

# David Isaacson

## 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.

50  
papers

2,615  
citations

18  
h-index

51  
g-index

51  
ext. papers

2,906  
ext. citations

4  
avg, IF

4.7  
L-index

#	Paper	IF	Citations
50	3D ELECTRICAL IMPEDANCE TOMOGRAPHY RECONSTRUCTIONS FROM SIMULATED ELECTRODE DATA USING DIRECT INVERSION AND CALDERON METHODS.. <i>Inverse Problems and Imaging</i> , <b>2021</b> , 15, 1135-1169	2.1	1
49	Efficient Simultaneous Reconstruction of Time-Varying Images and Electrode Contact Impedances in Electrical Impedance Tomography. <i>IEEE Transactions on Biomedical Engineering</i> , <b>2017</b> , 64, 795-806	5	21
48	Artificial boundary conditions and domain truncation in electrical impedance tomography. Part I: Theory and preliminary results. <i>Inverse Problems and Imaging</i> , <b>2015</b> , 9, 749-766	2.1	11
47	Adaptive techniques in electrical impedance tomography reconstruction. <i>Physiological Measurement</i> , <b>2014</b> , 35, 1111-24	2.9	8
46	Adaptive Kaczmarz method for image reconstruction in electrical impedance tomography. <i>Physiological Measurement</i> , <b>2013</b> , 34, 595-608	2.9	10
45	A mathematical model of cell cycle effects in gastric cancer chemotherapy. <i>Bulletin of Mathematical Biology</i> , <b>2012</b> , 74, 159-74	2.1	4
44	A mathematical model for the effects of HER2 over-expression on cell cycle progression in breast cancer. <i>Bulletin of Mathematical Biology</i> , <b>2011</b> , 73, 2865-87	2.1	4
43	A mathematical model of breast cancer treatment with CMF and doxorubicin. <i>Bulletin of Mathematical Biology</i> , <b>2011</b> , 73, 585-608	2.1	11
42	Analysis of forward solvers for electrical impedance tomography in a mammography geometry. <i>Journal of Physics: Conference Series</i> , <b>2010</b> , 224, 012033	0.3	1
41	A two-layered forward model of tissue for electrical impedance tomography. <i>Physiological Measurement</i> , <b>2009</b> , 30, S19-34	2.9	11
40	An implementation of Calderon's method for 3-D limited-view EIT. <i>IEEE Transactions on Medical Imaging</i> , <b>2009</b> , 28, 1073-82	11.7	18
39	Methods for compensating for variable electrode contact in EIT. <i>IEEE Transactions on Biomedical Engineering</i> , <b>2009</b> , 56, 2762-72	5	22
38	A versatile high-permittivity phantom for EIT. <i>IEEE Transactions on Biomedical Engineering</i> , <b>2008</b> , 55, 2603-7	5	30
37	Regional admittivity spectra with tomosynthesis images for breast cancer detection: preliminary patient study. <i>IEEE Transactions on Medical Imaging</i> , <b>2008</b> , 27, 1762-8	11.7	17
36	Robust linearized image reconstruction for multifrequency EIT of the breast. <i>IEEE Transactions on Medical Imaging</i> , <b>2008</b> , 27, 1439-48	11.7	25
35	An analytical layered forward model for breasts in electrical impedance tomography. <i>Physiological Measurement</i> , <b>2008</b> , 29, S27-40	2.9	7
34	A mathematical model for the effects of HER2 overexpression on cell proliferation in breast cancer. <i>Bulletin of Mathematical Biology</i> , <b>2008</b> , 70, 1707-29	2.1	18

33	An Algorithm for Applying Multiple Currents Using Voltage Sources in Electrical Impedance Tomography. <i>International Journal of Control, Automation and Systems</i> , <b>2008</b> , 6, 613-619	2.9	2
32	A method for analyzing electrical impedance spectroscopy data from breast cancer patients. <i>Physiological Measurement</i> , <b>2007</b> , 28, S237-46	2.9	31
31	An electrical impedance spectroscopy system for breast cancer detection. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society</i> , <b>2007</b> , 2007, 4154-7		26
30	3-D electrical impedance tomography for piecewise constant domains with known internal boundaries. <i>IEEE Transactions on Biomedical Engineering</i> , <b>2007</b> , 54, 2-10	5	19
29	A reconstruction algorithm for breast cancer imaging with electrical impedance tomography in mammography geometry. <i>IEEE Transactions on Biomedical Engineering</i> , <b>2007</b> , 54, 700-10	5	55
28	Regional admittivity spectra with tomosynthesis images for breast cancer detection. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society</i> , <b>2007</b> , 2007, 4142-5		1
27	The complete electrode model for EIT in a mammography geometry. <i>Physiological Measurement</i> , <b>2007</b> , 28, S57-69	2.9	17
26	The complete electrode model for imaging and electrode contact compensation in electrical impedance tomography. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society</i> , <b>2007</b> , 2007, 3462-5		6
25	Layered model for breasts in electrical impedance tomography. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society</i> , <b>2007</b> , 2007, 4150-3		1
24	Dynamic electrical impedance imaging of a chest phantom using the Kalman filter. <i>Physiological Measurement</i> , <b>2006</b> , 27, S81-91	2.9	23
23	Electrode boundary conditions and experimental validation for BEM-based EIT forward and inverse solutions. <i>IEEE Transactions on Medical Imaging</i> , <b>2006</b> , 25, 1180-8	11.7	16
22	Dynamic electrical impedance imaging with the interacting multiple model scheme. <i>Physiological Measurement</i> , <b>2005</b> , 26, S217-33	2.9	8
21	A simplified model of mammography geometry for breast cancer imaging with electrical impedance tomography. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society</i> , <b>2004</b> , 2004, 1310-3		5
20	Reconstructions of chest phantoms by the D-bar method for electrical impedance tomography. <i>IEEE Transactions on Medical Imaging</i> , <b>2004</b> , 23, 821-8	11.7	116
19	A 3-D boundary element solution to the forward problem of electrical impedance tomography. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society</i> , <b>2004</b> , 2004, 960-3		4
18	A direct reconstruction algorithm for electrical impedance tomography. <i>IEEE Transactions on Medical Imaging</i> , <b>2002</b> , 21, 555-9	11.7	72
17	Reconstruction of conductivity changes due to ventilation and perfusion from EIT data collected on a rectangular electrode array. <i>Physiological Measurement</i> , <b>2001</b> , 22, 97-106	2.9	34
16	Optimal Acoustic Measurements. <i>SIAM Journal on Applied Mathematics</i> , <b>2001</b> , 61, 1628-1647	1.8	20

15	Reconstruction of high contrast 2-D conductivities by the algorithm of A. Nachman. <i>Contemporary Mathematics</i> , <b>2001</b> , 241-254	1.6	10
14	An implementation of the reconstruction algorithm of A Nachman for the 2D inverse conductivity problem. <i>Inverse Problems</i> , <b>2000</b> , 16, 681-699	2.3	162
13	Electrical Impedance Tomography. <i>SIAM Review</i> , <b>1999</b> , 41, 85-101	7.4	707
12	Problems in impedance imaging <b>1993</b> , 62-70		
11	Layer-stripping reconstruction algorithms in impedance imaging <b>1993</b> , 9-15		1
10	Existence and Uniqueness for Electrode Models for Electric Current Computed Tomography. <i>SIAM Journal on Applied Mathematics</i> , <b>1992</b> , 52, 1023-1040	1.8	628
9	Electrical impedance tomography. Comments on reconstruction algorithms. <i>Clinical Physics and Physiological Measurement: an Official Journal of the Hospital Physicists Association, Deutsche Gesellschaft Fur Medizinische Physik and the European Federation of Organisations for Medical Physics</i> , <b>1992</b> , 13 Suppl A, 83-9		10
8	Effects of Measurement Precision and Finite Numbers of Electrodes on Linear Impedance Imaging Algorithms. <i>SIAM Journal on Applied Mathematics</i> , <b>1991</b> , 51, 1705-1731	1.8	47
7	Comment on Calderon's Paper: "On an Inverse Boundary Value Problem". <i>Mathematics of Computation</i> , <b>1989</b> , 52, 553	1.6	18
6	Comment on A.-P. Calderón paper: "On an inverse boundary value problem" in {it Seminar on Numerical Analysis and its Applications to Continuum Physics} (Rio de Janeiro, 1980), 65-73, Soc. Brasil. Mat., Rio de Janeiro, 1980; MR0590275 (81k:35160)]. <i>Mathematics of Computation</i> , <b>1989</b> , 52, 553-553	1.6	13
5	Distinguishability of conductivities by electric current computed tomography. <i>IEEE Transactions on Medical Imaging</i> , <b>1986</b> , 5, 91-5	11.7	306
4	Large coupling behavior of the energy eigenvalues of two anharmonic oscillators. <i>Journal of Mathematical Physics</i> , <b>1983</b> , 24, 1477-1481	1.2	
3	The eigenvalues and eigenfunctions of a spherically symmetric anharmonic oscillator. <i>Communications on Pure and Applied Mathematics</i> , <b>1978</b> , 31, 659-670	2.5	6
2	The critical behavior of $\zeta(1)$ . <i>Communications in Mathematical Physics</i> , <b>1977</b> , 53, 257-275	2	18
1	Singular perturbations and asymptotic eigenvalue degeneracy. <i>Communications on Pure and Applied Mathematics</i> , <b>1976</b> , 29, 531-551	2.5	13