECIS) as a Platform for Evaluating Barrier-Function Susceptibility and Damage from Pulmonary Atelectrauma. Biosensors, 2022, 12, 390.	4.7	5
4	Computational lung modelling in respiratory medicine. Journal of the Royal Society Interface, 2022, 19, .	3.4	15
5	Surfactant-Mediated Airway and Acinar Interactions in a Multi-Scale Model of a Healthy Lung. Frontiers in Physiology, 2020, 11, 941.	2.8	6
6	Atelectrauma Versus Volutrauma: A Tale of Two Time-Constants. , 2020, 2, e0299.		21
7	The POOR Get POORer: A Hypothesis for the Pathogenesis of Ventilator-induced Lung Injury. American Journal of Respiratory and Critical Care Medicine, 2020, 202, 1081-1087.	5.6	51
8	Core Competencies for Undergraduates in Bioengineering and Biomedical Engineering: Findings, Consequences, and Recommendations. Annals of Biomedical Engineering, 2020, 48, 905-912.	2.5	37
9	Microscale to mesoscale analysis of parenchymal tethering: the effect of heterogeneous alveolar pressures on the pulmonary mechanics of compliant airways. Journal of Applied Physiology, 2019, 126, 1204-1213.	2.5	12
10	Microscale distribution and dynamic surface tension of pulmonary surfactant normalize the recruitment of asymmetric bifurcating airways. Journal of Applied Physiology, 2017, 122, 1167-1178.	2.5	4
11	The influence of tethering and gravity on the stability of compliant liquid-lined airways. Journal of Biomechanics, 2017, 50, 228-233.	2.1	2
12	Reduced-Dimension Modeling Approach for Simulating Recruitment/De-recruitment Dynamics in the Lung. Annals of Biomedical Engineering, 2016, 44, 3619-3631.	2.5	8
13	Estimation of the Pressure Drop Required for Lymph Flow through Initial Lymphatic Networks. Lymphatic Research and Biology, 2016, 14, 62-69.	1.1	16
14	The unusual symmetric reopening effect induced by pulmonary surfactant. Journal of Applied Physiology, 2014, 116, 635-644.	2.5	7
15	Invited editorial on "Surface tension in situ in flooded alveolus unaltered by albumin". Journal of Applied Physiology, 2014, 117, 423-424.	2.5	1
16	A model of surfactant-induced surface tension effects on the parenchymal tethering of pulmonary airways. Journal of Biomechanics, 2013, 46, 319-328.	2.1	21
17	In situ enhancement of pulmonary surfactant function using temporary flow reversal. Journal of Applied Physiology, 2012, 112, 149-158.	2.5	24
18	Atelectrauma disrupts pulmonary epithelial barrier integrity and alters the distribution of tight junction proteins ZO-1 and claudin 4. Journal of Applied Physiology, 2012, 113, 1377-1387.	2.5	38

#	ARTICLE	IF	CITATIONS
19	The influence of surfactant on the propagation of a semi-infinite bubble through a liquid-filled compliant channel. <i>Journal of Fluid Mechanics</i> , 2012, 698, 125-159.	3.4	10
20	Lagrangian transport properties of pulmonary interfacial flows. <i>Journal of Fluid Mechanics</i> , 2012, 705, 234-257.	3.4	5
21	Biofluid Mechanics of Special Organs and the Issue of System Control. <i>Annals of Biomedical Engineering</i> , 2010, 38, 1204-1215.	2.5	8
22	Agent-based simulations of complex droplet pattern formation in a two-branch microfluidic network. <i>Lab on A Chip</i> , 2010, 10, 303-312.	6.0	30
23	$\frac{1}{4}$ -PIV measurements of the ensemble flow fields surrounding a migrating semi-infinite bubble. <i>Experiments in Fluids</i> , 2009, 47, 309-320.	2.4	16
24	Physicochemical Effects Enhance Surfactant Transport in Pulsatile Motion of a Semi-Infinite Bubble. <i>Biophysical Journal</i> , 2009, 96, 312-327.	0.5	11
25	Evaluation of interfacial fluid dynamical stresses using the immersed boundary method. <i>Discrete and Continuous Dynamical Systems - Series B</i> , 2009, 11, 519-540.	0.9	11
26	Biomechanics of liquid-epithelium interactions in pulmonary airways. <i>Respiratory Physiology and Neurobiology</i> , 2008, 163, 232-243.	1.6	83
27	The pulsatile propagation of a finger of air within a fluid-occluded cylindrical tube. <i>Journal of Fluid Mechanics</i> , 2008, 601, 1-23.	3.4	18
28	Biofluid Mechanics of the Pulmonary System. <i>Annals of Biomedical Engineering</i> , 2005, 33, 1681-1688.	2.5	25
29	The pulsatile motion of a semi-infinite bubble in a channel: flow fields, and transport of an inactive surface-associated contaminant. <i>Journal of Fluid Mechanics</i> , 2005, 537, 1.	3.4	13
30	Unsteady bubble propagation in a flexible channel: predictions of a viscous stick-slip instability. <i>Journal of Fluid Mechanics</i> , 2005, 528, 53-86.	3.4	28
31	Pressure gradient, not exposure duration, determines the extent of epithelial cell damage in a model of pulmonary airway reopening. <i>Journal of Applied Physiology</i> , 2004, 97, 269-276.	2.5	119
32	The influence of non-equilibrium surfactant dynamics on the flow of a semi-infinite bubble in a rigid cylindrical capillary tube. <i>Journal of Fluid Mechanics</i> , 2003, 478, 165-196.	3.4	79
33	Modeling of Mass Transport into Immiscible Polymeric Blends. <i>Macromolecules</i> , 2003, 36, 9216-9229.	4.8	15
34	Mechanisms of surface-tension-induced epithelial cell damage in a model of pulmonary airway reopening. <i>Journal of Applied Physiology</i> , 2003, 94, 770-783.	2.5	312
35	Ventilator-induced lung injury: in vivo and in vitro mechanisms. <i>American Journal of Physiology - Lung Cellular and Molecular Physiology</i> , 2002, 283, L678-L682.	2.9	111
36	A Dual-Reciprocity Boundary Element Method for Evaluating Bulk Convective Transport of Surfactant in Free-Surface Flows. <i>Journal of Computational Physics</i> , 2001, 171, 534-559.	3.8	23

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37	A Theoretical Model of Pulmonary Surfactant Multilayer Collapse under Oscillating Area Conditions. Journal of Colloid and Interface Science, 2000, 229, 353-364.	9.4	57
38	An investigation of pulmonary surfactant physicochemical behavior under airway reopening conditions. Journal of Applied Physiology, 2000, 88, 493-506.	2.5	48
39	A Theoretical Model Study of the Influence of Fluid Stresses on a Cell Adhering to a Microchannel Wall. Biophysical Journal, 1998, 75, 721-733.	0.5	157
40	The influence of surfactant on two-phase flow in a flexible-walled channel under bulk equilibrium conditions. Physics of Fluids, 1998, 10, 1846-1863.	4.0	50
41	The steady motion of a semi-infinite bubble through a flexible-walled channel. Journal of Fluid Mechanics, 1996, 319, 25.	3.4	120
42	A Microscale Model of Bacterial Swimming, Chemotaxis and Substrate Transport. Journal of Theoretical Biology, 1995, 177, 325-340.	1.7	76
43	An Experimental Model Investigation of the Opening of a Collapsed Untethered Pulmonary Airway. Journal of Biomechanical Engineering, 1995, 117, 245-253.	1.3	38
44	Droplet spreading on a thin viscous film. Journal of Fluid Mechanics, 1992, 235, 399.	3.4	117
45	The dynamics of a localized surfactant on a thin film. Journal of Fluid Mechanics, 1990, 213, 127.	3.4	195
46	An experimental investigation of oscillating flow in a tapered channel. Journal of Fluid Mechanics, 1986, 172, 47.	3.4	44