

Francesco De Paulis

List of Publications by Year in descending order

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139
papers

1,928
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279798

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all docs

148
docs citations

148
times ranked

925
citing authors

#	ARTICLE	IF	CITATIONS
1	Physics-Based Via and Trace Models for Efficient Link Simulation on Multilayer Structures Up to 40 GHz. IEEE Transactions on Microwave Theory and Techniques, 2009, 57, 2072-2083.	4.6	196
2	Analytical Evaluation of Via-Plate Capacitance for Multilayer Printed Circuit Boards and Packages. IEEE Transactions on Microwave Theory and Techniques, 2008, 56, 2118-2128.	4.6	179
3	Signal/Power Integrity Analysis for Multilayer Printed Circuit Boards Using Cascaded S-Parameters. IEEE Transactions on Electromagnetic Compatibility, 2010, 52, 1008-1018.	2.2	65
4	A Simple and Efficient Design Procedure for Planar Electromagnetic Bandgap Structures on Printed Circuit Boards. IEEE Transactions on Electromagnetic Compatibility, 2011, 53, 482-490.	2.2	65
5	Impact of Shorting Vias Placement on Embedded Planar Electromagnetic BandGap Structures Within Multilayer Printed Circuit Boards. IEEE Transactions on Microwave Theory and Techniques, 2010, 58, 1867-1876.	4.6	48
6	Compact Configuration for Common Mode Filter Design based on Planar Electromagnetic Bandgap Structures. IEEE Transactions on Electromagnetic Compatibility, 2012, 54, 646-654.	2.2	46
7	Through Silicon Via (TSV) Defect Modeling, Measurement, and Analysis. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2017, 7, 138-152.	2.5	45
8	Rapid Rotary Scanner and Portable Coherent Wideband Q-Band Transceiver for High-Resolution Millimeter-Wave Imaging Applications. IEEE Transactions on Instrumentation and Measurement, 2011, 60, 186-197.	4.7	44
9	Near-Field Shielding Performances of EMI Noise Suppression Absorbers. IEEE Transactions on Electromagnetic Compatibility, 2017, 59, 654-661.	2.2	39
10	IR-DROP Analysis and Thermal Assessment of Planar Electromagnetic Bandgap Structures for Power Integrity Applications. IEEE Transactions on Advanced Packaging, 2010, 33, 617-622.	1.6	38
11	Design of a Common Mode Filter by Using Planar Electromagnetic Bandgap Structures. IEEE Transactions on Advanced Packaging, 2010, 33, 994-1002.	1.6	38
12	Bandwidth Enhancement Based on Optimized Via Location for Multiple Vias EBG Power/Ground Planes. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2012, 2, 332-341.	2.5	37
13	Transient Analysis of TSV Equivalent Circuit Considering Nonlinear MOS Capacitance Effects. IEEE Transactions on Electromagnetic Compatibility, 2015, 57, 1216-1225.	2.2	36
14	Compact and Reliable T/R Module Prototype for Advanced Space Active Electronically Steerable Antenna in 3-D LTCC Technology. IEEE Transactions on Microwave Theory and Techniques, 2018, 66, 2746-2756.	4.6	34
15	Signal Integrity Analysis of Single-Ended and Differential Striplines in Presence of EBG Planar Structures. IEEE Microwave and Wireless Components Letters, 2009, 19, 554-556.	3.2	33
16	Common mode filtering performances of planar EBG structures. , 2009, , .		30
17	Diagnosis of Multiple Wiring Faults Using Time-Domain Reflectometry and Teaching-Based Learning-Optimization. Electromagnetics, 2015, 35, 10-24.	0.7	29
18	Design of Homogeneous and Composite Materials From Shielding Effectiveness Specifications. IEEE Transactions on Electromagnetic Compatibility, 2014, 56, 343-351.	2.2	28

#	ARTICLE	IF	CITATIONS
19	Decoupling Capacitors Placement for a Multichip PDN by a Nature-Inspired Algorithm. IEEE Transactions on Electromagnetic Compatibility, 2018, 60, 1678-1685.	2.2	27
20	From Maxwell Garnett to Debye Model for Electromagnetic Simulation of Composite Dielectrics—Part II: Random Cylindrical Inclusions. IEEE Transactions on Electromagnetic Compatibility, 2012, 54, 280-289.	2.2	26
21	Removable EBG-Based Common-Mode Filter for High-Speed Signaling: Experimental Validation of Prototype Design. IEEE Transactions on Electromagnetic Compatibility, 2015, 57, 672-679.	2.2	25
22	Reduction of EMI Due to Common-Mode Currents Using a Surface-Mount EBG-Based Filter. IEEE Transactions on Electromagnetic Compatibility, 2016, 58, 1440-1447.	2.2	25
23	Detectability of Degraded Joint Discontinuities in HV Power Lines Through TDR-Like Remote Monitoring. IEEE Transactions on Instrumentation and Measurement, 2016, 65, 2725-2733.	4.7	24
24	Exploring Remote Monitoring of Degraded Compression and Bolted Joints in HV Power Transmission Lines. IEEE Transactions on Power Delivery, 2016, 31, 2179-2187.	4.3	24
25	Mitigation of Noise Coupling in Multilayer High-Speed PCB: State of the Art Modeling Methodology and EBG Technology. IEICE Transactions on Communications, 2010, E93-B, 1678-1689.	0.7	21
26	Practical EBG application to multilayer PCB: Impact on power integrity. IEEE Electromagnetic Compatibility Magazine, 2012, 1, 60-65.	0.1	21
27	EBG-Based Common-Mode Stripline Filters: Experimental Investigation on Interlayer Crosstalk. IEEE Transactions on Electromagnetic Compatibility, 2015, 57, 1416-1424.	2.2	21
28	ACCURATE AND EFFICIENT ANALYSIS OF PLANAR ELECTROMAGNETIC BAND-GAP STRUCTURES FOR POWER BUS NOISE MITIGATION IN THE GHZ BAND. Progress in Electromagnetics Research B, 2012, 37, 59-80.	1.0	20
29	High Power, Thermally Efficient, X-band 3D T/R Module With Calibration Capability for Space Radar. IEEE Access, 2018, 6, 60921-60929.	4.2	20
30	Fundamental mechanisms of coupling between planar electromagnetic bandgap structures and interconnects in high-speed digital circuits. Part I - microstrip lines. , 2009, , .		19
31	From Maxwell Garnett to Debye Model for Electromagnetic Simulation of Composite Dielectrics Part I: Random Spherical Inclusions. IEEE Transactions on Electromagnetic Compatibility, 2011, 53, 933-942.	2.2	18
32	EBG-Based Common-Mode Microstrip and Stripline Filters: Experimental Investigation of Performances and Crosstalk. IEEE Transactions on Electromagnetic Compatibility, 2015, 57, 996-1004.	2.2	18
33	Effective PCB Decoupling Optimization by Combining an Iterative Genetic Algorithm and Machine Learning. Electronics (Switzerland), 2020, 9, 1243.	3.1	18
34	Return via connections for extending signal link path bandwidth of via transitions. , 2008, , .		17
35	Impact of Frequency-Dependent and Nonlinear Parameters on Transient Analysis of Through Silicon Vias Equivalent Circuit. IEEE Transactions on Electromagnetic Compatibility, 2015, 57, 538-545.	2.2	16
36	Performance improvements of wire fault diagnosis approach based on timeâ€domain reflectometry. IET Science, Measurement and Technology, 2017, 11, 538-544.	1.6	16

#	ARTICLE	IF	CITATIONS
37	Experimental validation of common-mode filtering performances of planar electromagnetic band-gap structures. , 2010, , .		15
38	Optimum geometrical parameters for the EBG-based common mode filter design. , 2012, , .		15
39	HOMOGENIZED PERMITTIVITY OF COMPOSITES WITH ALIGNED CYLINDRICAL INCLUSIONS FOR CAUSAL ELECTROMAGNETIC SIMULATIONS. Progress in Electromagnetics Research B, 2012, 37, 205-235.	1.0	14
40	Electromagnetic Absorbing Materials Design by Optimization Using a Machine Learning Approach. IEEE Transactions on Electromagnetic Compatibility, 2024, , 1-8.	2.2	14
41	Analytical evaluation of scattering parameters for equivalent circuit of through silicon via array. Electronics Letters, 2015, 51, 1025-1027.	1.0	13
42	Notice of Retraction: Experimental Validation of a 3D FSS Designed by Periodic Conductive Fibers Part-1: Band-Pass Filter Characteristic. IEEE Transactions on Electromagnetic Compatibility, 2017, 59, 1841-1847.	2.2	13
43	Genetic Algorithm PDN Optimization based on Minimum Number of Decoupling Capacitors Applied to Arbitrary Target Impedance. , 2020, , .		13
44	An advanced transmit/receive 3D ceramic hybrid circuit module for space applications. , 2015, , .		12
45	Estimation of Modal Parameters for Inter-Area Oscillations Analysis by a Machine Learning Approach with Offline Training. Energies, 2020, 13, 6410.	3.1	12
46	Reconfigurable photoinduced metamaterials in the microwave regime. Journal Physics D: Applied Physics, 2015, 48, 135103.	2.8	11
47	Notice of Retraction: Most Valuable Player Algorithm for Circular Antenna Arrays Optimization to Maximum Sidelobe Levels Reduction. IEEE Transactions on Electromagnetic Compatibility, 2018, 60, 1655-1661.	2.2	11
48	Notice of Retraction: Near Field Shielding Performances of Absorbing Materials for Integrated Circuits (IC) Applications Part I: Lateral Excitation. IEEE Transactions on Electromagnetic Compatibility, 2018, 60, 188-195.	2.2	11
49	Analysis of Near-Field Emissions From Common-Mode Filters Based on EBG Structures. IEEE Transactions on Electromagnetic Compatibility, 2017, 59, 593-599.	2.2	10
50	Signal integrity: Efficient, physics-based via modeling: Integration of striplines. IEEE Electromagnetic Compatibility Magazine, 2012, 1, 74-81.	0.1	9
51	Experimental validation of an 8 GHz EBG based common mode filter and impact of manufacturing uncertainties. , 2013, , .		9
52	Through silicon via time domain crosstalk modeling considering hysteretic coupling capacitance. , 2015, , .		9
53	Band-gap limits prediction for effective noise coupling reduction in microwave circuits metallic enclosures. , 2016, , .		9
54	Algorithm for Extracting Parameters of the Coupling Capacitance Hysteresis Cycle for TSV Transient Modeling and Robustness Analysis. IEEE Transactions on Electromagnetic Compatibility, 2017, 59, 1329-1338.	2.2	9

#	ARTICLE	IF	CITATIONS
55	Notice of Retraction: Experimental Validation of a 3D FSS Designed by Periodic Conductive Fibers Part-2: Band-Stop Filter Characteristic. IEEE Transactions on Electromagnetic Compatibility, 2017, 59, 1835-1840.	2.2	9
56	Modeling multilayer power distribution network by systematically incorporating via and cavity models. , 2008, , .		8
57	Equivalent Circuit Modeling of Dielectric Hysteresis Loops in Through Silicon Vias. IEEE Transactions on Electromagnetic Compatibility, 2015, 57, 1510-1516.	2.2	8
58	Miniaturization approach for EBG-based common mode filter and interference analysis. , 2015, , .		8
59	Notice of Retraction: Efficient Analytical Prediction of the EMI Bandgap Limits of PEC-PMC Metallic Enclosures Hosting RF and Digital Circuits. IEEE Transactions on Electromagnetic Compatibility, 2017, 59, 367-374.	2.2	8
60	An intelligent wire fault diagnosis approach using time domain reflectometry and pattern recognition network. Nondestructive Testing and Evaluation, 2019, 34, 99-116.	2.1	8
61	Backplane Channel Design Exploration at 112 Gbps Using Channel Operating Margin (COM). , 2020, , .		8
62	Equivalent circuit models for evaluation of bandgap limits for planar electromagnetic bandgap structures. , 2010, , .		7
63	Equivalent Circuit Modeling in Time Domain of the Hysteresis of Magnetic Materials. IEEE Transactions on Electromagnetic Compatibility, 2015, 57, 1013-1020.	2.2	7
64	TEM-Like Launch Geometries and Simplified De-embedding for Accurate Through Silicon Via Characterization. IEEE Transactions on Instrumentation and Measurement, 2017, 66, 792-801.	4.7	7
65	Validation and Performance Evaluation of High Speed Connector Model for Channel Design at 56 Gbps and Above. , 2020, , .		7
66	Efficient Analytical Prediction of the Cavity Resonant Behavior of PEC-PMC Metallic Enclosures and Packages. IEEE Transactions on Electromagnetic Compatibility, 2021, 63, 93-102.	2.2	7
67	Link path design on a block-by-block basis. , 2008, , .		6
68	Efficient prediction of RF interference in a shielding enclosure with PCBs using a general segmentation method. , 2008, , .		6
69	Investigating Confidence Histograms and Classification in FSV: Part I. Fuzzy FSV. IEEE Transactions on Electromagnetic Compatibility, 2013, 55, 917-924.	2.2	6
70	Sensitivity analysis of electromagnetic transmission, reflection and absorption coefficients for biphasic composite structures. , 2014, , .		6
71	Standalone removable EBG-based common mode filter for high speed differential signaling. , 2014, , .		6
72	Mitigating the threat of crosstalk and unwanted radiation when using electromagnetic bandgap structures to suppress common mode signal propagation in PCB differential interconnects. , 2015, , .		6

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73	Modeling optimization of test patterns used in de-embedding method for through silicon via (TSV) measurement in silicon interposer. , 2016, , .		6
74	Notice of Retraction: Localization of Short and Open Defects in Multilayer Through Silicon Vias (TSV) Daisy-Chain Structures. IEEE Transactions on Electromagnetic Compatibility, 2017, 59, 1558-1564.	2.2	6
75	Effective noise coupling reduction in metallic enclosures hosting X-K bands microwave circuits. , 2017, , .		6
76	Efficient Iterative Process based on an Improved Genetic Algorithm for Decoupling Capacitor Placement at Board Level. Electronics (Switzerland), 2019, 8, 1219.	3.1	6
77	Routing strategies for improving common mode filter performances in high speed digital differential interconnects. , 2011, , .		5
78	Compact configuration of a planar EBG based CM filter and crosstalk analysis. , 2011, , .		5
79	Investigating Confidence Histograms and Classification in FSV: Part II-Float FSV. IEEE Transactions on Electromagnetic Compatibility, 2013, 55, 925-932.	2.2	5
80	Notice of Retraction: Electric Dipole Equations in Very Near Field Conditions for Electromagnetic Shielding Assessment. Part I: Radiation Equations. IEEE Transactions on Electromagnetic Compatibility, 2017, 59, 1196-1202.	2.2	5
81	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
82	Decoupling Capacitors Placement at Board Level Adopting a Nature-Inspired Algorithm. Electronics (Switzerland), 2019, 8, 737.	3.1	5
83	Reduction of EMI in Transmit/Receive Modules for Space Systems. , 2019, , .		5
84	Easy-to-Design-and-Manufacture Frequency Selective Surfaces for Conformal Applications. IEEE Antennas and Wireless Propagation Letters, 2021, 20, 753-757.	4.0	5
85	An equivalent circuit model for the identification of the stub resonance due to differential vias on PCB. , 2009, , .		4
86	Signal integrity analysis of embedded planar EBG Structures. , 2010, , .		4
87	Impact of planar electromagnetic band-gap structures on IR-DROP and signal integrity in high speed printed circuit boards. , 2012, , .		4
88	Practical EBG application to multilayer PCB: impact on signal integrity. IEEE Electromagnetic Compatibility Magazine, 2013, 2, 82-87.	0.1	4
89	Through-Silicon Via Capacitanceâ€“Voltage Hysteresis Modeling for 2.5-D and 3-D IC. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2017, 7, 925-935.	2.5	4
90	Analytical Unit Cell Assembly for Efficient Chip/Package Power Distribution Network Modeling. IEEE Microwave and Wireless Components Letters, 2017, 27, 815-817.	3.2	4

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91	Multiband and Broadband Interference-Free Metallic Package Designs for Microwave Modules. IEEE Microwave and Wireless Components Letters, 2020, 30, 1053-1056.	3.2	4
92	Performance Optimization of EBG-Based Common Mode Filters for Signal Integrity Applications. Springer Proceedings in Mathematics and Statistics, 2016, , 111-133.	0.2	4
93	Block Analysis of a Voltage Supply Chain: Mixed Electromagnetic Modeling and Validation. IEEE Transactions on Electromagnetic Compatibility, 2010, 52, 629-639.	2.2	3
94	Electromagnetic simulation of 3D stacked ICs: Full model vs. S-parameter cascaded based model. , 2014, , .		3
95	Detection of open and short faults in 3D-ICs based on through silicon via (TSV). , 2017, , .		3
96	Notice of Retraction: Applicability of Cylindrical Near-Field to Far-Field Transformation to OTA and EMC Measurements of 5G Equipment and Devices. IEEE Transactions on Electromagnetic Compatibility, 2018, 60, 1171-1179.	2.2	3
97	Identification and Modeling of Intrinsic Discontinuities in High-Voltage Transmission Lines for PLC Applications. IEEE Transactions on Electromagnetic Compatibility, 2018, 60, 42-49.	2.2	3
98	Notice of Retraction: Near-Field Shielding Performances of Absorbing Materials for Integrated Circuits (IC) Applications. Part II: Crossing Excitation. IEEE Transactions on Electromagnetic Compatibility, 2018, 60, 196-201.	2.2	3
99	Impact of chip and interposer PDN to eye diagram in high speed channels. , 2018, , .		3
100	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
101	Tunable Band-Gap for Metallic Packages and Cavities. , 2020, , .		3
102	Characterization of serial links at 5.5Gbps on FR4 backplanes. , 2008, , .		2
103	Full-wave EMC simulations using Maxwell Garnett model for composites with cylindrical inclusions. , 2011, , .		2
104	Dynamically reconfigurable metamaterials for shielding and absorption in the GHz range. , 2015, , .		2
105	Impact of Voltage Bias on Through Silicon Vias (TSV) depletion and crosstalk. , 2016, , .		2
106	Resonant EBG-based common mode filter for LTCC substrates. , 2016, , .		2
107	A Truncation Scheme for the Analytical Formula of via Barrel-Plate Capacitance. , 2018, , .		2
108	Single Step 2-Port Device De-Embedding Algorithm for Fixture-DUT-Fixture Network Assembly. Electronics (Switzerland), 2021, 10, 1275.	3.1	2

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109	Signal Integrity and Crosstalk Analysis of PCBs Within a PEC-PMC Bandgap Metallic Cavity. , 2021, , .		2
110	Accurate Multi-Port De-Embedding of Crosstalk-Affected Fixtures for High Speed Devices. , 2021, , .		2
111	A Compact High-Isolation Wideband Three-Sector Linear Array. IEEE Transactions on Antennas and Propagation, 2022, 70, 3094-3099.	5.1	2
112	Single-Step algorithm for the cascade assembly of multiple S-parameters based multiports networks. International Journal of RF and Microwave Computer-Aided Engineering, 2022, 32, e23070.	1.2	2
113	Corrugated horn with stable phase center for Ka-band compact antenna test range measurement systems. International Journal of RF and Microwave Computer-Aided Engineering, 2022, 32, .	1.2	2
114	Aperture modeling using a hybrid method for RFI analysis. , 2008, , .		1
115	Performance of signal link paths in presence of signal reference planes of EBG type. , 2010, , .		1
116	Measurement of differential mode propagation in printed circuit board for satellites applications. , 2010, , .		1
117	Evaluation of dielectric permittivity for homogeneous materials from transmittance requirements. , 2012, , .		1
118	Histogram density for the Feature Selective Validation (FSV) method. , 2014, , .		1
119	Effects of time-variant non-linear TSV parameters on transient analysis for signal integrity. , 2015, , .		1
120	Extraction of the parameters of the coupling capacitance hysteresis cycle for TSV transient modeling. , 2016, , .		1
121	Novel De-Embedding Methodology and Broadband Microprobe Measurement for Through-Silicon Via Pair in Silicon Interposer. IEEE Transactions on Electromagnetic Compatibility, 2017, 59, 1565-1575.	2.2	1
122	CBO-Based TDR Approach for Wiring Network Diagnosis. Modeling and Optimization in Science and Technologies, 2017, , 329-348.	0.7	1
123	Notice of Retraction: FDTD Implementation of Resistive Coupling at MTL Termination Networks. IEEE Transactions on Electromagnetic Compatibility, 2017, 59, 1975-1982.	2.2	1
124	Remote Monitoring of Joints Status on In-Service High-Voltage Overhead Lines. Energies, 2019, 12, 1004.	3.1	1
125	A Method for Measuring the Maximum Measurable Gain of a Passive Intermodulation Chamber. Electronics (Switzerland), 2021, 10, 770.	3.1	1
126	Efficient estimation of EMI from stacked radiation sources by combining their spherical wave expansion coefficients. IET Microwaves, Antennas and Propagation, 2020, 14, 1504-1513.	1.4	1

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127	Rapid Test Method for Multi-Beam Profile of Phased Array Antennas. <i>Sensors</i> , 2022, 22, 47.	3.8	1
128	Using TWDP to quantify channel performance with frequency-domain s-parameter data. , 2008, , .		0
129	Closed-form expressions for determining approximate PMC boundaries around an aperture in a metal cavity wall. , 2008, , .		0
130	Optimization procedure for removable EBG common mode filter design. , 2016, , .		0
131	Notice of Retraction: Approximate Versus Exact Near Field Formulation for a Cylindrical Electric Dipole. <i>IEEE Transactions on Electromagnetic Compatibility</i> , 2017, 59, 1498-1504.	2.2	0
132	A multilayer removable EBG based common mode filter for high speed buses. , 2017, , .		0
133	Notice of Retraction: Carbon-Reinforced Flexible Band-Stop Frequency Selective Surface Design. <i>IEEE Transactions on Electromagnetic Compatibility</i> , 2018, , 1-3.	2.2	0
134	Notice of Retraction: Resistive Coupling at Termination Networks of Lossy and Externally Excited MTL: An FDTD Formulation. <i>IEEE Transactions on Electromagnetic Compatibility</i> , 2018, 60, 211-217.	2.2	0
135	Probe calibrations for phased array measurement. , 2018, , .		0
136	An improved expression of via barrel-plate capacitance based on a convergence study. , 2018, , .		0
137	Reduction of IC Heatsink Radiation by Optimization of Absorbing Material Geometry. , 2019, , .		0
138	Notice of Retraction: Exact Near-Field Formulation for Shielding Evaluation: The Werner's Equations Revised. <i>IEEE Transactions on Electromagnetic Compatibility</i> , 2017, 59, 1967-1974.	2.2	0
139	EMI Minimization from Stacked Radiation Sources by Means of Multiple Objective Genetic Algorithm. <i>Electronics (Switzerland)</i> , 2022, 11, 1402.	3.1	0