

Caren Tischendorf

List of Publications by Citations

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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.

58
papers

705
citations

13
h-index

25
g-index

73
ext. papers

797
ext. citations

1.3
avg, IF

4.13
L-index

#	Paper	IF	Citations
58	Structural analysis of electric circuits and consequences for MNA. <i>International Journal of Circuit Theory and Applications</i> , 2000 , 28, 131-162	2	159
57	Differential-Algebraic Equations: A Projector Based Analysis 2013 ,		109
56	Numerical analysis of DAEs from coupled circuit and semiconductor simulation. <i>Applied Numerical Mathematics</i> , 2005 , 53, 471-488	2.5	42
55	Qualitative features of matrix pencils and DAEs arising in circuit dynamics. <i>Dynamical Systems</i> , 2007 , 22, 107-131	0.6	29
54	Elliptic Partial Differential-Algebraic Multiphysics Models in Electrical Network Design. <i>Mathematical Models and Methods in Applied Sciences</i> , 2003 , 13, 1261-1278	3.5	27
53	Semistate models of electrical circuits including memristors. <i>International Journal of Circuit Theory and Applications</i> , 2011 , 39, 607-627	2	26
52	PDAE models of integrated circuits and index analysis. <i>Mathematical and Computer Modelling of Dynamical Systems</i> , 2007 , 13, 1-17	1	24
51	Stability preserving integration of index-1 DAEs. <i>Applied Numerical Mathematics</i> , 2003 , 45, 175-200	2.5	24
50	Model Order Reduction of Differential Algebraic Equations Arising from the Simulation of Gas Transport Networks. <i>Differential-algebraic Equations Forum</i> , 2014 , 183-205	0.6	23
49	Recent Results in Solving Index-2 Differential-Algebraic Equations in Circuit Simulation. <i>SIAM Journal of Scientific Computing</i> , 1997 , 18, 139-159	2.6	22
48	Stability preserving integration of index-2 DAEs. <i>Applied Numerical Mathematics</i> , 2003 , 45, 201-229	2.5	20
47	On the stability of solutions of autonomous index-1 tractable and quasilinear index-2 tractable DAEs. <i>Circuits, Systems, and Signal Processing</i> , 1994 , 13, 139-154	2.2	19
46	Steady-State Behavior of Large Water Distribution Systems: Algebraic Multigrid Method for the Fast Solution of the Linear Step. <i>Journal of Water Resources Planning and Management - ASCE</i> , 2012 , 138, 639-650	2.8	16
45	Tractability index of hybrid equations for circuit simulation. <i>Mathematics of Computation</i> , 2011 , 81, 923-939	2.3	11
44	The hyperbolicity problem in electrical circuit theory. <i>Mathematical Methods in the Applied Sciences</i> , 2010 , 33, 2037-2049	2.3	11
43	Least-squares collocation for linear higher-index differential-algebraic equations. <i>Journal of Computational and Applied Mathematics</i> , 2017 , 317, 403-431	2.4	10
42	Index-aware model order reduction for differential-algebraic equations. <i>Mathematical and Computer Modelling of Dynamical Systems</i> , 2014 , 20, 345-373	1	10

41	Index-Aware Model Order Reduction for Linear Index-2 DAEs with Constant Coefficients. <i>SIAM Journal of Scientific Computing</i> , 2013 , 35, A1487-A1510	2.6	9
40	Frequency Domain Methods and Decoupling of Linear Infinite Dimensional Differential Algebraic Systems. <i>Journal of Evolution Equations</i> , 2005 , 5, 357-385	1.2	9
39	Solving more general index-2 differential algebraic equations. <i>Computers and Mathematics With Applications</i> , 1994 , 28, 77-105	2.7	8
38	A Unified (P)DAE Modeling Approach for Flow Networks. <i>Differential-algebraic Equations Forum</i> , 2014 , 127-151	0.6	7
37	Structural characterization of classical and memristive circuits with purely imaginary eigenvalues. <i>International Journal of Circuit Theory and Applications</i> , 2013 , 41, 273-294	2	6
36	Modeling Circuit Systems Coupled with Distributed Semiconductor Equations 2003 , 229-247		6
35	Waveform relaxation: a convergence criterion for differential-algebraic equations. <i>Numerical Algorithms</i> , 2019 , 81, 1327-1342	2.1	6
34	Large signal simulation of integrated inductors on semi-conducting substrates 2012 ,		5
33	Topological index-calculation of DAEs in circuit simulation. <i>ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik</i> , 1998 , 78, 1103-1104	1	5
32	Consistent Initialization for Coupled Circuit-Device Simulation. <i>Mathematics in Industry</i> , 2010 , 297-304	0.2	5
31	Least-squares collocation for higher-index linear differential-algebraic equations: Estimating the instability threshold. <i>Mathematics of Computation</i> , 2018 , 88, 1647-1683	1.6	5
30	Global unique solvability for memristive circuit DAEs of Index 1. <i>International Journal of Circuit Theory and Applications</i> , 2015 , 43, 73-93	2	4
29	Convergence analysis of a partial differential algebraic system from coupling a semiconductor model to a circuit model. <i>Applied Numerical Mathematics</i> , 2011 , 61, 382-394	2.5	4
28	Mathematical Problems in Circuit Simulation. <i>Mathematical and Computer Modelling of Dynamical Systems</i> , 2001 , 7, 215-223	1	4
27	Generalized Elements for a Structural Analysis of Circuits. <i>Differential-algebraic Equations Forum</i> , 2020 , 397-431	0.6	4
26	Finding Beneficial DAE Structures in Circuit Simulation 2003 , 413-428		4
25	Analysis of semi-discretized differential algebraic equation from coupled circuit device simulation. <i>Computational and Applied Mathematics</i> , 2015 , 34, 933-955		3
24	A Topology Based Discretization of PDAEs Describing Water Transportation Networks. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2014 , 14, 923-924	0.2	3

23	Generic Construction and Efficient Evaluation of Flow Network DAEs and Their Derivatives in the Context of Gas Networks. <i>Operations Research Proceedings: Papers of the Annual Meeting = Vorträge Der Jahrestagung / DGOR, 2018, 627-632</i>	0.1	3
22	A Signal Adaptive Prediction Filter for Video Coding Using Directional Total Variation: Mathematical Framework and Parameter Selection. <i>IEEE Transactions on Image Processing, 2020, 29, 9678-9688</i>	8.7	3
21	A Signal Adaptive Diffusion Filter for Video Coding Using Directional Total Variation 2018,		3
20	Gas Network Benchmark Models. <i>Differential-algebraic Equations Forum, 2018, 171-197</i>	0.6	3
19	Interface Model Integrating Full-Wave Maxwell Simulation Models into Modified Nodal Equations for Circuit Simulation?. <i>IFAC-PapersOnLine, 2015, 48, 940-941</i>	0.7	2
18	Nanoelectronic COupled problems solutions - nanoCOPS: modelling, multirate, model order reduction, uncertainty quantification, fast fault simulation. <i>Journal of Mathematics in Industry, 2016, 7,</i>	2.9	2
17	Holistic coupled field and circuit simulation 2016,		2
16	Transient Modeling and Simulation of Gas Pipe Networks with Characteristic Diagram Models for Compressors. <i>Proceedings in Applied Mathematics and Mechanics, 2017, 17, 707-708</i>	0.2	1
15	Regularization of Electrical Circuits?. <i>IFAC-PapersOnLine, 2015, 48, 312-313</i>	0.7	1
14	Hybrid Analysis of Nonlinear Time-Varying Circuits Providing DAEs with Index at Most One. <i>Mathematics in Industry, 2010, 151-158</i>	0.2	1
13	Coupled Electromagnetic Field and Electric Circuit Simulation: A Waveform Relaxation Benchmark 2021, 165-200		1
12	Effective Numerical Computation of Parameter Dependent Problems. <i>Mathematics in Industry, 2012, 49-57</i>	0.2	1
11	Waveform Relaxation for Low Frequency Coupled Field/Circuit Differential-Algebraic Models of Index 2. <i>Mathematics in Industry, 2021, 201-209</i>	0.2	1
10	Coupled Circuit Device Simulation. <i>Mathematics in Industry, 2018, 69-77</i>	0.2	0
9	On the abs-polynomial expansion of piecewise smooth functions. <i>Optimization Methods and Software, 2021, 36, 301-315</i>	1.3	0
8	MathEnergy [Mathematical Key Technologies for Evolving Energy Grids. <i>Mathematics in Industry, 2021, 233-262</i>	0.2	0
7	Index-aware model order reduction: LTI DAEs in electric networks. <i>COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2014, 33, 1123-1144</i>	0.7	
6	Numerical Simulation of High-Frequency Circuits in Telecommunication 2008, 9-18		

- 5 Model Design Criteria for Integrated Circuits to Have a Unique Solution and Good Numerical Properties. *Lecture Notes in Computational Science and Engineering*, **2001**, 179-198 0.3
- 4 Piecewise Polynomial Taylor Expansions – The Generalization of Faà di Bruno’s Formula **2021**, 63-82
- 3 Structural Characterization of Circuit Configurations with Undamped Oscillations. *Mathematics in Industry*, **2012**, 13-19 0.2
- 2 Stability Analysis of Electromagnetic Transient Simulations. *Mathematics in Industry*, **2018**, 25-33 0.2
- 1 Splitting Methods for Linear Circuit DAEs of Index 1 in port-Hamiltonian Form. *Mathematics in Industry*, **2021**, 211-219 0.2