Jacob Herrmann

List of Publications by Year
in descending order

35 papers	662 citations	623734 14 h-index	610901 24 g-index
36 all docs	36 docs citations	36 times ranked	790 citing authors

#	Article	IF	Citations
1	A Personalized Spring Network Representation of Emphysematous Lungs From CT Images. Frontiers in Network Physiology, 2022, 2, .	1.8	1
2	Early versus late intubation in COVID-19 patients failing helmet CPAP: A quantitative computed tomography study. Respiratory Physiology and Neurobiology, 2022, 301, 103889.	1.6	8
3	CT image segmentation for inflamed and fibrotic lungs using a multi-resolution convolutional neural network. Scientific Reports, 2021, 11, 1455.	3.3	32
4	Diminishing Efficacy of Prone Positioning With Late Application in Evolving Lung Injury. Critical Care Medicine, 2021, 49, e1015-e1024.	0.9	14
5	An Experimental Pre-Post Study on the Efficacy of Respiratory Physiotherapy in Severe Critically Ill COVID-19 Patients. Journal of Clinical Medicine, 2021, 10, 2139.	2.4	12
6	Regional Gas Transport During Conventional and Oscillatory Ventilation Assessed by Xenon-Enhanced Computed Tomography. Annals of Biomedical Engineering, 2021, 49, 2377-2388.	2.5	5
7	Lung distribution of gas and blood volume in critically ill COVID-19 patients: a quantitative dual-energy computed tomography study. Critical Care, 2021, 25, 214.	5.8	39
8	Effects of Lung Injury on Regional Aeration and Expiratory Time Constants: Insights From Four-Dimensional Computed Tomography Image Registration. Frontiers in Physiology, 2021, 12, 707119.	2.8	11
9	Percolation of collagen stress in a random network model of the alveolar wall. Scientific Reports, 2021, 11, 16654.	3.3	8
10	Stabilizing breathing pattern using local mechanical vibrations: comparison of deterministic and stochastic stimulations in rodent models of apnea of prematurity. Biomedical Engineering Letters, 2021, 11, 383-392.	4.1	1
11	Inflation instability in the lung: an analytical model of a thick-walled alveolus with wavy fibres under large deformations. Journal of the Royal Society Interface, 2021, 18, 20210594.	3.4	9
12	A comparison of endotracheal tube compensation techniques for the measurement of respiratory mechanical impedance at low frequencies. Journal of Clinical Monitoring and Computing, 2021, , .	1.6	1
13	Multi-resolution convolutional neural networks for fully automated segmentation of acutely injured lungs in multiple species. Medical Image Analysis, 2020, 60, 101592.	11.6	55
14	Assessment of anesthesia machine redesign on cleaning of the anesthesia machine using surface disinfection wipes. American Journal of Infection Control, 2020, 48, 675-681.	2.3	10
15	High-Frequency Oscillatory Ventilation and Ventilator-Induced Lung Injury. Critical Care Medicine, 2020, 48, e66-e73.	0.9	16
16	Modeling lung perfusion abnormalities to explain early COVID-19 hypoxemia. Nature Communications, 2020, 11, 4883.	12.8	95
17	A Markov chain model of particle deposition in the lung. Scientific Reports, 2020, 10, 13573.	3.3	12
18	Shared Ventilation in the Era of COVID-19: A Theoretical Consideration of the Dangers and Potential Solutions. Respiratory Care, 2020, 65, 932-945.	1.6	40

#	Article	IF	Citations
19	Quantifying Regional Lung Deformation Using Four-Dimensional Computed Tomography: A Comparison of Conventional and Oscillatory Ventilation. Frontiers in Physiology, 2020, 11, 14.	2.8	15
20	An Analytic Model of Tissue Self-Healing and Its Network Implementation: Application to Fibrosis and Aging. Frontiers in Physiology, 2020, 11, 583024.	2.8	5
21	System identification of proportional solenoid valve dynamics. International Journal of Modelling, Identification and Control, 2020, 34, 103.	0.2	1
22	Strain, strain rate, and mechanical power: An optimization comparison for oscillatory ventilation. International Journal for Numerical Methods in Biomedical Engineering, 2019, 35, e3238.	2.1	12
23	Computational Modeling of Primary Blast Lung Injury: Implications for Ventilator Management. Military Medicine, 2019, 184, 273-281.	0.8	10
24	Imaging the Injured Lung. Anesthesiology, 2019, 131, 716-749.	2.5	29
25	Respiratory System Mechanics During Low Versus High Positive End-Expiratory Pressure in Open Abdominal Surgery. Anesthesia and Analgesia, 2018, 126, 143-149.	2.2	28
26	Parenchymal strain heterogeneity during oscillatory ventilation: why two frequencies are better than one. Journal of Applied Physiology, 2018, 124, 653-663.	2.5	17
27	Targeted Versus Continuous Delivery of Volatile Anesthetics During Cholinergic Bronchoconstriction. Journal of Engineering and Science in Medical Diagnostics and Therapy, 2018, 1, .	0.5	3
28	Transfer Learning for Segmentation of Injured Lungs Using Coarse-to-Fine Convolutional Neural Networks. Lecture Notes in Computer Science, 2018, , 191-201.	1.3	4
29	Intratidal Overdistention and Derecruitment in the Injured Lung: A Simulation Study. IEEE Transactions on Biomedical Engineering, 2017, 64, 681-689.	4.2	22
30	Frequency-Selective Computed Tomography: Applications During Periodic Thoracic Motion. IEEE Transactions on Medical Imaging, 2017, 36, 1722-1732.	8.9	12
31	Comparison of pneumotachography and anemometery for flow measurement during mechanical ventilation with volatile anesthetics. Journal of Clinical Monitoring and Computing, 2017, 31, 1263-1271.	1.6	3
32	Regional gas transport in the heterogeneous lung during oscillatory ventilation. Journal of Applied Physiology, 2016, 121, 1306-1318.	2.5	21
33	Multifrequency Oscillatory Ventilation in the Premature Lung. Anesthesiology, 2015, 123, 1394-1403.	2.5	25
34	Extracellular matrix presentation modulates vascular smooth muscle cell mechanotransduction. Matrix Biology, 2015, 41, 36-43.	3.6	68
35	Volatile anesthetics and the treatment of severe bronchospasm: a concept of targeted delivery. Drug Discovery Today: Disease Models, 2015, 15, 43-50.	1.2	18