En-Xiao Liu

List of Publications by Year
in descending order

116 papers	1,160 citations	471509 17 h-index	434195 31 g-index
117 all docs	117 docs citations	117 times ranked	724 citing authors

#	Article	IF	Citations
1	Progress Review of Electromagnetic Compatibility Analysis Technologies for Packages, Printed Circuit Boards, and Novel Interconnects. IEEE Transactions on Electromagnetic Compatibility, 2010, 52, 248-265.	2.2	157
2	A Coupled Efficient and Systematic Full-Wave Time-Domain Macromodeling and Circuit Simulation Method for Signal Integrity Analysis of High-Speed Interconnects. IEEE Transactions on Advanced Packaging, 2004, 27, 213-223.	1.6	86
3	Novel Methods for Modeling of Multiple Vias in Multilayered Parallel-Plate Structures. IEEE Transactions on Microwave Theory and Techniques, 2009, 57, 1724-1733.	4.6	81
4	Compact Wideband Equivalent-Circuit Model for Electrical Modeling of Through-Silicon Via. IEEE Transactions on Microwave Theory and Techniques, 2011, 59, 1454-1460.	4.6	75
5	An Effective and Efficient Approach for Radiated Emission Prediction Based on Amplitude-Only Near-Field Measurements. IEEE Transactions on Electromagnetic Compatibility, 2012, 54, 1186-1189.	2.2	48
6	An Iterative Approach for EMI Source Reconstruction Based on Phaseless and Single-Plane Near-Field Scanning. IEEE Transactions on Electromagnetic Compatibility, 2018, 60, 937-944.	2.2	48
7	Efficient Simulation of Power Distribution Network by Using Integral-Equation and Modal-Decoupling Technology. IEEE Transactions on Microwave Theory and Techniques, 2008, 56, 2277-2285.	4.6	46
8	A Semi-Analytical Approach for System-Level Electrical Modeling of Electronic Packages With Large Number of Vias. IEEE Transactions on Advanced Packaging, 2008, 31, 267-274.	1.6	43
9	Efficient Modeling of Rerouted Return Currents in Multilayered Power-Ground Planes by Using Integral Equation. IEEE Transactions on Electromagnetic Compatibility, 2008, 50, 740-743.	2.2	38
10	Systematic Microwave Network Analysis for Multilayer Printed Circuit Boards With Vias and Decoupling Capacitors. IEEE Transactions on Electromagnetic Compatibility, 2010, 52, 401-409.	2.2	32
11	Reconstruction of Equivalent Emission Sources for PCBs From Near-Field Scanning Using a Differential Evolution Algorithm. IEEE Transactions on Electromagnetic Compatibility, 2018, 60, 1670-1677.	2.2	29
12	3D traffic noise mapping using unstructured surface mesh representation of buildings and roads. Applied Acoustics, 2017, 127, 297-304.	3.3	27
13	Differential Evolutionary Optimization of an Equivalent Dipole Model for Electromagnetic Emission Analysis. IEEE Transactions on Electromagnetic Compatibility, 2018, 60, 1635-1639.	2.2	27
14	Emission and Susceptibility Modeling of Finite-Size Power-Ground Planes Using a Hybrid Integral Equation Method. IEEE Transactions on Advanced Packaging, 2008, 31, 536-543.	1.6	24
15	Recent advances in electromagnetic compatibility of 3D-ICs &2013; Part I. IEEE Electromagnetic Compatibility Magazine, 2015, 4, 79-89.	0.1	23
16	Interconnect design and analysis for Through Silicon Interposers (TSIs). , 2012, , .		22
17	Cascaded Microwave Network Approach for Power and Signal Integrity Analysis of Multilayer Electronic Packages. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2011, 1, 1428-1437.	2.5	21
18	Finite-difference time-domain macromodel for simulation of electromagnetic interference at high-speed interconnects. IEEE Transactions on Magnetics, 2005, 41, 65-71.	2.1	19

#	Article	IF	Citations
19	Circuit Modeling for RRAM-Based Neuromorphic Chip Crossbar Array With and Without Write-Verify Scheme. IEEE Transactions on Circuits and Systems I: Regular Papers, 2021, 68, 1906-1916.	5.4	18
20	Hybridization of the Scattering Matrix Method and Modal Decomposition for Analysis of Signal Traces in a Power Distribution Network. IEEE Transactions on Electromagnetic Compatibility, 2009, 51, 784-791.	2.2	17
21	Near-field scanning and its EMC applications. , 2017, , .		16
22	Modeling of Advanced Multilayered Packages with Multiple Vias and Finite Ground Planes. , 2007, , .		15
23	Two-Dimensional Discontinuous Galerkin Time-Domain Method for Modeling of Arbitrarily Shaped Power-Ground Planes. IEEE Transactions on Electromagnetic Compatibility, 2015, 57, 1744-1747.	2.2	14
24	Fast Contour Integral Equation Method for Wideband Power Integrity Analysis. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2014, 4, 1317-1324.	2.5	12
25	Electromagnetic Characteristics of Multiport TSVs Using L-2L De-Embedding Method and Shielding TSVs. IEEE Transactions on Electromagnetic Compatibility, 2017, 59, 1541-1548.	2.2	12
26	EMI Radiation Prediction and Structure Optimization of Packages by Deep Learning. IEEE Access, 2019, 7, 93772-93780.	4.2	11
27	Analysis of multilayer planar circuits by a hybrid method. IEEE Microwave and Wireless Components Letters, 2006, 16, 66-68.	3.2	10
28	Equivalent Model Built with Limited Information: Predicting Installed Performance of Slotted Waveguide Antennas. IEEE Antennas and Propagation Magazine, 2018, 60, 52-61.	1.4	9
29	EM Performance of Conductive Composite Laminate Made of Nanostructured Materials for Aerospace Application. IEEE Transactions on Electromagnetic Compatibility, 2015, 57, 1139-1148.	2.2	8
30	Recent advances in electromagnetic compatibility of 3D-ICs â€" Part II. IEEE Electromagnetic Compatibility Magazine, 2016, 5, 65-74.	0.1	8
31	Modeling and Signal Integrity Analysis of RRAM-Based Neuromorphic Chip Crossbar Array Using Partial Equivalent Element Circuit (PEEC) Method. IEEE Transactions on Circuits and Systems I: Regular Papers, 2022, 69, 3490-3500.	5.4	7
32	Radiated emission analysis from printed circuit board edges using multiple stimulus sources. , 2006, , .		6
33	Power and Ground Bounce Effects on Component Performance Based on Printed Circuit Board Edge Termination Methodologies. , 2007, , .		6
34	Efficient analysis for multilayer power-ground planes with multiple vias and signal traces in an advanced electronic package. , 2008, , .		6
35	Multi-physics modeling of through-silicon vias with equivalent-circuit approach. , 2010, , .		6
36	Hybrid FDTD-MPIE method for the simulation of locally inhomogeneous multilayer LTCC structure. IEEE Microwave and Wireless Components Letters, 2005, 15, 42-44.	3.2	5

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37	Research and Development on Satellite Positioning and Navigation in China. IEICE Transactions on Communications, 2012, E95.B, 3385-3392.	0.7	5
38	A compact common-mode noise suppression filter for high speed differential signals using defected ground structure. , 2015, , .		5
39	Fast-Convergent Expression for the Barrel-Plate Capacitance in the Physics-Based Via Circuit Model. IEEE Microwave and Wireless Components Letters, 2018, 28, 368-370.	3.2	5
40	Analysis of signal propagation on high-speed planar interconnect systems based on full-wave and macromodeling techniques. Microwave and Optical Technology Letters, 2003, 39, 183-187.	1.4	4
41	Efficient signal and power integrity analysis by using modal decomposition and integral equations. , 2010, , .		4
42	Different designs of TSVs for 3D IC: Signal integrity analysis with cascaded scattering matrix. , 2011, , .		4
43	Electrical performance of vertical natural capacitor for RF system-on-chip in 32-nm technology. , 2011, , .		4
44	Automatic Container Code Recognition System Based on Geometrical Clustering and Spatial Structure Template Matching. Lecture Notes in Electrical Engineering, 2019, , 2198-2204.	0.4	4
45	Advanced parallel algorithm for system-level EMC modeling of high-speed electronic package. , 2008, , .		3
46	Analytical formulas for the barrel-plate and pad-plate capacitance in the physics-based via circuit model for signal integrity analysis of PCBs. , 2009, , .		3
47	Interference Suppressing and Null Broadening Method for GNSS Receiver Based on Circular Antenna Array. , 2010, , .		3
48	New circuit model for modeling differential pair of through-hole vias in multilayered electronic packages. , 2011, , .		3
49	Domain and modal decomposition for efficient signal and power integrity analysis of multilayer packages and PCBs. , 2012, , .		3
50	Systematic analysis for static and dynamic drops in power supply grids of 3-D integrated circuits. , 2012, , .		3
51	Power integrity analysis of TSV based 3-D integrated circuits. , 2012, , .		3
52	Far-field prediction from amplitude-only near-field measurements using equivalent electric currents. , 2012, , .		3
53	A differential evolution based equivalent source approach for predicting electromagnetic emissions using near-field scanning. , 2013, , .		3
54	Global forward-predicting dynamic routing for traffic concurrency space stereo multi-layer scale-free network. Chinese Physics B, 2015, 24, 098903.	1.4	3

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55	A dense overlapped linear subarray architecture for interference suppressing in small‐scale arrays. International Journal of Communication Systems, 2015, 28, 990-1000.	2.5	3
56	Exploration of design guidelines for cavity-backed dumbbell-shaped DGS common-mode filters. , 2016, , .		3
57	Effective modeling of multidirectional CFRP panels based on characterizing unidirectional samples for studying the lightning direct effect. , 2017, , .		3
58	Transmission Line Representation of the Capacitive Via-Plate Interaction Toward a Capacitor-Free Via Model. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2019, 9, 2248-2256.	2.5	3
59	Crack Profile Reconstruction from Eddy Current Signals with an Encoder-Decoder Convolutional Neural Network. , 2019, , .		3
60	A novel integrated approach for simulation of electromagnetic susceptibility problem. , 0, , .		2
61	An Efficient Method for Power integrity and EMI Analysis of Irregular-Shaped Power/Ground Planes in Packages. , 2007, , .		2
62	An efficient method for power integrity and EMI Analysis of advanced packages. , 2008, , .		2
63	Signal integrity analysis of through-silicon via based 3D integrated circuit. , 2010, , .		2
64	A novel collaborative navigation architecture based on decentralized and distributed Ad-hoc networks. , 2012, , .		2
65	Impact of TSV induced thermo-mechanical stress on semiconductor device performance. , 2012, , .		2
66	Effective resistance approach for DC analysis of power grid on through-silicon interposer (TSI). , 2012, , .		2
67	Fast voltage drop modeling of power grid with application to silicon interposer analysis. , 2013, , .		2
68	Power integrity modeling and measurement of TSV-based 3D IC system with application to the analysis of seven-chip stack. IEEE Electromagnetic Compatibility Magazine, 2016, 5, 52-60.	0.1	2
69	Common-mode filter using cavity-backed defected ground structure for multilayer PCB. , 2016, , .		2
70	A Truncation Scheme for the Analytical Formula of via Barrel-Plate Capacitance. , 2018, , .		2
71	Lightning Direct Effect and Electromagnetic Shielding Analysis of Conductive Aircraft Composite. , 2019, , .		2
72	Satellite Visibility and Geometry Analysis for GNSS Positioning in an Urban Environment. , 2019, , .		2

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73	Hybrid FDTD-MPIE method for the simulation of locally inhomogeneous multilayer LTCC structure. , 0, , .		1
74	Analysis of Rectangular Power-Ground Plane Pairs for Noise Suppression. , 2006, , .		1
75	Coupled computational intelligence and time-domain method for design of the microwave devices. , 2006, , .		1
76	Hybrid of Scattering Matrix Method and Integral Equation used for Co-simulation of Power Integrity and EMI in Electronic Package with Large Number of P/G Vias. , 2007, , .		1
77	A Systematic Semi-Numerical Approach for Modeling of Signal and Power Integrity of Electronic Packages. , 2007, , .		1
78	Thermal-aware electrical analysis of high-speed interconnect. , 2008, , .		1
79	Radiated emission effects from multiple via stimulation within a printed circuit board. , 2008, , .		1
80	A 2D Time Domain Method for Electrical Analysis of Electronic Packages. , 2008, , .		1
81	Contour integral equation and vector fitting based adaptive frequency sampling for fast wide-band analysis of power ground plane pair. , 2013, , .		1
82	Comprehensive study of the impact of TSV induced thermo-mechanical stress on 3D IC device performance. , 2013, , .		1
83	A differential evolution algorithm based source reconstruction technique. , 2014, , .		1
84	Surrogate-model based isolation analysis of slotted waveguide antennas. , 2015, , .		1
85	Retrieval of Secchi disk depth in offshore marine areas based on simulated HICO from in-situ hyperspectral data. , 2015, , .		1
86	Simulation of dispersive plasmas using implicit and explicit ADE-FDTD schemes. , 2015, , .		1
87	2.5D methodologies for electronic package and PCB modeling: Review and latest development. , 2016, , .		1
88	Introduction to the Special Section on Nature-Inspired Algorithms for EMC and Signal and Power Integrity Applications. IEEE Transactions on Electromagnetic Compatibility, 2018, 60, 1619-1620.	2.2	1
89	Study on Electromagnetic Simulation Methodology for Sea Clutter Based on FDTD Model. Lecture Notes in Electrical Engineering, 2019, , 2387-2394.	0.4	1
90	Recent Developments in the Physics-based Via Circuit Model. , 2019, , .		1

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91	An approach combining the integral equation method with a generalized image technique for modeling incabin radio wave propagation. International Journal of Numerical Modelling: Electronic Networks, Devices and Fields, 2020, 33, e2595.	1.9	1
92	A framework for community noise modelling using machine learning methods. Applied Acoustics, 2020, 157, 107033.	3.3	1
93	A Hybrid Parallel Computing Model to Support Scalable Processing of Big Oceanographic Spatial Data. Communications in Computer and Information Science, 2017, , 276-285.	0.5	1
94	ADBF at subarray level using a generalized sidelobe canceller. , 2009, , .		0
95	Method for system-level signal and power integrity modeling of high-speed electronic packages. , 2009, , .		0
96	Research on the Computing Network Topology Distribution Based on Energy Consumption for Cooperative Communication System. , 2014, , .		0
97	Iteration-free phase retrieval for amplitude-only near to far field transformation. , 2015, , .		0
98	EMC analysis and characterization of new nanocomposite laminates for aeronautic application. , 2015, , .		0
99	Power integrity modeling, measurement and analysis of seven-chip stack for TSV-based 3D IC integration. , 2015, , .		0
100	Micro-Scale Severe Weather Prediction Based on Region Trajectories Extracted from Meteorological Radar Data. , 2016, , .		0
101	2016 Asia-Pacific International Symposium on EMC (APEMC), Shenzhen, China, May 18-21, 2016. IEEE Electromagnetic Compatibility Magazine, 2016, 5, 84-89.	0.1	0
102	A discontinuous Galerkin Time-Domain method for modeling of power-ground planes with narrow slots and signal vias. , 2017, , .		0
103	Evaluating airborne slotted waveguide antenna arrays using an equivalent model based on near-field samplings over slots. , 2017, , .		0
104	A combined 1D and 2D DGTD method for modeling multilayer power-ground planes with narrow slots. , 2018, , .		0
105	An improved expression of via barrel-plate capacitance based on a convergence study. , 2018, , .		0
106	Guest Editorial Introduction to the Special Issue for the Joint 2018 IEEE EMC and APEMC Symposium in Singapore and IEEE EMC+SIPI Symposium in Long Beach USA. IEEE Transactions on Electromagnetic Compatibility, 2019, , 1-2.	2.2	0
107	A Novel Absorptive Common-Mode Filter Based on Wilkinson Power Dividers. , 2019, , .		0
108	Electromagnetic Analysis for Multi-constellation GNSS Satellite Visibility Determination in Urban Areas. , 2019, , .		0

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109	Research on Clearance of Aerial Remote Sensing Images Based on Image Fusion. , 2017, , .		0
110	Monitoring Ulva prolifera in the Yellow Sea and East China Sea derived from multi-source remote sensing images. , 2017, , .		0
111	Spatio-temporal distribution of total suspended sediment concentration derived from MODIS data in the Yellow and East China Seas from 2001 to 2013. , 2017, , .		0
112	Global Dynamic One-Step-Prediction Resource Allocation Strategy for Space Stereo Multi-layer Data Asymmetric Scale-Free Network. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2018, , 482-489.	0.3	0
113	Implementation of Video Abstract Algorithm Based on CUDA. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2018, , 391-401.	0.3	0
114	Automatic Retrieval of Water Chlorophyll-A Concentration Based on Push Broom Images. Advances in Intelligent Systems and Computing, 2020, , 662-670.	0.6	0
115	Electromagentic Impact of Parasitic Effects on the STDP Characteristics in Neuromorphic Memristor Crossbar Arrays. , 2021, , .		0
116	Electromagnetic Impact of Interconnect Resistance on STDP Characteristics in Neuromorphic Crossbar Array. , 2022, , .		0