

Madhavan Swaminathan

List of Publications by Year in descending order

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232
papers

2,968
citations

218381

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253896

43
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232
all docs

232
docs citations

232
times ranked

1312
citing authors

#	ARTICLE	IF	CITATIONS
1	Modeling and transient simulation of planes in electronic packages. IEEE Transactions on Advanced Packaging, 2000, 23, 340-352.	1.7	126
2	Designing and Modeling for Power Integrity. IEEE Transactions on Electromagnetic Compatibility, 2010, 52, 288-310.	1.4	114
3	Electrical modeling of Through Silicon and Package Vias. , 2009, , .		105
4	High-Dimensional Global Optimization Method for High-Frequency Electronic Design. IEEE Transactions on Microwave Theory and Techniques, 2019, 67, 2128-2142.	2.9	99
5	Electromagnetic Modeling of Through-Silicon Via (TSV) Interconnections Using Cylindrical Modal Basis Functions. IEEE Transactions on Advanced Packaging, 2010, 33, 804-817.	1.7	95
6	Electrical-Thermal Co-Simulation of 3D Integrated Systems With Micro-Fluidic Cooling and Joule Heating Effects. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2011, 1, 234-246.	1.4	92
7	Rigorous Electrical Modeling of Through Silicon Vias (TSVs) With MOS Capacitance Effects. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2011, 1, 893-903.	1.4	92
8	A Global Bayesian Optimization Algorithm and Its Application to Integrated System Design. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2018, 26, 792-802.	2.1	84
9	Multilayered Finite-Difference Method (MFDM) for Modeling of Package and Printed Circuit Board Planes. IEEE Transactions on Electromagnetic Compatibility, 2007, 49, 441-447.	1.4	77
10	On-Chip Power-Grid Simulation Using Latency Insertion Method. IEEE Transactions on Circuits and Systems I: Regular Papers, 2008, 55, 914-931.	3.5	67
11	Machine Learning and Uncertainty Quantification for Surrogate Models of Integrated Devices With a Large Number of Parameters. IEEE Access, 2019, 7, 4056-4066.	2.6	66
12	Skin-Effect-Incorporated Transient Simulation Using the Laguerre-FDTD Scheme. IEEE Transactions on Microwave Theory and Techniques, 2013, 61, 4029-4039.	2.9	65
13	Application of Machine Learning for Optimization of 3-D Integrated Circuits and Systems. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2017, 25, 1856-1865.	2.1	57
14	Transient Analysis of CMOS-Gate-Driven \$RLGC\$ Interconnects Based on FDTD. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2011, 30, 574-583.	1.9	51
15	Demystifying Machine Learning for Signal and Power Integrity Problems in Packaging. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2020, 10, 1276-1295.	1.4	48
16	A Novel Compact Electromagnetic Bandgap Structure in Power Plane for Wideband Noise Suppression and Low Radiation. IEEE Transactions on Electromagnetic Compatibility, 2011, 53, 996-1004.	1.4	41
17	Noise Isolation in Mixed-Signal Systems Using Alternating Impedance Electromagnetic Bandgap (AI-EBG) Structure-Based Power Distribution Network (PDN). IEEE Transactions on Advanced Packaging, 2010, 33, 2-12.	1.7	40
18	Decoupling Capacitor Placement in Power Delivery Networks Using MFEM. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2011, 1, 1651-1661.	1.4	39

#	ARTICLE	IF	CITATIONS
19	A New Self-Healing Methodology for RF Amplifier Circuits Based on Oscillation Principles. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2012, 20, 1835-1848.	2.1	39
20	Transient Analysis of TSV Equivalent Circuit Considering Nonlinear MOS Capacitance Effects. IEEE Transactions on Electromagnetic Compatibility, 2015, 57, 1216-1225.	1.4	36
21	Broadband and Miniaturized Antenna-in-Package (AiP) Design for 5G Applications. IEEE Antennas and Wireless Propagation Letters, 2020, 19, 1963-1967.	2.4	32
22	Architecture, Chip, and Package Codesign Flow for Interposer-Based 2.5-D Chiplet Integration Enabling Heterogeneous IP Reuse. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2020, 28, 2424-2437.	2.1	32
23	Power transmission lines: A new interconnect design to eliminate simultaneous switching noise. , 2008, , .		31
24	Stopband Analysis Using Dispersion Diagram for Two-Dimensional Electromagnetic Bandgap Structures in Printed Circuit Boards. IEEE Microwave and Wireless Components Letters, 2006, 16, 645-647.	2.0	30
25	Do we need wide flits in Networks-on-Chip?. , 2013, , .		30
26	Characterization of ABF/Glass/ABF Substrates for mmWave Applications. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2021, 11, 384-394.	1.4	29
27	Antenna miniaturization using magneto-dielectric substrates. , 2009, , .		28
28	Inductance and Resistance Calculations in Three-Dimensional Packaging Using Cylindrical Conduction-Mode Basis Functions. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2009, 28, 846-859.	1.9	27
29	Electricalâ€“Thermal Cosimulation With Nonconformal Domain Decomposition Method for Multiscale 3-D Integrated Systems. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2014, 4, 588-601.	1.4	27
30	Surface Roughness Modeling of Substrate Integrated Waveguide in D-Band. IEEE Transactions on Microwave Theory and Techniques, 2016, 64, 1209-1216.	2.9	27
31	Analytical Stability Condition of the Latency Insertion Method for Nonuniform GLC Circuits. IEEE Transactions on Circuits and Systems II: Express Briefs, 2008, 55, 937-941.	2.2	26
32	A Laguerre-FDTD Formulation for Frequency-Dependent Dispersive Materials. IEEE Microwave and Wireless Components Letters, 2011, 21, 225-227.	2.0	25
33	Causal and Passive Parameterization of S-Parameters Using Neural Networks. IEEE Transactions on Microwave Theory and Techniques, 2020, 68, 4290-4304.	2.9	25
34	Air-Gap Transmission Lines on Organic Substrates for Low-Loss Interconnects. IEEE Transactions on Microwave Theory and Techniques, 2007, 55, 1919-1925.	2.9	23
35	Coupling analysis of through-silicon via (TSV) arrays in silicon interposers for 3D systems. , 2011, , .		23
36	Electrical modeling of annular and co-axial TSVs considering MOS capacitance effects. , 2009, , .		22

#	ARTICLE	IF	CITATIONS
37	Accurate Transient Simulation of Interconnects Characterized by Band-Limited Data With Propagation Delay Enforcement in a Modified Nodal Analysis Framework. IEEE Transactions on Electromagnetic Compatibility, 2008, 50, 715-729.	1.4	21
38	Electrical-thermal co-analysis for power delivery networks in 3D system integration. , 2009, , .		21
39	Constant Current Power Transmission Line-Based Power Delivery Network for Single-Ended Signaling. IEEE Transactions on Electromagnetic Compatibility, 2011, 53, 1050-1064.	1.4	21
40	Modeling of Voltage-Controlled Oscillators Including I/O Behavior Using Augmented Neural Networks. IEEE Access, 2019, 7, 38973-38982.	2.6	19
41	Near-Field and Far-Field Analyses of Alternating Impedance Electromagnetic Bandgap (AI-EBG) Structure for Mixed-Signal Applications. IEEE Transactions on Advanced Packaging, 2007, 30, 180-190.	1.7	18
42	A Spectral Convolutional Net for Co-Optimization of Integrated Voltage Regulators and Embedded Inductors. , 2019, , .		18
43	A novel self-healing methodology for RF Amplifier circuits based on oscillation principles. , 2009, , .		17
44	Achieving near zero SSN power delivery networks by eliminating power planes and using constant current power transmission lines. , 2009, , .		17
45	Conformal Antennas on Liquid Crystalline Polymer Based Rigid-Flex Substrates Integrated With the Front-End Module. IEEE Transactions on Advanced Packaging, 2009, 32, 797-808.	1.7	17
46	A Rigorous Model for Through-Silicon Vias With Ohmic Contact in Silicon Interposer. IEEE Microwave and Wireless Components Letters, 2013, 23, 385-387.	2.0	17
47	A Bayesian Framework for Optimizing Interconnects in High-Speed Channels. , 2018, , .		17
48	Fault Detection and Automated Fault Diagnosis for Embedded Integrated Electrical Passives. Journal of Signal Processing Systems, 1999, 21, 265-276.	1.0	16
49	Design, modeling, and characterization of embedded electromagnetic band gap (EBG) structure. , 2008, , .		16
50	Electromagnetic Band Gap Synthesis Using Genetic Algorithms for Mixed Signal Applications. IEEE Transactions on Advanced Packaging, 2009, 32, 13-25.	1.7	16
51	Enhancing Signal and Power Integrity Using Double Sided Silicon Interposer. IEEE Microwave and Wireless Components Letters, 2011, 21, 598-600.	2.0	16
52	Repeater Insertion to Reduce Delay and Power in Copper and Carbon Nanotube-Based Nanointerconnects. IEEE Access, 2019, 7, 13622-13633.	2.6	16
53	Polarization mode basis functions for modeling insulator-coated through-silicon via (TSV) interconnections. , 2009, , .		14
54	Behavioral Modeling of Tunable I/O Drivers With Preemphasis Including Power Supply Noise. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2020, 28, 233-242.	2.1	14

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55	Antennas in Glass Interposer For sub-THz Applications. , 2021, , .		14
56	Analysis and Design of Electromagnetic Bandgap (EBG) Structures for Power Plane Isolation Using 2D Dispersion Diagrams and Scalability. , 2006, , .		13
57	Characterization of Next Generation Thin Low-K and Low-Loss Organic Dielectrics From 1 to 110 GHz. IEEE Transactions on Advanced Packaging, 2010, 33, 180-188.	1.7	13
58	An effective modeling method for multi-scale and multilayered power/ground plane structures. , 2011, , .		13
59	Electricalâ€“thermal modeling of throughâ€“silicon via (TSV) arrays in interposer. International Journal of Numerical Modelling: Electronic Networks, Devices and Fields, 2013, 26, 545-559.	1.2	13
60	Design and Characterization of Inductors for Self-Powered IoT Edge Devices. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2018, 8, 1263-1271.	1.4	13
61	Efficient Modeling of Package Power Delivery Networks with Fringing Fields and Gap Coupling in Mixed Signal Systems. , 2006, , .		12
62	Modeling and Performance Analysis of Shielded Differential Annular Through-Silicon Via (SD-ATSV) for 3-D ICs. IEEE Access, 2018, 6, 33238-33250.	2.6	12
63	Analysis of Parameter Variability in an Integrated Wireless Power Transfer System via Partial Least-Squares Regression. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2020, 10, 1795-1802.	1.4	12
64	Electrical Circuit Modeling and Validation of Through-Silicon Vias Embedded in a Silicon Microfluidic Pin-Fin Heat Sink Filled With Deionized Water. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2020, 10, 1337-1347.	1.4	12
65	Polymers for RF Apps. IEEE Microwave Magazine, 2011, 12, 62-77.	0.7	11
66	Electromagnetic modeling of non-uniform through-silicon via (TSV) interconnections. , 2012, , .		11
67	Bayesian Active Learning for Uncertainty Quantification of High Speed Channel Signaling. , 2018, , .		11
68	A Passive Equalizer Design for Shielded Differential Through-Silicon Vias in 3-D IC. IEEE Microwave and Wireless Components Letters, 2018, 28, 768-770.	2.0	11
69	Use of the finite element method for the modeling of multi-layered power/ground planes with small features. , 2009, , .		10
70	Preconditioned Second-Order Multi-Point Passive Model Reduction for Electromagnetic Simulations. IEEE Transactions on Microwave Theory and Techniques, 2010, 58, 2856-2866.	2.9	10
71	Simulation of power delivery networks with Joule heating effects for 3D integration. , 2010, , .		10
72	FDFD Modeling of Signal Paths With TSVs in Silicon Interposer. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2014, 4, 708-717.	1.4	10

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73	Transient Simulation of Multiscale Structures Using the Nonconformal Domain Decomposition Laguerre-FDTD Method. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2015, 5, 532-540.	1.4	10
74	Inverse Design of Transmission Lines with Deep Learning. , 2019, , .		10
75	Laminated Glass-Based, Compact Inline Stepped-Impedance Resonator Bandpass Filters for 5G New Radio Modules. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2021, 11, 708-711.	1.4	10
76	Eye-Pattern Design for High-Speed Differential Links Using Extended Passive Equalization. IEEE Transactions on Advanced Packaging, 2008, 31, 246-257.	1.7	9
77	A low cost method for testing integrated RF substrates. , 2008, , .		9
78	Enabling antenna design with nano-magnetic materials using machine learning. , 2015, , .		9
79	Mechanical and High-Frequency Electrical Study of Printed, Flexible Antenna Under Deformation. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2020, 10, 1088-1100.	1.4	9
80	Analysis for Signal and Power Integrity Using the Multilayered Finite Difference Method. , 2007, , .		8
81	Correlation of PDN impedance with jitter and voltage margin for high speed channels. , 2008, , .		8
82	Pseudo-balanced signaling using power transmission lines for parallel links. , 2011, , .		8
83	Characterization of alternate power distribution methods for 3D integration. , 2014, , .		8
84	System-Level Thermal Modeling Using Nonconformal Domain Decomposition and Model-Order Reduction. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2014, 4, 66-76.	1.4	8
85	Preliminary application of machine-learning techniques for thermal-electrical parameter optimization in 3-D IC. , 2016, , .		8
86	Recent advances in electromagnetic compatibility of 3D-ICs â€” Part II. IEEE Electromagnetic Compatibility Magazine, 2016, 5, 65-74.	0.1	8
87	High-density low-loss millimeter-wave package interconnects with the impact of dielectric-material surface roughness. Applied Physics Letters, 2021, 119, .	1.5	8
88	Reinforcement Learning for the Optimization of Decoupling Capacitors in Power Delivery Networks. , 2021, , .		8
89	Invertible Neural Networks for Inverse Design of CTLE in High-speed Channels. , 2020, , .		8
90	Extraction of S-Parameters from TDR/TDT Measurements using Rational Functions. , 2000, , .		7

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91	Causal Transient Simulation of Passive Networks with Fast Convolution. , 2006, , .		7
92	A Heterogeneous Array of Off-Chip Interconnects for Optimum Mechanical and Electrical Performance. Journal of Electronic Packaging, Transactions of the ASME, 2007, 129, 460-468.	1.2	7
93	Fast EM/Circuit Transient Simulation Using Laguerre Equivalent Circuit (SLeEC). IEEE Transactions on Electromagnetic Compatibility, 2009, 51, 756-762.	1.4	7
94	Filter integration in ultra thin organic substrate via 3D stitched capacitor. , 2009, , .		7
95	Effect of system components on electrical and thermal characteristics for power delivery networks in 3D system integration. , 2009, , .		7
96	Low-Cost Specification Based Testing of RF Amplifier Circuits using Oscillation Principles. Journal of Electronic Testing: Theory and Applications (JETTA), 2010, 26, 13-24.	0.9	7
97	DC IR drop solver for large scale 3D power delivery networks. , 2010, , .		7
98	Nanomagnetics for High-Performance, Miniaturized Power, and RF Components [Nanopackaging]. IEEE Nanotechnology Magazine, 2012, 6, 18-23.	0.9	7
99	Consideration of MOS capacitance effect in TSV modeling based on cylindrical modal basis functions. , 2012, , .		7
100	New power delivery scheme for 3D ICs to minimize simultaneous switching noise for high speed I/Os. , 2012, , .		7
101	Modeling and analysis of SSN in silicon and glass interposers for 3D systems. , 2012, , .		7
102	Analysis, Design, and Prototyping of Temperature Resilient Clock Distribution Networks for 3-D ICs. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2015, 5, 1669-1678.	1.4	7
103	Application of a New Power Distribution Scheme for Complex Printed Circuit Boards for High-Speed Signaling. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2015, 5, 806-817.	1.4	7
104	A Compact Passive Equalizer Design for Differential Channels in TSV-Based 3-D ICs. IEEE Access, 2018, 6, 75278-75292.	2.6	7
105	Open and Closed Loop Inductors for High-Efficiency System-on-Package Integrated Voltage Regulators. , 2019, , .		7
106	A Hybrid Methodology for Jitter and Eye Estimation in High-Speed Serial Channels Using Polynomial Chaos Surrogate Models. IEEE Access, 2019, 7, 53629-53640.	2.6	7
107	Impedance Response Extrapolation of Power Delivery Networks using Recurrent Neural Networks. , 2019, , .		7
108	Design Flow for Active Interposer-Based 2.5-D ICs and Study of RISC-V Architecture With Secure NoC. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2020, 10, 2047-2060.	1.4	7

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109	Worst-Case Eye Analysis of High-Speed Channels Based on Bayesian Optimization. IEEE Transactions on Electromagnetic Compatibility, 2021, 63, 246-258.	1.4	7
110	Flexible and Ultra-Thin Glass Substrates for RF Applications. , 2021, , .		7
111	A Survey of Test Techniques for MCM Substrates. Journal of Electronic Testing: Theory and Applications (JETTA), 1997, 10, 27-38.	0.9	6
112	Liquid Crystal Polymer-Based Planar Lumped Component Dual-Band Filters For Dual-Band WLAN Systems. , 2007, , .		6
113	Conformal Antennas on Liquid Crystalline Polymer Substrates for Consumer Applications. , 2007, , .		6
114	Characterization of Co-Planar Silicon Transmission Lines With and Without Slow-Wave Effect. IEEE Transactions on Advanced Packaging, 2007, 30, 526-532.	1.7	6
115	Skin effect modeling of interconnects using the Laguerre-FDTD scheme. , 2012, , .		6
116	Multiphysics challenges with Heterogeneous Integrated Voltage Regulator based Power Delivery Architectures. , 2020, , .		6
117	Dielectric Constant and Loss Tangent Characterization of Thin High-K Dielectrics Using Corner-to-Corner Plane Probing. , 2006, , .		5
118	A low-cost test approach for embedded RF passive circuits. , 2008, , .		5
119	Extraction of electrical properties of nanomagnetic materials through meander-shaped inductor and inverted-F antenna structures. , 2012, , .		5
120	Fast electrical-thermal co-simulation using multigrid method for 3D integration. , 2012, , .		5
121	Constant Voltage-Based Power Delivery Scheme for 3-D ICs and Interposers. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2013, 3, 1907-1916.	1.4	5
122	Wireless power transfer integrated board for low power IoT applications. , 2017, , .		5
123	Preliminary Application of Deep Learning to Design Space Exploration. , 2018, , .		5
124	A Non-Random Exploration based Method for the optimization of Capacitors in Power Delivery Networks. , 2020, , .		5
125	Determining worst-case eye height in low BER channels using Bayesian optimization. , 2020, , .		5
126	Chiplet/Interposer Co-Design for Power Delivery Network Optimization in Heterogeneous 2.5-D ICs. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2021, 11, 2148-2157.	1.4	5

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127	Invertible Neural Networks for High-Speed Channel Design & Parameter Distribution Estimation. , 2021, , .		5
128	A low-cost approach for testing embedded rf passive circuits based on oscillation principle. , 2008, , .		4
129	Compact Electromagnetic Bandgap structure for noise suppression in power plane. , 2008, , .		4
130	Low-Cost One-Port Approach for Testing Integrated RF Substrates. , 2008, , .		4
131	Coupling noise analysis and high frequency design optimization of power/ground plane stack-up in embedded chip substrate cavities. , 2008, , .		4
132	Fast memory-efficient full-wave 3D simulation of power planes. , 2009, , .		4
133	RF substrates yield improvement using package-chip co-design and on-chip calibration. , 2010, , .		4
134	Design of power delivery networks using power transmission lines and pseudo-balanced signaling for multiple I/Os. , 2011, , .		4
135	Constant current Power Transmission Line based power delivery network for single-ended signaling with reduced simultaneous switching noise. , 2011, , .		4
136	Minimizing coupling of power supply noise between digital and RF circuit blocks in mixed signal systems. , 2014, , .		4
137	A Simple Technique for Power Distribution With Better Characteristics Than Electromagnetic Bandgap Structures. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2015, 5, 797-805.	1.4	4
138	A New Approach for Magneto-Static Hysteresis Behavioral Modeling. IEEE Transactions on Magnetics, 2016, 52, 1-14.	1.2	4
139	Enhancing the Bandwidth of Low-Dropout Regulators Using Power Transmission Lines for High-Speed I/Os. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2017, 7, 533-543.	1.4	4
140	Reverse Power Delivery Network for Wireless Power Transfer. IEEE Microwave and Wireless Components Letters, 2018, 28, 624-626.	2.0	4
141	Anisotropic Scatterer Models for Representing RCS of Complex Objects. , 2021, , .		4
142	Simulation of Eye-Diagrams on Lossy Transmission Lines using Extracted Data from 1-port TDR Measurements. , 2002, , .		3
143	Eye-Pattern Improvement for Design of High-Speed Differential Links Using Passive Equalization. , 2006, , .		3
144	Electrical Characterization and Design Optimization of Embedded Chip in Substrate Cavities. , 2007, , .		3

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145	Frequency-Dependent Dielectric Constant and Loss Tangent Characterization of Thin Dielectrics Using a Rapid Solver. , 2007, , .		3
146	Broadband Modeling and Tuning of Multi-layer RF Circuits using Physical Augmentation Methodology. , 2007, , .		3
147	Cylindrical Conduction Mode Basis Functions for Modeling of Inductive Couplings in System-in-Package (SiP). , 2007, , .		3
148	Chip-package co-simulation with multiscale structures. , 2008, , .		3
149	2008 IEEE electrical performance of electronic packaging suppression of vertical coupling using Electromagnetic Band Gap structures. , 2008, , .		3
150	Wideband electrical modeling of large three-dimensional interconnects using accelerated generation of partial impedances with cylindrical conduction mode basis functions. , 2008, , .		3
151	Simple Equivalent Circuit Model of a Stripline in Inhomogeneous Dielectric Media. IEEE Microwave and Wireless Components Letters, 2009, 19, 771-773.	2.0	3
152	Low-frequency test method for integrated RF substrates. , 2009, , .		3
153	A low-cost test method for embedded RF passive circuits using two-tone input signals. , 2009, , .		3
154	Near zero SSN power delivery networks using Constant Voltage Power Transmission Lines. , 2009, , .		3
155	A compact third-order 5 GHz bandpass filter with enhanced stopband characteristics in ultra thin organic substrate. , 2010, , .		3
156	Low-Noise Power Delivery Network Design Using Power Transmission Line for Mixed-Signal Testing. , 2011, , .		3
157	Timing analysis for thermally robust clock distribution network design for 3D ICs. , 2013, , .		3
158	Memory efficient Laguerre-FDTD scheme for dispersive media. , 2013, , .		3
159	Modeling of Power/Ground Planes Using Triangular Elements. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2014, 4, 291-302.	1.4	3
160	Reduction of PDN induced coupling into signal lines using PTL power distribution. , 2015, , .		3
161	Concurrent Multi-Directional Beam-Forming Receiving Network for Full-FoV High-Efficiency Wireless Power Transfer. , 2019, , .		3
162	HilbertNet: A Probabilistic Machine Learning Framework for Frequency Response Extrapolation of Electromagnetic Structures. IEEE Transactions on Electromagnetic Compatibility, 2022, 64, 405-417.	1.4	3

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163	Silicon vs. Organic Interposer: PPA and Reliability Tradeoffs in Heterogeneous 2.5D Chiplet Integration. , 2020, , .		3
164	Hybrid Active-Passive Beamforming for Scalable sub-Terahertz Antenna Array. , 2021, , .		3
165	A survey of various computer architectures for solution of large matrix equations. International Journal of Numerical Modelling: Electronic Networks, Devices and Fields, 1995, 8, 153-168.	1.2	2
166	Waveguide mode solution using a hybrid edge element approach. The International Executive, 1995, 5, 122-130.	0.2	2
167	Efficient Simulation of Power/Ground Planes for SiP Applications. , 2007, , .		2
168	Extraction of material properties for low-K and low-loss dielectrics using cavity resonator and efficient finite difference solver up to 40GHz. , 2008, , .		2
169	Multi-layer fringe-field augmentations for the efficient modeling of package power planes. , 2008, , .		2
170	Conformal WLAN/WiMAX antenna on rigid-flex liquid crystalline polymer based substrate. , 2009, , .		2
171	RF system integration and miniaturization using advanced polymers. , 2010, , .		2
172	Low-Frequency and Low-Cost Test Methodology for Integrated RF Substrates. IEEE Transactions on Advanced Packaging, 2010, 33, 669-680.	1.7	2
173	Practical aspects of modeling apertures for signal and power integrity co-simulation. , 2011, , .		2
174	A self-testable SiGe LNA and Built-in-Self-Test methodology for multiple performance specifications of RF amplifiers. , 2012, , .		2
175	One-Port Resonance-Based Test Technique for RF Interconnect and Filters Embedded in RF Substrates. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2013, 3, 236-246.	1.4	2
176	Pseudo-balanced Signaling Using Power Transmission Lines for Parallel I/O Links. IEEE Transactions on Electromagnetic Compatibility, 2013, 55, 315-327.	1.4	2
177	Implementation of power transmission lines to field programmable gate array ICs for managing signal and power integrity. , 2013, , .		2
178	Efficient computation of capacitive coupling between planar and cylindrical interconnections. , 2014, , .		2
179	An alternate power distribution scheme with superior noise suppression characteristics than EBG. , 2014, , .		2
180	Behavioral Modeling of Pre-emphasis Drivers Including Power Supply Noise Using Neural Networks. , 2019, , .		2

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181	Packaging Approaches for mm Wave and Sub-THz Communication. , 2019, , .		2
182	Automated I/O Library Generation for Interposer-Based System-in-Package Integration of Multiple Heterogeneous Dies. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2020, 10, 111-122.	1.4	2
183	Computation of Maximum Voltage Droop in Power Delivery Networks. IEEE Access, 2020, 8, 197875-197884.	2.6	2
184	Bayesian Optimization for Signal Transmission Including Crosstalk in a Via Array. , 2020, , .		2
185	Process design kit and design automation for flexible hybrid electronics. Journal of the Society for Information Display, 2020, 28, 241-251.	0.8	2
186	Design Space Extrapolation for Power Delivery Networks using a Transposed Convolutional Net. , 2021, , .		2
187	Demonstration of Glass-based 3D Package Architectures with Embedded Dies for High Performance Computing. , 2022, , .		2
188	Switching Noise Suppression in Mixed Signal System Applications Using Electromagnetic Band Gap (EBG) Synthesizer. , 2006, , .		1
189	Electromagnetic band gap (EBG) structure synthesizer using genetic algorithm for wireless system applications. , 2006, , .		1
190	Parasitic-Aware RF Design via Parameterization of Embedded Passives on Multilayer Organic Substrates. , 2007, , .		1
191	Design of Integrated RF Modules with Process Control Monitors on Liquid Crystalline Polymer Substrates for Large Volume Manufacturing. , 2007, , .		1
192	A novel method for suppression of vertical coupling in multi-layered substrates. , 2008, , .		1
193	Analysis of frequency-dependent lossy transmission lines driven by CMOS gates. , 2009, , .		1
194	Accelerated frequency domain analysis by susceptance-element based model order reduction of 3D full-wave equations. , 2009, , .		1
195	Nodal order reduction via bilinear conformal transformation. , 2010, , .		1
196	Chip-package electrical interaction in organic packages with embedded actives. , 2011, , .		1
197	Suppression of Vertical Electromagnetic Coupling in Multilayer Packages. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2012, 2, 418-429.	1.4	1
198	Minimizing simultaneous switching noise at reduced power with power transmission lines for high-speed signaling. , 2012, , .		1

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199	Managing signal and power integrity using power transmission lines and alternative signaling schemes. , 2013, , .		1
200	FDFD Nonconformal Domain Decomposition Method for the Electromagnetic Modeling of Interconnections in Silicon Interposer. IEEE Transactions on Electromagnetic Compatibility, 2015, 57, 496-504.	1.4	1
201	Synthesis of magneto-dielectrics from first principles and antenna design. , 2015, , .		1
202	Transient non-conformal domain decomposition using the Laguerre-FDTD method. , 2015, , .		1
203	Combined integral equation based circuit modeling of interconnections in electronic packaging. , 2016, , .		1
204	Bayesian Framework for Optimization of Electromagnetics Problems. , 2018, , .		1
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