Danny Smyl

List of Publications by Citations

35 papers	509 citations	14 h-index	21 g-index
35 ext. papers	600 ext. citations	5.2 avg, IF	4.9 L-index

#	Paper	IF	Citations
35	Can Electrical Resistance Tomography be used for imaging unsaturated moisture flow in cement-based materials with discrete cracks?. *Cement and Concrete Research*, **2017**, 91, 61-72	10.3	45
34	A Parametric Level Set-Based Approach to Difference Imaging in Electrical Impedance Tomography. *IEEE Transactions on Medical Imaging*, **2019**, 38, 145-155	11.7	44
33	Modeling water absorption in concrete and mortar with distributed damage. *Construction and Building Materials*, **2016**, 125, 438-449	6.7	39
32	Detection and reconstruction of complex structural cracking patterns with electrical imaging. *NDT and E International*, **2018**, 99, 123-133	4.1	35
31	Quantitative electrical imaging of three-dimensional moisture flow in cement-based materials. *International Journal of Heat and Mass Transfer*, **2016**, 103, 1348-1358	4.9	34
30	B-Spline-Based Sharp Feature Preserving Shape Reconstruction Approach for Electrical Impedance Tomography. *IEEE Transactions on Medical Imaging*, **2019**, 38, 2533-2544	11.7	33
29	Nonstationary Shape Estimation in Electrical Impedance Tomography Using a Parametric Level Set-Based Extended Kalman Filter Approach. *IEEE Transactions on Instrumentation and Measurement*, **2020**, 69, 1894-1907	5.2	30
28	A comparison of methods to evaluate mass transport in damaged mortar. *Cement and Concrete Composites*, **2016**, 70, 119-129	8.6	22
27	Shape Reconstruction Using Boolean Operations in Electrical Impedance Tomography. *IEEE Transactions on Medical Imaging*, **2020**, 39, 2954-2964	11.7	21
26	Three-Dimensional Electrical Impedance Tomography to Monitor Unsaturated Moisture Ingress in Cement-Based Materials. *Transport in Porous Media*, **2016**, 115, 101-124	3.1	20
25	B-Spline Level Set Method for Shape Reconstruction in Electrical Impedance Tomography. *IEEE Transactions on Medical Imaging*, **2020**, 39, 1917-1929	11.7	18
24	Optimizing Electrode Positions in 2-D Electrical Impedance Tomography Using Deep Learning. *IEEE Transactions on Instrumentation and Measurement*, **2020**, 69, 6030-6044	5.2	17
23	Electrical tomography for characterizing transport properties in cement-based materials: A review. *Construction and Building Materials*, **2020**, 244, 118299	6.7	17
22	Coupled digital image correlation and quasi-static elasticity imaging of inhomogeneous orthotropic composite structures. *Inverse Problems*, **2018**, 34, 124005	2.3	16
21	Shape-Driven Difference Electrical Impedance Tomography. *IEEE Transactions on Medical Imaging*, **2020**, 39, 3801-3812	11.7	14
20	Less is often more: Applied inverse problems using hp-forward models. *Journal of Computational Physics*, **2019**, 399, 108949	4.1	13
19	Shape-Driven EIT Reconstruction Using Fourier Representations. *IEEE Transactions on Medical Imaging*, **2021**, 40, 481-490	11.7	11

18	An overview of 38 least squares-based frameworks for structural damage tomography. *Structural Health Monitoring*, **2020**, 19, 215-239	4.4	10
17	Can the dual-permeability model be used to simulate unsaturated moisture flow in damaged mortar and concrete?. *International Journal of Advances in Engineering Sciences and Applied Mathematics*, **2017**, 9, 54-66	0.6	9
16	A Multiscale Modelling Approach for Estimating the Effect of Defects in Unidirectional Carbon Fiber Reinforced Polymer Composites. *Materials*, **2019**, 12,	3.5	9
15	Damage Tomography as a State Estimation Problem: Crack Detection Using Conductive Area Sensors **2019**, 3, 1-4		9
14	Multiphase Conductivity Imaging With Electrical Impedance Tomography and B-Spline Level Set Method. *IEEE Transactions on Instrumentation and Measurement*, **2020**, 69, 9634-9644	5.2	8
13	Supershape Recovery From Electrical Impedance Tomography Data. *IEEE Transactions on Instrumentation and Measurement*, **2021**, 70, 1-11	5.2	8
12	Learning and correcting non-Gaussian model errors. *Journal of Computational Physics*, **2021**, 432, 110152	4.1	5
11	OpenQSEI: A MATLAB package for quasi static elasticity imaging. *SoftwareX*, **2019**, 9, 73-76	2.7	5
10	Invisibility and indistinguishability in structural damage tomography. *Measurement Science and Technology*, **2020**, 31, 024001	2	4
9	An Efficient Quasi-Newton Method for Nonlinear Inverse Problems via Learned Singular Values. *IEEE Signal Processing Letters*, **2021**, 28, 748-752	3.2	4
8	Stacked Elasticity Imaging Approach for Visualizing Defects in the Presence of Background Inhomogeneity. *Journal of Engineering Mechanics - ASCE*, **2019**, 145, 06018006	2.4	3
7	Fusing electrical and elasticity imaging. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2021**, 379, 20200194	3	2
6	Probabilistic cracking prediction via deep learned electrical tomography. *Structural Health Monitoring*, 147592172110372	4.4	2
5	Self-filtering electrical area sensors emerging from deep learning. *Measurement Science and Technology*, **2020**, 31, 065107	2	1
4	Supershape Augmented Reconstruction Method Based on Boolean Operations in Electrical Impedance Tomography. *IEEE Transactions on Instrumentation and Measurement*, **2021**, 1-1	5.2	1
3	Structural engineering from an inverse problems perspective.. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2022**, 478, 20210526	2.4	0
2	Predicting strain and stress fields in self-sensing nanocomposites using deep learned electrical tomography. *Smart Materials and Structures*, **2022**, 31, 045024	3.4	0
1	Non-cooperative finite element games. *Applied Numerical Mathematics*, **2021**, 167, 273-280	2.5	