

# Huaxiang Wang

## List of Publications by Citations

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108  
papers

887  
citations

17  
h-index

24  
g-index

162  
ext. papers

1,159  
ext. citations

3  
avg, IF

4.26  
L-index

#	Paper	IF	Citations
108	A review on image reconstruction algorithms for electrical capacitance/resistance tomography. <i>Sensor Review</i> , <b>2016</b> , 36, 429-445	1.4	89
107	A high-performance digital system for electrical capacitance tomography. <i>Measurement Science and Technology</i> , <b>2011</b> , 22, 055503	2	58
106	A pre-iteration method for the inverse problem in electrical impedance tomography. <i>IEEE Transactions on Instrumentation and Measurement</i> , <b>2004</b> , 53, 1093-1096	5.2	52
105	Electrical Capacitance Tomography for Sensors of Square Cross Sections Using Calderon's Method. <i>IEEE Transactions on Instrumentation and Measurement</i> , <b>2011</b> , 60, 900-907	5.2	46
104	Liquid Film Thickness Estimation using Electrical Capacitance Tomography. <i>Measurement Science Review</i> , <b>2014</b> , 14, 8-15	1.7	28
103	Fuzzy clustering based ET image fusion. <i>Information Fusion</i> , <b>2013</b> , 14, 487-497	16.7	26
102	Image reconstruction based on L1 regularization and projection methods for electrical impedance tomography. <i>Review of Scientific Instruments</i> , <b>2012</b> , 83, 104707	1.7	26
101	Electrical Capacitance Tomography With Differential Sensor. <i>IEEE Sensors Journal</i> , <b>2015</b> , 15, 5087-5094	4	23
100	A new linear back projection algorithm to electrical tomography based on measuring data decomposition. <i>Measurement Science and Technology</i> , <b>2015</b> , 26, 125402	2	21
99	A Specific Data Acquisition Scheme for Electrical Tomography <b>2008</b> ,		21
98	Reconstruction of electrical impedance tomography (EIT) images based on the expectation maximum (EM) method. <i>ISA Transactions</i> , <b>2012</b> , 51, 808-20	5.5	20
97	A hybrid reconstruction algorithm for electrical impedance tomography. <i>Measurement Science and Technology</i> , <b>2007</b> , 18, 813-818	2	20
96	Linearized solution to electrical impedance tomography based on the Schur conjugate gradient method. <i>Measurement Science and Technology</i> , <b>2007</b> , 18, 3373-3383	2	20
95	Thermodynamic Model and Dynamic Temperature Compensation in Positive-Pressure-Based Sonic Nozzle Gas Flow Standard. <i>IEEE Transactions on Instrumentation and Measurement</i> , <b>2013</b> , 62, 1154-1165	5.2	19
94	Data fusion in dual-mode tomography for imaging oil/gas two-phase flow. <i>Flow Measurement and Instrumentation</i> , <b>2014</b> , 37, 1-11	2.2	18
93	Hilbert Huang Transform-Based Electrostatic Signal Analysis of Ring-Shape Electrodes With Different Widths. <i>IEEE Transactions on Instrumentation and Measurement</i> , <b>2012</b> , 61, 1209-1217	5.2	18
92	An integrated ECT/ERT dual modality sensor <b>2009</b> ,		17

91	A Dual-Modality Integrated Sensor for Electrical Capacitance Tomography and Electromagnetic Tomography. <i>IEEE Sensors Journal</i> , <b>2019</b> , 19, 10016-10026	4	15
90	Electrical capacitance tomography using an accelerated proximal gradient algorithm. <i>Review of Scientific Instruments</i> , <b>2012</b> , 83, 043704	1.7	13
89	Application of a high speed ECT system to online monitoring of pneumatic conveying process. <i>Measurement: Journal of the International Measurement Confederation</i> , <b>2014</b> , 48, 29-42	4.6	12
88	Development of single drive electrode electrical resistance tomography system. <i>IEEE Transactions on Instrumentation and Measurement</i> , <b>2006</b> , 55, 1208-1214	5.2	12
87	Classification of normal and cancerous lung tissues by electrical impedance tomography. <i>Bio-Medical Materials and Engineering</i> , <b>2014</b> , 24, 2229-41	1	11
86	Two-Phase Flow Regime Identification Based on Cross-Entropy and Information Extension Methods for Computerized Tomography. <i>IEEE Transactions on Instrumentation and Measurement</i> , <b>2011</b> , 60, 488-495 <sup>2</sup>	5.2	11
85	An unsupervised grid-based approach for clustering analysis. <i>Science China Information Sciences</i> , <b>2010</b> , 53, 1345-1357	3.4	11
84	ECT Image Reconstruction Based on Alternating Direction Approximate Newton Algorithm. <i>IEEE Transactions on Instrumentation and Measurement</i> , <b>2020</b> , 69, 4873-4886	5.2	10
83	Fast reconstruction of electrical resistance tomography (ERT) images based on the projected CG method. <i>Flow Measurement and Instrumentation</i> , <b>2012</b> , 27, 37-46	2.2	9
82	Gamma-ray CT from incomplete projections for two-phase pipe flow. <i>Review of Scientific Instruments</i> , <b>2017</b> , 88, 025106	1.7	8
81	Impulsive noise reduction in digital phase-sensitive demodulation by nonlinear filtering. <i>Measurement Science and Technology</i> , <b>2015</b> , 26, 075401	2	8
80	3D modelling of the human thorax for ventilation distribution measured through electrical impedance tomography. <i>Measurement Science and Technology</i> , <b>2010</b> , 21, 115801	2	8
79	Optimal distance of multi-plane sensor in three-dimensional electrical impedance tomography. <i>Computer Assisted Surgery</i> , <b>2017</b> , 22, 326-338	1.8	7
78	Clustering mechanism for electric tomography imaging. <i>Science China Information Sciences</i> , <b>2012</b> , 55, 2849-2864	3.4	7
77	Independent component analysis of interface fluctuation of gas/liquid two-phase flows □ experimental study. <i>Flow Measurement and Instrumentation</i> , <b>2009</b> , 20, 220-229	2.2	7
76	A modified conjugate gradient method based on the Tikhonov system for computerized tomography (CT). <i>ISA Transactions</i> , <b>2011</b> , 50, 256-61	5.5	7
75	The dynamic compensation of temperature sensors in sonic nozzle airflow standard facilities based on method of positive pressure <b>2012</b> ,		7
74	An Unsupervised Method for Evaluating Electrical Impedance Tomography Images. <i>IEEE Transactions on Instrumentation and Measurement</i> , <b>2018</b> , 67, 2796-2803	5.2	7

73	Second-order sensitivity coefficient based electrical tomography imaging. <i>Chemical Engineering Science</i> , <b>2019</b> , 199, 40-49	4.4	6
72	The Effects of Fluid Viscosity on the Orifice Rotameter. <i>Measurement Science Review</i> , <b>2016</b> , 16, 87-95	1.7	6
71	Online monitoring of oil film using electrical capacitance tomography and level set method. <i>Review of Scientific Instruments</i> , <b>2015</b> , 86, 085106	1.7	6
70	Mesh Wire Tomography combined with a modified sensitivity map <b>2011</b> ,		6
69	Lung ventilation functional monitoring based on electrical impedance tomography. <i>Transactions of Tianjin University</i> , <b>2009</b> , 15, 7-12	2.9	6
68	A Novel ECT System Based on FPGA and DSP <b>2007</b> ,		6
67	Modified sparse regularization for electrical impedance tomography. <i>Review of Scientific Instruments</i> , <b>2016</b> , 87, 034702	1.7	6
66	Electrical Capacitance Tomography Using Incomplete Measurement Set. <i>IEEE Access</i> , <b>2019</b> , 7, 79555-79564	5.4	5
65	Electrical Capacitance Tomography Sensor Using Internal Electrodes. <i>IEEE Sensors Journal</i> , <b>2020</b> , 20, 3207-3216	5	
64	Amplitude demodulation for electrical capacitance tomography based on singular value decomposition. <i>Review of Scientific Instruments</i> , <b>2018</b> , 89, 074705	1.7	5
63	Sparse defects detection and 3D imaging base on electromagnetic tomography and total variation algorithm. <i>Review of Scientific Instruments</i> , <b>2019</b> , 90, 124703	1.7	5
62	Electrical-impedance-tomography imaging based on a new three-dimensional thorax model for assessing the extent of lung injury. <i>AIP Advances</i> , <b>2019</b> , 9, 125310	1.5	5
61	Exploring Respiratory Motion Tracking Through Electrical Impedance Tomography. <i>IEEE Transactions on Instrumentation and Measurement</i> , <b>2021</b> , 70, 1-12	5.2	5
60	Fuzzy optimal solution of electric tomography imaging: Modelling and application. <i>Flow Measurement and Instrumentation</i> , <b>2018</b> , 59, 72-78	2.2	4
59	Singular value decomposition based impulsive noise reduction in multi-frequency phase-sensitive demodulation of electrical impedance tomography. <i>Review of Scientific Instruments</i> , <b>2018</b> , 89, 064702	1.7	4
58	Finite element mesh optimisation for improvement of the sensitivity matrix in electrical resistance tomography. <i>IET Science, Measurement and Technology</i> , <b>2015</b> , 9, 792-799	1.5	4
57	Cyclostationarity in electrical resistance tomography data from gas/liquid two-phase flow <b>2010</b> ,		4
56	Digital phase-sensitive demodulation in electrical capacitance tomography system <b>2008</b> ,		4

55	An Evaluation Method for Reconstructed Images in Electrical Tomography <b>2008</b> ,		4
54	Accelerated reconstruction of electrical impedance tomography images via patch based sparse representation. <i>Review of Scientific Instruments</i> , <b>2016</b> , 87, 114707	1.7	4
53	2-D Median Filter-Based Impulsive Noise Reduction in Multifrequency Phase-sensitive Demodulation of Electrical Impedance Tomography. <i>IEEE Transactions on Instrumentation and Measurement</i> , <b>2020</b> , 69, 54-64	5.2	4
52	Further Development in Differential Electrical Capacitance Tomography. <i>IEEE Sensors Journal</i> , <b>2018</b> , 18, 9781-9791	4	4
51	Patch-based sparse reconstruction for electrical impedance tomography. <i>Sensor Review</i> , <b>2017</b> , 37, 257-269		3
50	Damage detection of CFRP composites using open electrical impedance tomography <b>2015</b> ,		3
49	An effective measured data preprocessing method in electrical impedance tomography. <i>Scientific World Journal, The</i> , <b>2014</b> , 2014, 208765	2.2	3
48	Research on improved genetic algorithm for low-dimensional and multimodal function optimization <b>2011</b> ,		3
47	Electrical resistance tomography(ERT) by using an ECT sensor <b>2010</b> ,		3
46	An image reconstruction algorithm based on preconditioned LSQR for 3D EIT <b>2011</b> ,		3
45	A shrinkage-thresholding method for the inverse problem of Electrical Resistance Tomography <b>2012</b> ,		3
44	A Novel Digital Lock-in Amplifier with Dual Channels <b>2009</b> ,		3
43	Error-constraint Deep Learning Scheme for Electrical Impedance Tomography (EIT). <i>IEEE Transactions on Instrumentation and Measurement</i> , <b>2021</b> , 1-1	5.2	3
42	Improved PSO ERT image reconstruction algorithm for human lung based on prior knowledge and clustering <b>2018</b> ,		2
41	Design of a dual camera children monitoring system based on motion tracking technology <b>2017</b> ,		2
40	Early lung cancer identification based on ERT measurements <b>2017</b> ,		2
39	Application of electrical resistance tomography in bubble columns for volume fraction measurement <b>2012</b> ,		2
38	Image reconstruction of electrical resistance tomography based on image fusion <b>2011</b> ,		2

37	The experimental research of vortex flowmeter in vertical upward oil-gas-water three-phase flow <b>2010</b> ,		2
36	Image reconstruction based on expectation maximization method for electrical impedance tomography (EIT) <b>2011</b> ,		2
35	Application of electrical resistance tomography for slug flow measurement in gas/liquid flow of horizontal pipe <b>2009</b> ,		2
34	Hilbert-Huang transform based electrostatic signal analysis for characterization of dilute gas-solid two-phase flow <b>2011</b> ,		2
33	Digital signal processing in electrical capacitance tomography <b>2008</b> ,		2
32	Electrical impedance tomography with square sensor. <i>AIP Conference Proceedings</i> , <b>2007</b> ,	0	2
31	A Fast Barzilai-Borwein Gradient Projection for Sparse Reconstruction Algorithm Based on 3D Modeling: Application to ERT Imaging. <i>IEEE Access</i> , <b>2021</b> , 9, 152913-152922	3.5	2
30	A Method for Absolute Electrical Impedance Tomography without Measuring Reference Voltages <b>2019</b> ,		2
29	A Regularization-Guided Deep Imaging Method for Electrical Impedance Tomography. <i>IEEE Sensors Journal</i> , <b>2022</b> , 1-1	4	2
28	Choquet Integral-Based Fusion of Multiple Patterns for Improving EIT Spatial Resolution. <i>IEEE Transactions on Applied Superconductivity</i> , <b>2019</b> , 29, 1-5	1.8	1
27	FPGA Implementation of a Complex Permeability Measurement Instrument <b>2019</b> ,		1
26	Defects detection based on sparse regularization method for electromagnetic tomography (EMT) <b>2017</b> ,		1
25	EIT imaging fused with CT slice <b>2012</b> ,		1
24	Image reconstruction based on 11 regularization for electrical impedance tomography (EIT) <b>2011</b> ,		1
23	An Iterative Reconstruction Technique for Multiphase Flow CT System <b>2010</b> ,		1
22	Independent component analysis of the interface fluctuations of gas/liquid two-phase flow <b>2009</b> ,		1
21	An image reconstruction algorithm of EIT based on pulmonary prior information. <i>Frontiers of Electrical and Electronic Engineering in China: Selected Publications From Chinese Universities</i> , <b>2009</b> , 4, 121-126		1
20	New progress of the digital electrical capacitance tomography system for gas/liquid two phase flow <b>2009</b> ,		1

19	Time series of EIT measurements and images during lung ventilation based on principal component analysis. <i>Transactions of Tianjin University</i> , <b>2010</b> , 16, 366-372	2.9	1
18	A preconditioned hybrid reconstruction algorithm for electrical impedance tomography <b>2008</b> ,		1
17	Total Variation Regularization Used in Electrical Capacitance Tomography. <i>AIP Conference Proceedings</i> , <b>2007</b> ,	0	1
16	Vulcanization Control of Rubber Fender Based on Neural Network PID Method <b>2007</b> ,		1
15	Phase Sensitive Detector for Multi-electrode Electromagnetic Flowmeter <b>2021</b> ,		1
14	Level set based image segmentation for oil film monitoring using ECT <b>2016</b> ,		1
13	Electromagnetic Sensing and Imaging Methods in Industrial Flow Measurements <b>2019</b> ,		1
12	Improvement of signal processing in Coriolis mass flowmeters for gas-liquid two-phase flow. <i>Frontiers of Information Technology and Electronic Engineering</i> , <b>2021</b> , 22, 272-286	2.2	1
11	Measurement of Flow Velocity Using Electrical Resistance Tomography and Cross-Correlation Technique. <i>IEEE Sensors Journal</i> , <b>2021</b> , 21, 20714-20721	4	1
10	V-Shaped Dense Denoising Convolutional Neural Network for Electrical Impedance Tomography. <i>IEEE Transactions on Instrumentation and Measurement</i> , <b>2022</b> , 1-1	5.2	1
9	Optimal similarity norm for electrical tomography based on Bregman divergence. <i>Review of Scientific Instruments</i> , <b>2020</b> , 91, 033707	1.7	0
8	Fluidization behavior monitoring of phosphogypsum in cyclone separator using electrical capacitance tomography. <i>Review of Scientific Instruments</i> , <b>2019</b> , 90, 105108	1.7	0
7	A fast Tikhonov regularization method based on homotopic mapping for electrical resistance tomography.. <i>Review of Scientific Instruments</i> , <b>2022</b> , 93, 043709	1.7	0
6	Survey of signal clamping for digital phase sensitive detector. <i>Review of Scientific Instruments</i> , <b>2020</b> , 91, 015109	1.7	
5	Fusion of ERT images based on Dempster-Shafer evidence theory. <i>Transactions of Tianjin University</i> , <b>2013</b> , 19, 404-412	2.9	
4	Computed tomography using level set method and algebraic reconstruction technique. <i>Transactions of Tianjin University</i> , <b>2011</b> , 17, 418-423	2.9	
3	ITERATIVE FILTERING RECONSTRUCTION ALGORITHM FOR GAMMA COMPUTERIZED TOMOGRAPHY: APPLICATION TO TWO-PHASE FLOW VISUALIZATION. <i>Instrumentation Science and Technology</i> , <b>2012</b> , 40, 1-16	1.4	
2	Hardware Implementation and Evaluation of Electromagnetic Flow Tomography System for Water-Continuous Flows. <i>IEEE Transactions on Instrumentation and Measurement</i> , <b>2022</b> , 71, 1-9	5.2	

- 1 An alternative excitation method for electrical impedance tomography.. *Review of Scientific Instruments*, **2022**, 93, 044710

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