Zhanqi Zhao

List of Publications by Year
in descending order

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130 papers	2,774 citations	279798 23 h-index	206112 48 g-index
134 all docs	134 docs citations	134 times ranked	1539 citing authors

#	Article	IF	Citations
1	Chest electrical impedance tomography examination, data analysis, terminology, clinical use and recommendations: consensus statement of the TRanslational EIT developmeNt stuDy group. Thorax, 2017, 72, 83-93.	5.6	580
2	Evaluation of an electrical impedance tomography-based global inhomogeneity index for pulmonary ventilation distribution. Intensive Care Medicine, 2009, 35, 1900-6.	8.2	223
3	PEEP titration guided by ventilation homogeneity: a feasibility study using electrical impedance tomography. Critical Care, 2010, 14, R8.	5.8	165
4	Spatial and temporal heterogeneity of regional lung ventilation determined by electrical impedance tomography during pulmonary function testing. Journal of Applied Physiology, 2012, 113, 1154-1161.	2.5	85
5	Regional ventilation in cystic fibrosis measured by electrical impedance tomography. Journal of Cystic Fibrosis, 2012, 11, 412-418.	0.7	75
6	Positive end-expiratory pressure titration with electrical impedance tomography and pressureâ€“volume curve in severe acute respiratory distress syndrome. Annals of Intensive Care, 2019, 9, 7.	4.6	64
7	Multicenter Prospective Trial of Stent Placement in Patients with Symptomatic High-Grade Intracranial Stenosis. American Journal of Neuroradiology, 2016, 37, 1275-1280.	2.4	63
8	A review of electrical impedance tomography in lung applications: Theory and algorithms for absolute images. Annual Reviews in Control, 2019, 48, 442-471.	7.9	62
9	The EIT-based global inhomogeneity index is highly correlated with regional lung opening in patients with acute respiratory distress syndrome. BMC Research Notes, 2014, 7, 82.	1.4	60
10	Regional airway obstruction in cystic fibrosis determined by electrical impedance tomography in comparison with high resolution CT. Physiological Measurement, 2013, 34, N107-N114.	2.1	56
11	Hierarchical Parameter Identification in Models of Respiratory Mechanics. IEEE Transactions on Biomedical Engineering, 2011, 58, 3234-3241.	4.2	55
12	Regional lung function determined by electrical impedance tomography during bronchodilator reversibility testing in patients with asthma. Physiological Measurement, 2016, 37, 698-712.	2.1	55
13	Regional lung response to bronchodilator reversibility testing determined by electrical impedance tomography in chronic obstructive pulmonary disease. American Journal of Physiology - Lung Cellular and Molecular Physiology, 2016, 311, L8-L19.	2.9	45
14	Spontaneous breathing trials after prolonged mechanical ventilation monitored by electrical impedance tomography: an observational study. Acta Anaesthesiologica Scandinavica, 2017, 61, 1166-1175.	1.6	44
15	Positioning of electrode plane systematically influences EIT imaging. Physiological Measurement, 2015, 36, 1109-1118.	2.1	41
16	Electrical impedance tomography: functional lung imaging on its way to clinical practice?. Expert Review of Respiratory Medicine, 2015, 9, 721-737.	2.5	41
17	Preliminary Study of Assessing Bladder Urinary Volume Using Electrical Impedance Tomography. Journal of Medical and Biological Engineering, 2016, 36, 71-79.	1.8	39
18	Positive end-expiratory pressure titration with electrical impedance tomography and pressureâ€“volume curve: a randomized trial in moderate to severe ARDS. Physiological Measurement, 2021, 42, 014002.	2.1	38

#	Article	IF	Citations
19	Early individualized positive end-expiratory pressure guided by electrical impedance tomography in acute respiratory distress syndrome: a randomized controlled clinical trial. Critical Care, 2021, 25, 230.	5.8	38
20	Bedside Evaluation of Pulmonary Embolism by Saline Contrast Electrical Impedance Tomography Method: A Prospective Observational Study. American Journal of Respiratory and Critical Care Medicine, 2020, 202, 1464-1468.	5.6	37
21	Thoracic electrical impedance tomography in Chinese hospitals: a review of clinical research and daily applications. Physiological Measurement, 2020, 41, 04TR01.	2.1	33
22	Identification of regional overdistension, recruitment and cyclic alveolar collapse with electrical impedance tomography in an experimental ARDS model. Critical Care, 2016, 20, 119.	5.8	32
23	Assessment of Lung Recruitment by Electrical Impedance Tomography and Oxygenation in ARDS Patients. Medicine (United States), 2016, 95, e3820.	1.0	29
24	Comparison of electrical impedance tomography and intracranial pressure during dehydration treatment of cerebral edema. NeuroImage: Clinical, 2019, 23, 101909.	2.7	27
25	Influence of overdistension/recruitment induced by high positive end-expiratory pressure on ventilationâ€“perfusion matching assessed by electrical impedance tomography with saline bolus. Critical Care, 2020, 24, 586.	5.8	27
26	Qualitative and quantitative assessment of pendelluft: a simple method based on electrical impedance tomography. Annals of Translational Medicine, 2020, 8, 1216-1216.	1.7	24
27	PEEP guided by electrical impedance tomography during one-lung ventilation in elderly patients undergoing thoracoscopic surgery. Annals of Translational Medicine, 2019, 7, 757-757.	1.7	23
28	Effect of postextubation high-flow nasal cannula therapy on lung recruitment and overdistension in high-risk patient. Critical Care, 2020, 24, 82.	5.8	23
29	Positive End-expiratory Pressure Titration after Alveolar Recruitment Directed by Electrical Impedance Tomography. Chinese Medical Journal, 2015, 128, 1421-1427.	2.3	22
30	Adaptive SLICE method: an enhanced method to determine nonlinear dynamic respiratory system mechanics. Physiological Measurement, 2012, 33, 51-64.	2.1	21
31	Comparison of different functional EIT approaches to quantify tidal ventilation distribution. Physiological Measurement, 2018, 39, 01NT01.	2.1	21
32	Three broad classifications of acute respiratory failure etiologies based on regional ventilation and perfusion by electrical impedance tomography: a hypothesis-generating study. Annals of Intensive Care, 2021, 11, 134.	4.6	21
33	A lung area estimation method for analysis of ventilation inhomogeneity based on electrical impedance tomography. Journal of X-Ray Science and Technology, 2010, 18, 171-182.	1.0	20
34	Regional lung function measures determined by electrical impedance tomography during repetitive ventilation manoeuvres in patients with COPD. Physiological Measurement, 2021, 42, 015008.	2.1	20
35	Effects of neurally adjusted ventilatory assist on air distribution and dead space in patients with acute exacerbation of chronic obstructive pulmonary disease. Critical Care, 2017, 21, 126.	5.8	19
36	The incidence and interpretation of large differences in EIT-based measures for PEEP titration in ARDS patients. Journal of Clinical Monitoring and Computing, 2020, 34, 1005-1013.	1.6	19

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37	Detection of Acute Pulmonary Embolism by Electrical Impedance Tomography and Saline Bolus Injection. American Journal of Respiratory and Critical Care Medicine, 2020, 202, 881-882.	5.6	18
38	Regional ventilation redistribution measured by electrical impedance tomography during spontaneous breathing trial with automatic tube compensation. Physiological Measurement, 2017, 38, 1193-1203.	2.1	17
39	Electrical Impedance Changes at Different Phases of Cerebral Edema in Rats with Ischemic Brain Injury. BioMed Research International, 2018, 2018, 1-10.	1.9	17
40	Lung regions identified with CT improve the value of global inhomogeneity index measured with electrical impedance tomography. Quantitative Imaging in Medicine and Surgery, 2021, 11, 1209-1219.	2.0	17
41	A narrative review of electrical impedance tomography in lung diseases with flow limitation and hyperinflation: methodologies and applications. Annals of Translational Medicine, 2020, 8, 1688-1688.	1.7	17
42	Prevalence and prognosis of respiratory pendelluft phenomenon in mechanically ventilated ICU patients with acute respiratory failure: a retrospective cohort study. Annals of Intensive Care, 2022, 12, 22.	4.6	17
43	Multi-layer ventilation inhomogeneity in cystic fibrosis. Respiratory Physiology and Neurobiology, 2016, 233, 25-32.	1.6	16
44	Regional air trapping in acute exacerbation of obstructive lung diseases measured with electrical impedance tomography: a feasibility study. Minerva Anestesiologica, 2020, 86, 172-180.	1.0	16
45	Influence of tidal volume and positive end-expiratory pressure on ventilation distribution and oxygenation during one-lung ventilation. Physiological Measurement, 2018, 39, 034003.	2.1	15
46	The influence of image reconstruction algorithms on linear thorax EIT image analysis of ventilation. Physiological Measurement, 2014, 35, 1083-1093.	2.1	14
47	Regional ventilation distribution in healthy lungs: can reference values be established for electrical impedance tomography parameters?. Annals of Translational Medicine, 2021, 9, 789-789.	1.7	14
48	The calculation of mechanical power is not suitable for intra-patient monitoring under pressure-controlled ventilation. Intensive Care Medicine, 2019, 45, 749-750.	8.2	13
49	Regional lung function testing in children using electrical impedance tomography. Pediatric Pulmonology, 2018, 53, 293-301.	2.0	12
50	Detection of pulmonary oedema by electrical impedance tomography: validation of previously proposed approaches in a clinical setting. Physiological Measurement, 2019, 40, 054008.	2.1	12
51	Simple Electrical Impedance Tomography Measures for the Assessment of Ventilation Distribution. American Journal of Respiratory and Critical Care Medicine, 2020, 201, 386-388.	5.6	12
52	The use of electrical impedance tomography for individualized ventilation strategy in COVID-19: a case report. BMC Pulmonary Medicine, 2021, 21, 38.	2.0	12
53	Lung Recruitment, Individualized PEEP, and Prone Position Ventilation for COVID-19-Associated Severe ARDS: A Single Center Observational Study. Frontiers in Medicine, 2020, 7, 603943.	2.6	12
54	Determination of Lung Area in EIT Images. , 2009, , .		11

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55	Assessment of a volume-dependent dynamic respiratory system compliance in ALI/ARDS by pooling breathing cycles. Physiological Measurement, 2012, 33, N61-N67.	2.1	11
56	The influence of an electrical impedance tomography belt on lung function determined by spirometry in sitting position. Physiological Measurement, 2020, 41, 044002.	2.1	11
57	A Wireless, Low-Power, and Miniaturized EIT System for Remote and Long-Term Monitoring of Lung Ventilation in the Isolation Ward of ICU. IEEE Transactions on Instrumentation and Measurement, 2021, 70, 1-11.	4.7	11
58	Titration of extra-PEEP against intrinsic-PEEP in severe asthma by electrical impedance tomography. Medicine (United States), 2020, 99, e20891.	1.0	10
59	Comparison of Combined Bipolar Radiofrequency Impedance-Controlled Endometrial Ablation with Levonorgestrel Intrauterine System versus Bipolar Radiofrequency Endometrial Ablation Alone in Women with Abnormal Uterine Bleeding. Journal of Minimally Invasive Gynecology, 2020, 27, 774-780.	0.6	9
60	Optimal mean airway pressure during high-frequency oscillatory ventilation in an experimental model of acute respiratory distress syndrome: EIT-based method. Annals of Intensive Care, 2020, 10, 31.	4.6	9
61	Prone position improves lung ventilationâ€“perfusion matching in non-intubated COVID-19 patients: a prospective physiologic study. Critical Care, 2022, 26, .	5.8	9
62	Regional lung function in nonsmokers and asymptomatic current and former smokers. ERJ Open Research, 2019, 5, 00240-2018.	2.6	8
63	Monitoring bronchoalveolar lavage with electrical impedance tomography: first experience in a patient with COVID-19. Physiological Measurement, 2020, 41, 085008.	2.1	8
64	Emerging Trends and Hot Spots of Electrical Impedance Tomography Applications in Clinical Lung Monitoring. Frontiers in Medicine, 2021, 8, 813640.	2.6	8
65	Is there a need for individualized adjustment of electrode belt position during EIT-guided titration of positive end-expiratory pressure?. Physiological Measurement, 2022, 43, 064001.	2.1	8
66	Global and local inhomogeneity indices of lung ventilation based on electrical impedance tomography. IFMBE Proceedings, 2009, , 256-259.	0.3	7
67	Patient-ventilator asynchrony identified with electrical impedance tomography. IFAC-PapersOnLine, 2018, 51, 52-55.	0.9	7
68	Oxygen Therapy Delivery and Body Position Effects Measured With Electrical Impedance Tomography. Respiratory Care, 2020, 65, 281-287.	1.6	7
69	Rapid dynamic bedside assessment of pulmonary perfusion defect by electrical impedance tomography in a patient with acute massive pulmonary embolism. Pulmonary Circulation, 2021, 11, 1-3.	1.7	7
70	Spatial Ventilation Inhomogeneity Determined by Electrical Impedance Tomography in Patients With Chronic Obstructive Lung Disease. Frontiers in Physiology, 2021, 12, 762791.	2.8	7
71	Individual thorax geometry reduces position and size differences in reconstructed images of electrical impedance tomography. Journal of X-Ray Science and Technology, 2014, 22, 797-807.	1.0	6
72	Inspiratory muscle training can be monitored by electrical impedance tomography. Australian Critical Care, 2019, 32, 79-80.	1.3	6

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73	COVID-19 pneumonia: phenotype assessment requires bedside tools. Critical Care, 2020, 24, 272.	5.8	6
74	First Attempt at Using Electrical Impedance Tomography to Predict High Flow Nasal Cannula Therapy Outcomes at an Early Phase. Frontiers in Medicine, 2021, 8, 737810.	2.6	6
75	Visualisation of Time-Variant Respiratory System Elastance in ARDS Models. Biomedizinische Technik, 2013, 58 Suppl 1, .	0.8	5
76	Management of adult-onset methylmalonic acidemia with hypotonia and acute respiratory failure. Medicine (United States), 2018, 97, e11162.	1.0	5
77	Ventilation improvement after pneumonia treatment evaluated with electrical impedance tomography: an observational study. Physiological Measurement, 2021, 42, 104001.	2.1	5
78	Real-time assessment of global and regional lung ventilation in the anti-gravity straining maneuver using electrical impedance tomography. Computers in Biology and Medicine, 2021, 135, 104592.	7.0	5
79	Effect of Position Change From the Bed to a Wheelchair on the Regional Ventilation Distribution Assessed by Electrical Impedance Tomography in Patients With Respiratory Failure. Frontiers in Medicine, 2021, 8, 744958.	2.6	5
80	Ventilation inhomogeneity is one criterion among many in multidimensional PEEP titration. Critical Care, 2010, 14, 424.	5.8	4
81	Does thorax EIT image analysis depend on the image reconstruction method?. Journal of Physics: Conference Series, 2013, 434, 012040.	0.4	4
82	Determination of regional lung function in cystic fibrosis using electrical impedance tomography. Current Directions in Biomedical Engineering, 2016, 2, 633-636.	0.4	4
83	Influence of tidal volume on ventilation distribution and oxygenation during oneâ€lungâ€‰ventilation. Kaohsiung Journal of Medical Sciences, 2018, 34, 420-421.	1.9	4
84	Respiratory muscle endurance training with normocapnic hyperpnoea for patients with chronic spinal cord injury: A pilot short-term randomized controlled trial. Journal of Rehabilitation Medicine, 2019, 51, 616-620.	1.1	4
85	On the analysis of dynamic lung mechanics separately in ins- and expiration. IFMBE Proceedings, 2010, , 164-167.	0.3	4
86	Determination of Dynamic Respiratory Mechanics with the Adaptive Slice Method. , 2008, , .		3
87	Identification of lung overdistension caused by tidal volume and positive end-expiratory pressure increases based on electrical impedance tomography. British Journal of Anaesthesia, 2021, 126, e167-e170.	3.4	3
88	Scoring System to Evaluate the Performance of ICU Ventilators in the Pandemic of COVID-19: A Lung Model Study. Frontiers in Medicine, 2021, 8, 663608.	2.6	3
89	On the separate determination of lung mechanics in in- and expiration. IFMBE Proceedings, 2009, , 2049-2052.	0.3	3
90	Lung sound analysis to monitor lung recruitment. IFMBE Proceedings, 2009, , 268-271.	0.3	3

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91	Twenty-four-hour mechanical power variation rate is associated with mortality among critically ill patients with acute respiratory failure: a retrospective cohort study. BMC Pulmonary Medicine, 2021, 21, 331.	2.0	3
92	Abnormal Pulmonary Function in Early Parkinsonâ€™s Disease: A Preliminary Prospective Observational Study. Lung, 2022, 200, 325-329.	3.3	3
93	Comparison of Global and Regional Compliance-Guided Positive End-Expiratory Pressure Titration on Regional Lung Ventilation in Moderate-to-Severe Pediatric Acute Respiratory Distress Syndrome. Frontiers in Medicine, 2022, 9, .	2.6	3
94	Noninvasive method for measuring respiratory system compliance during pressure support ventilation. , 2011, 2011, 3808-11.		2
95	Project-oriented studying to support medical engineering education. , 2013, , .		2
96	Customized electrical impedance tomography based analysis of regional lung function: a feasibility study. Biomedizinische Technik, 2013, 58 Suppl 1, .	0.8	2
97	Electrical impedance tomography for chest imaging in acute respiratory failure. European Respiratory Journal, 2019, 54, 1901497.	6.7	2
98	Lung ventilation distribution in patients after traditional full sternotomy and minimally invasive thoracotomy: An observational study. Acta Anaesthesiologica Scandinavica, 2021, 65, 877-885.	1.6	2
99	Real-time monitoring hypoxia at high altitudes using electrical bioimpedance technique: an animal experiment. Journal of Applied Physiology, 2021, 130, 952-963.	2.5	2
100	Reply to Wang and Zhong: Bedside Evaluation of Pulmonary Embolism by Saline Contrastâ€“enhanced Electrical Impedance Tomography: Considerations for Future Research. American Journal of Respiratory and Critical Care Medicine, 2021, 203, 395-397.	5.6	2
101	Optimizing Perioperative Ventilation Support with Adequate Settings of Positive End-Expiratory Pressure. , 0, , .		2
102	Effect of Prone Positioning With Individualized Positive End-Expiratory Pressure in Acute Respiratory Distress Syndrome Using Electrical Impedance Tomography. Frontiers in Physiology, 0, 13, .	2.8	2
103	Regional Obstruction in Cystic Fibrosis Patients. , 2011, , .		1
104	Ventilation inhomogeneity in patients with cystic fibrosis measured by electrical impedance tomography. Biomedizinische Technik, 2012, 57, .	0.8	1
105	Involving Industry in Medical Engineering Education. Biomedizinische Technik, 2013, 58 Suppl 1, .	0.8	1
106	Evaluation of a New Measurement System Combining Body Plethysmography and Electrical Impedance Tomography. Biomedizinische Technik, 2013, 58 Suppl 1, .	0.8	1
107	Impact of Heart Rate on Ventilation and Pulmonary Perfusion Associated Impedance Changes. IFMBE Proceedings, 2016, , 1270-1275.	0.3	1
108	Is the Recruited Lung Volume Underestimated in Presence of Overdistension?. Critical Care Medicine, 2021, 49, e206-e207.	0.9	1

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109	Developing Customized Evaluation Software for Clinical Trials: An Example with Obstructive Lung Diseases. Engineering, 2013, 05, 103-107.	0.8	1
110	3-D Lung Visualization Using Electrical Impedance Tomography Combined with Body Plethysmography. IFMBE Proceedings, 2014, , 172-175.	0.3	1
111	Regional ventilation distribution in patients with scoliosis assessed by electrical impedance tomography: Is individual thorax shape required?. Respiratory Physiology and Neurobiology, 2022, 299, 103854.	1.6	1
112	Respiratory image analysis. , 2022, , 169-212.		1
113	Assessment of the Operative Feasibility and Ventilation Distribution during Nonintubation Thoracoscopic Surgery Using Electrical Impedance Tomography. Journal of Personalized Medicine, 2022, 12, 1066.	2.5	1
114	Assessment of Low Back Pain in Helicopter Pilots Using Electrical Bio-Impedance Technique: A Feasibility Study. Frontiers in Neuroscience, 0, 16, .	2.8	1
115	Editorial: Bedside visual image technologies for respiratory and circulatory management in intensive care settings. Frontiers in Medicine, 0, 9, .	2.6	1
116	Intratidal Analysis of Lung Mechanics in Ins- and Expiration. International Conference on Bioinformatics and Biomedical Engineering: [proceedings] International Conference on Bioinformatics and Biomedical Engineering, 2010, , .	0.0	0
117	Analysis of Total Lung Compliance in Spontaneously Breathing Patients with the Adaptive Time Slice Method. International Conference on Bioinformatics and Biomedical Engineering: [proceedings] International Conference on Bioinformatics and Biomedical Engineering, 2010, , .	0.0	0
118	Ventilation distribution on different body positions measured by electrical impedance tomography. , 2011, , .		0
119	Notice of Retraction: Disinfection Using UVA Light on Glass Surfaces with or without Titanium Dioxide Coating. , 2011, , .		0
120	A Hybrid Model of Interacting Physiological Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 290-294.	0.4	0
121	EIT image reconstruction with individual thorax geometry. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 103-106.	0.4	0
122	Individual thorax geometry improves EIT image reconstruction. Biomedizinische Technik, 2012, 57, .	0.8	0
123	Customized evaluation software for clinical trials: An example on pulmonary function test with electrical impedance tomography. , 2013, , .		0
124	Noise in respiratory signals influences dynamic respiratory system compliance analysis: A simulation study. Biomedizinische Technik, 2013, 58 Suppl 1, .	0.8	0
125	Chest Electrical Impedance Tomography and Its Clinical Applications. IFMBE Proceedings, 2016, , 1259-1263.	0.3	0
126	Electrical impedance tomography captures heterogeneous lung ventilation that may be associated with ineffective inspiratory efforts. Critical Care, 2021, 25, 303.	5.8	0

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127	Analysis of nonlinear dynamic respiratory system mechanics: an improvement of the Adaptive SLICE Method. IFMBE Proceedings, 2013, , 522-525.	0.3	0
128	Regionale Lungenobstruktion bei Mukoviszidose (CF): Korrelation von Elektro-Impedanztomografie (EIT) und HRCT. RoFo Fortschritte Auf Dem Gebiet Der Rontgenstrahlen Und Der Bildgebenden Verfahren, 2014, 186, .	1.3	0
129	Editorial: CardioPulmonary Physiology: Novel Approaches to Pulmonary Function and Critical Care. Frontiers in Physiology, 2021, 12, 825098.	2.8	0
130	A randomised trial evaluating mask ventilation using electrical impedance tomography during anesthetic induction: one-handed technique versus two-handed technique. Physiological Measurement, 2022, 43, 064004.	2.1	0