**James L. Drewniak**

**PUBLICATIONS**

**Book Chapters**

1. M. Koledintseva, K.N. Rozanov, and J. L. Drewniak, “Engineering, modeling and testing of composite absorbing materials for EMC applications”, in *Advances in Composite Materials – Ecodesign and Analysis*, editor B. Attaf, InTech, ISBN 978-953-307-150-3, March 2011, Chapter 13, pp. 291-316.

**Referred Journal Articles**

1. Wei, L., Li, L., Shringarpure, K., Ruehli, A.E., Wheeler, E., Fan, J., Archambeault, B., Drewniak, J.L., “Plane-pair PEEC model for power distribution networks with sub-meshing techniques,” *IEEE Transactions on Microwave Theory and Techniques*, PP (99), Jan, 2016, pp. 1-9.
2. Sui, C., Ren, L., Gao, X., Pan, J., Drewniak, J.L., Beetner, D.G., “Predicting statistical characteristics of jitter due to simultaneous switching noise,” *IEEE Transactions on Electromagnetic Compatibility,* vol. 58, no. 1, Feb 2016, pp. 249 – 256.
3. Chen, H.C., Connor, S., Halligan, M.S., Tian, X., Li, X., Archambeault, B., Drewniak, J.L., Wu, T.L., “Investigation of the radiated emissions from high-speed/high-density connectors,” *IEEE Transactions on Electromagnetic Compatibility,* vol. 58, no. 1, Feb 2016, pp. 220 – 230.
4. Chada, A., Mutnury, B., Fan, J., Drewniak, J.L., “Quantifying the impact of FEXT on eye margin for coupled lines in inhomogeneous media,” *IEEE Transactions on Electromagnetic Compatibility,* vol. 57, no. 6, Dec 2015, pp. 1665-1675.
5. Chada, A., Mutnury, B., Fan, J., Drewniak, J.L., “Crosstalk impact of periodic-coupled routing on eye opening of high-speed links in PCBs,” *IEEE Transactions on Electromagnetic Compatibility,* vol. 57, no. 6, Dec 2015, pp. 1676-1689.
6. Dikhaminjia, N., Rogava, J., Tsiklauri, M., Zvonkin, M., Fan, J., Drewniak, J.L., “Fast approximation of sine and cosine hyperbolic functions for the calculation of the transmission matrix of a multiconductor transmission line,” *IEEE Transactions on Electromagnetic Compatibility,* vol. 57, no. 6, Dec 2015, pp. 1698-1704.
7. Yoon, C., Tsiklauri, M., Zvonkin, M., Chen, Q.B., Razmadze, A., Aflaki, A., Kim, J., Fan, J., Drewniak, J.L., “Design criteria and error sensitivity of time-domain channel characterization (TCC) for asymmetry fixture de-embedding,” *IEEE Transactions on Electromagnetic Compatibility,* pp. 836-846.
8. Li, J., Li, X., Toor, S., Fan, H., Bhobe, A.U., Fan, J. and Drewniak, J.L., “EMI coupling paths and mitigation in a board-to-board connector,” *IEEE Transactions on Electromagnetic Compatibility,* vol. 57, no. 4, August 2015, pp. 771-779.
9. Jing, S., Zhang, Y.J., Li, J., Liu, D., Koledintseva, M.Y., Pommerenke, D.J., Fan, J., Drewniak, J.L., “Extraction of permittivity and permeability for ferrites and flexible magnetodielectric materials using a genetic algorithm,” *IEEE Transactions on Electromagnetic Compatibility*, vol. 57, no. 3, June 2015, pp. 349-356.
10. Kim, J., Yoon, C., Tsiklauri, M., Zvonkin, M., Chen, Q.B., Aflaki, A., Fan, J., Drewniak, J.L.,  “Design criteria and error sensitivity of automatic fixture removal for asymmetric fixture de-embedding,” *IEEE Transactions on Electromagnetic Compatibility*, accepted for publication, November, 2014.
11. Tian, X., Halligan, M.S., Gui, L., Li, X., Kim, K., Connor, S., Archambeault, B., Cracraft, M., Ruehli, A., Li, Q., Pommerenke, D., Drewniak, J.L., “Quantifying radiation and physics from edge-coupled signal connectors,” *IEEE Transactions on Electromagnetic Compatibility*, vol. 57, no. 4, August 2015, pp. 780 - 787.
12. Rakov, A.V., De, S., Koledintseva, M.Y., Hinaga, S., Drewniak, J.L., Stanley, R.J., "Quantification of conductor surface roughness profiles in printed circuit boards,” *IEEE Transactions on Electromagnetic Compatibility*, vol. 57, no. 2, April 2015, pp. 264 - 273.
13. Koledintseva, M.Y., Rakov, A.V., Koledintsev, A.I., Drewniak, J.L., Hinaga, S., “Improved experiment-based technique to characterize dielectric properties of printed circuit boards,” *IEEE Transactions on Electromagnetic Compatibility*, vol. 56, no. 6, December 2014, pp. 1559 - 1566.
14. [Guo, X.](http://www.scopus.com/authid/detail.url?authorId=56019373900&amp;eid=2-s2.0-84893196347), [Jackson, D.R.](http://www.scopus.com/authid/detail.url?authorId=55671361700&amp;eid=2-s2.0-84893196347), [Koledintseva, M.Y.](http://www.scopus.com/authid/detail.url?authorId=6602769309&amp;eid=2-s2.0-84893196347), [Hinaga, S.](http://www.scopus.com/authid/detail.url?authorId=35310537300&amp;eid=2-s2.0-84893196347), [Drewniak, J.L.](http://www.scopus.com/authid/detail.url?authorId=7007149908&amp;eid=2-s2.0-84893196347), [Chen, J.](http://www.scopus.com/authid/detail.url?authorId=56021283000&amp;eid=2-s2.0-84893196347), “An analysis of conductor surface roughness effects on signal propagation for stripline interconnects,” *IEEE Transactions on Electromagnetic Compatibility*, vol. 56, no. 3, June 2014, pp. 707-714.
15. [Ren, L.](http://www.scopus.com/authid/detail.url?authorId=55985789500&amp;eid=2-s2.0-84891643802), [Li, T.](http://www.scopus.com/authid/detail.url?authorId=55986140000&amp;eid=2-s2.0-84891643802), [Chandra, S.](http://www.scopus.com/authid/detail.url?authorId=16038937800&amp;eid=2-s2.0-84891643802), [Chen, X.](http://www.scopus.com/authid/detail.url?authorId=51963432200&amp;eid=2-s2.0-84891643802), [Bishnoi, H.](http://www.scopus.com/authid/detail.url?authorId=26427534500&amp;eid=2-s2.0-84891643802), [Sun, S.](http://www.scopus.com/authid/detail.url?authorId=55986133600&amp;eid=2-s2.0-84891643802), [Boyle, P.](http://www.scopus.com/authid/detail.url?authorId=55361159200&amp;eid=2-s2.0-84891643802), [Zamek, I.](http://www.scopus.com/authid/detail.url?authorId=55986004300&amp;eid=2-s2.0-84891643802), [Fan, J.](http://www.scopus.com/authid/detail.url?authorId=55985666800&amp;eid=2-s2.0-84891643802), [Beetner, D.G.](http://www.scopus.com/authid/detail.url?authorId=6602719167&amp;eid=2-s2.0-84891643802), [Drewniak, J.L.](http://www.scopus.com/authid/detail.url?authorId=7007149908&amp;eid=2-s2.0-84891643802), “Prediction of power supply noise from switching activity in an FPGA,” *IEEE Transactions on Electromagnetic Compatibility*, vol. 56, no. 3, pp. 699-706, June 2014.
16. [De Paulis, F.](http://www.scopus.com/authid/detail.url?authorId=24801913100&amp;eid=2-s2.0-84884227639), [Nisanci, M.H.](http://www.scopus.com/authid/detail.url?authorId=36450811400&amp;eid=2-s2.0-84884227639), [Orlandi, A.](http://www.scopus.com/authid/detail.url?authorId=35482168000&amp;eid=2-s2.0-84884227639), [Koledintseva, M.Y.](http://www.scopus.com/authid/detail.url?authorId=6602769309&amp;eid=2-s2.0-84884227639), [Drewniak, J.L.](http://www.scopus.com/authid/detail.url?authorId=7007149908&amp;eid=2-s2.0-84884227639), “Design of homogeneous and composite materials from shielding effectiveness specifications,” *IEEE Transactions on Electromagnetic Compatibility*, vol. 56, no 2., pp. 343-351, April 2014 ***. (2014 Richard Schulz Prize Paper Award Honorable Mention)***
17. [Archambeault, B.](http://www.scopus.com/authid/detail.url?authorId=7006129909&amp;eid=2-s2.0-84881050674), [Connor, S.](http://www.scopus.com/authid/detail.url?authorId=7102767380&amp;eid=2-s2.0-84881050674), [Halligan, M.S.](http://www.scopus.com/authid/detail.url?authorId=53863547000&amp;eid=2-s2.0-84881050674), [Drewniak, J.L.](http://www.scopus.com/authid/detail.url?authorId=7007149908&amp;eid=2-s2.0-84881050674), [Ruehli, A.E.](http://www.scopus.com/authid/detail.url?authorId=7005598180&amp;eid=2-s2.0-84881050674), “Electromagnetic radiation resulting from PCB/high-density connector interfaces,” *IEEE Transactions on Electromagnetic Compatibility*, vol. 55, pp. 614-623, 2013.
18. J. Kim, L. Li, S. Wu, H. Wang, Y. Takita, H. Takeuchi, K., Araki, J. Fan, J. L. Drewniak, “Closed-form expressions for the maximum transient noise voltage caused by an IC switching current on a power distribution network,” *IEEE Transactions on Electromagnetic Compatibility*, vol. 54, no. 5, October 2012, pp. 1112-1124.
19. W. S. Smith, A. Razmadze, X.-M. Shao, and J. L. Drewniak, “A hierarchy of explicit low-dispersion FDTD methods for electrically large problems,” IEEE *Transactions on Antennas and Propagation*, vol. 60, no. 12, December 2012, pp. 5787-5800.
20. M.Y. Koledintseva, J. Huang, J.L. Drewniak, R.E. DuBroff, and B. Archambeault, “Modeling of metasheets embedded in dielectric layers”, *Progress In Electromagnetics Research*, PIER B, vol. 44, 2012, pp. 89-116.
21. M. Koledintseva, V.V. Khilkevich, A.G. Razmadze, A.Y. Gafarov, S. De, and J. L. Drewniak, “Evaluation of absorptive properties and permeability of thin sheet magneto-dielectric materials”, *Journal of Magnetism and Magnetic Materials,* vol.324, issue 21, Elsevier, 2012, pp. 3389-3392.
22. Xiao, J.; Pommerenke, D.; Drewniak, J. L.; Shumiya, H.; Maeshima, J.; Yamada, T.; Araki, K., “Model of secondary ESD for a portable electronic product,” *IEEE Transactions on Electromagnetic Compatibility*, vol. 54, no. 3, June 2012, pp. 546-555.
23. A. Koul, M.Y. Koledintseva, J. L. Drewniak, and S. Hinaga, “Differential extrapolation method for separating dielectric and rough conductor losses in printed circuit boards”, *IEEE Transactions on Electromagnetic Compatibility*, vol. 54, no. 2, April 2012, pp. 421-423.
24. M.H. Nisanci, F. de Paulis, M.Y. Koledintseva, J. L. Drewniak, and A. Orlandi, “From Maxwell Garnett to Debye model for electromagnetic simulation of composite dielectrics. Part II: Random cylindrical inclusions”, *IEEE Transactions on Electromagnetic Compatibility*, vol. 54, no. 2, 2012, pp. 280-289.
25. F. de Paulis, M.H. Nisanci, M.Y. Koledintseva, J. L. Drewniak, and A. Orlandi, “Derivation of homogeneous permittivity of composite materials with aligned cylindrical inclusions for causal electromagnetic simulations”, *Progress In Electromagnetic Research B*, vol. 37, pp. 205-235, 2012.
26. K.N. Rozanov, M.Y. Koledintseva, and J.L. Drewniak, “A mixing rule for predicting frequency dependence of material parameters in magnetic composites”, *Journal of Magnetism and Magnetic Materials*, no. 324, pp. 1063-1066, 2012.
27. De Paulis, F., Nisanci, M.H., Koledintseva, M.Y., Drewniak, J.L., Orlandi, A., “From Maxwell Garnett to Debye model for electromagnetic simulation of composite dielectrics part I: Random spherical inclusions,” *IEEE Transactions on Electromagnetic Compatibility*, 53 (4), November 2011, pp. 933-942.
28. Kim, J., Fan, J., Ruehli, A.E., Kim, J., Drewniak, J.L., “Inductance calculations for plane-pair area fills with vias in a power distribution network using a cavity model and partial inductances,” *IEEE Transactions on Microwave Theory and Techniques*, vol. 59 (8), August 2011, pp. 1909-1924.
29. Kim, J., Shringarpure, K., Fan, J., Kim, J., Drewniak, J.L. “Equivalent circuit model for power bus design in multi-layer PCBs with via arrays,” *IEEE Microwave and Wireless Components Letters*, vol. 21 (2), February 2011, pp. 62-64.
30. M.Y. Koledintseva, A.G. Razmadze, A.Y. Gafarov, V.V. Khilkevich, J.L. Drewniak, and T. Tsutaoka, “Attenuation in extended structures coated with thin magneto-dielectric absorber layer”, *Progress In Electromagnetic Research*, vol. 118 , pp. 441-459, 2011.
31. K. Hu, D. Beetner, D. Pommerenke, and J. L. Drewniak, “Unbalanced currents in integrated circuits and their effect on TEM cell emissions,” *IEEE Transactions on Electromagnetic Compatibility*, vol. 53, (3), August 2011 , pp. 600-610.
32. M. Y. Koledintseva, J. Xu, S. De, J.L. Drewniak, Y. He, and R. Johnson, “Systematic analysis and engineering of absorbing materials containing magnetic inclusions for EMC applications”, *IEEE Trans. Magnetics*, vol. 47, no. 2, February, 2011, pp. 317-323.
33. K. Lian, M. Eliacin, R. Lempkowski, M. Chason, M. J. O’Keefe, J. L. Drewniak, “RF-MEMS switches on a printed circuit board platform,” *Circuit World*, vol. 36, no. 4, pp. 12-17, 2010.
34. J. Xu, M. Koledintseva, Y. Zhang, Y. He, R.E. DuBroff, J.L. Drewniak, J. Zhang, "Complex permittivity and permeability measurements and finite-difference time domain simulation of ferrite materials", *IEEE Transactions on Electromagnetic Compatibility,* 2010, vol. 52, no. 4, pp. 878-887.
35. J. Zhang, M. Koledintseva, G. Antonini, J. Drewniak, A. Orlandi, and K. Rozanov, “Planar transmission line method for characterization of printed circuit board dielectrics”, *Progress In Electromagnetic Research, (PIER)*, vol. 102, March 2010, pp. 267-286.
36. J.N. Reck, K. Hu, S. Li, H. Weng, D. S. Ramsay, M. J. O’Keefe, J. L. Drewniak, and D. Beetner, “Fabrication of Two-Layer Thin Film Magnetic Field Micro-Probes on Freestanding SU-8 Photoepoxy,” *IEEE Transactions on Device and Materials Reliability,* vol. 10, no. 1, March 2010, pp., 26-32.
37. J. Zhang, J. L. Drewniak, D. J. Pommerenke, M.Y. Koledintseva, R. E. Dubroff, W. Cheng, Z. Yang, Q. B. Chen, and A. Orlandi, “Causal RLGC (ƒ) Models for Transmission Lines from Measured *S* -Parameters,” *IEEE Transactions on Electromagnetic Compatibility,* vol. 52, no. 1, February 2010, pp. 189-198.
38. M. Koledintseva, J. Drewniak, R. DuBroff, K. Rozanov, and B. Archambeault, “Modeling of shielding composite materials and structures for microwave frequencies”, *Progress In Electromagnetic Research B (PIER B)*, vol. 15, June 2009, pp., 197-215.
39. M. Koledintseva, J. Drewniak, Y. Zhang, J. Lenn, and M. Thoms, “Engineering of ferrite-based composite materials for shielding enclosures”, *Journal of Magnetism and Magnetic Materials (JMMM)*, vol. 321, March 2009, pp., 730-733.
40. S. Sun, D.J. Pommerenke, J. L. Drewniak, G. Chen, L. Xui, M.A. Brower, M.Y. Koledintseva, “A novel TDR-based coaxial cable sensor for crack/strain sensing in reinforced concrete Structures” *IEEE Trans. Instrumentation and Measurement,* vol. 58, no. 8, pp. 2714-2725, August 2009.
41. J. Zhang, M.Y. Koledintseva, J.L. Drewniak, D.J. Pommerenke, R.E. DuBroff, Z. Yang, W. Cheng, K.N. Rozanov, G.N. Antonini, A. Orlandi, “Reconstruction of dispersive dielectric properties for PCB substrates using a genetic algorithm,” *IEEE Transactions on Electromagnetic Compatibility*, vol. 50, pp. 704-714, August 2008.
42. G. Muchaidze, J. Koo, K. Wang, A. Martwick, T. Li, Q. Cai, L. Han, J. Min. J.L. Drewniak, D. Pommerenke, “Susceptibility scanning as failure analysis tool for system level ESD problems”, *IEEE Transactions on Electromagnetic Compatibility*, vol. 50, pp. 268-276, May 2008.
43. M.Y. Koledintseva, J.L. Drewniak, T.P. Van Doren, D.J. Pommerenke, M. Cocchini, and D.M. Hockanson, “Mutual external inductance in stripline structures”, *Progress in Electromagnetic Research (PIER)*, vol. 80, pp. 349-368, January 2008.
44. M.Y. Koledintseva, J.L. Drewniak, T.P. Van Doren, D.J. Pommerenke, M. Cocchini, D.M. Hockanson, “Method of edge currents for calculating mutual external inductance in a microstrip structure,” *Progress in Electromagnetics Research (PIER)*, vol. 80, January, 197-224, January 2008.
45. Sing-Tin Chen, Ting-Kuang Wang, Tzong-Lin Wu, and J.L. Drewniak, “Modeling noise coupling between package and PCB power ground planes with an efficient 2D FDTD/lumped element method,” *IEEE Trans. on Advanced Packaging*, vol. 30, pp. 864-871, November 2007.
46. Shishuang Sun, Geping Liu, D.J. Pommerenke, and J.L. Drewniak, “Hand-assemble cable bundle modeling for crosstalk and common-mode radiation prediction,” *IEEE Transactions on Electromagnetic Compatibility*, vol. 49, pp. 708-718, August 2007.
47. K. Xiao, D.J. Pommerenke, and J.L. Drewniak, “A three-dimensional FDTD sub-gridding algorithm with separated temporal and spatial interfaces and related stability analysis,” *IEEE Trans. Antennas and Propag*., vol. 55, pp. 1981-1990, July 2007.
48. M.Y. Koledintseva, R.E. DuBroff, R.W. Schwartz, and J.L. Drewniak, “Double statistical distribution of conductivity and aspect ratio of inclusions in dielectric mixtures at microwave frequencies”, *Progress in Electromagnetic Research (PIER)*, vol. 77, pp. 193-214, 2007.
49. C. Wang, J. Mao, G. Selli, S. Luan, L. Zhang, J. Fan, J. L. Drewniak, D. J. Pommerenke, and R. E. DuBroff , “An efficient approach for power delivery network design with closed-form expressions for parasitic interconnect inductances,” *IEEE Trans. on Advanced Packaging*, vol. 29, pp. 320-334, May 2006.
50. G. Chen, R. McDaniel, S. Sun, D.J. Pommerenke, and J.L. Drewniak. “Distributed crack sensors featuring unique memory capability for post-earthquake condition assessment of RC structures.” *Journal of Smart Structures and Systems*, vol. 1, no. 2, pp. 141-158, 2005.
51. G. D. Chen, S. Sun, D. Pommerenke, J.L. Drewniak, G.G. Greene, R.D. McDaniel, A. Belarbi, and H. Mu, “Crack detection of a full-scale reinforced concrete girder with a distributed cable sensor,” *Journal of Smart Materials and Structures*, vol. 14, pp. 1-10, 2005.
52. Marina Y. Koledintseva, James L. Drewniak, David J. Pommerenke, Giulio Antonini, Antonio Orlandi, Konstantin N. Rozanov, “Wideband Lorentzian media in the FDTD algorithm,” *IEEE Trans. Electromagn. Compat*., vol 47, pp. 392-399, May 2005.
53. C. Wang, M. Leone, J.L. Drewniak, and A. Orlandi, “Coupling between differential signals and the DC power-bus in multilayer PCBs,” *IEEE Trans. on Advanced Packaging*, vol. 28, pp. 337-345, May 2005.
54. G. Chen, H. Mu, D. Pommerenke, and J.L. Drewniak, “Damage detection of reinforced concrete beams with novel distributed crack/strain sensors,” *J. Struct. Health Monitoring*, vol. 3, pp. 225-243, September 2004.
55. T. Sudo, Hideki Sasaki, N. Masuda, and J.L. Drewniak, “Electromagnetic interference of system on package,” *IEEE Trans. Advanced Packaging*, vol. 27, pp. 304-314, May 2004.
56. K. Murano, T. Sanpei. F. Xiao, C. Wang, Y. Kami, and J.L. Drewniak, “Susceptibility characterization of a cavity with an aperture by using slowly rotating fields: FDTD analysis and measurements,” *IEEE Trans. Electromagn. Compat*., vol. 46, pp. 169-177, May 2004.
57. Y. Kayano, M. Tanaka, J.L. Drewniak, and H. Inoue, “Common-mode current due to a trace near an edge and its suppression using a guard band,” *IEEE Trans. Electromagn. Compat*., vol. 46, pp. 46-53, February 2004.
58. J. Fan, J.L. Drewniak, and J.L. Knighten, “Lumped circuit model extraction for vias in multi-layer substrates,” *IEEE Trans. Electromagn. Compat*., vol. 45, pp. 272-280, May 2003.
59. Wang Kai, Ramachandran Chundru, David Pommerenke, T.P. Van Doren, J.L. Drewniak, and, A. Shashindranath, “Numerical modeling of electrostatic discharge generator,” *IEEE Trans. Electromagn. Compat*., vol. 45, pp. 258-271, May 2003.
60. W. Cui, J. Fan, Y. Ren, H. Shi, J.L. Drewniak, and R.E. DuBroff, “DC power bus noise isolation with power plane segmentation,” *IEEE Trans. Electromagn. Compat*., vol. 45, pp. 436-443, May 2003.
61. M. Xu, T.H. Hubing, J. Chen, T.P. Van Doren, J.L. Drewniak, and R.E. DuBroff, “Power-bus decoupling with embedded capacitance in printed circuit board design,” *IEEE Trans. Electromagn. Compat*., vol. 45, pp. 22-30, February 2003.
62. M. Koledintseva, K.N. Rozanov, A. Orlandi, and J.L. Drewniak, “Extraction of Lorentzian and Debye parameters of dielectric and magnetic dispersive materials for FDTD modeling,” *J. Electrical Engineering*, vol. 53, pp. 97-100, 2002.
63. G. Antonini, J. Drewniak, A. Orlandi, and V. Ricchiuti, “Eye-pattern evaluation in high-speed digital systems analysis by using MTL modeling”, *IEEE Transactions on Microwave Theory and Techniques*, vol. 50, pp 1807-1815, July 2002.
64. J. Fan, W. Cui, J.L. Drewniak, T.P. Van Doren, and J.L. Knighten, “Estimating the noise mitigation effect of local decoupling in printed circuit boards”, *IEEE Trans. on Advanced Packaging*, vol. 25, pp. 154-165, May 2002.
65. R. Araneo, C. Wang, X. Gu, J.L. Drewniak, and S. Celozzi, “Efficient modeling of discontinuities and dispersive media in printed transmission lines,” *IEEE Trans. on Magnetics*, vol. 38, pp. 765-768, March 2002.
66. X. Ye, J.L. Drewniak, J. Nadolny, and D.M. Hockanson, “High performance backplane connectors: analysis of EMI characteristics,” *IEEE Trans. Electromagn. Compat*., vol. 44, pp 175-181, February 2002.
67. X. Ye and J.L. Drewniak, “FDTD modeling incorporating a two-port network for I/O line EMI filtering design,” *IEEE Trans. Electromagn. Compat*., vol. 44, pp 165-174, February 2002.
68. J. Fan, J.L. Drewniak, J.L. Knighten, N.W. Smith, A.. Orlandi, T.P. Van Doren, T.H. Hubing, and R.E. DuBroff, “Quantifying SMT decoupling capacitor placement in DC power bus design for multi-layer PCBs, *IEEE Trans. Electromagn. Compat*., vol. 43, pp. 588-599, November 2001.
69. X. Ye, M.Y. Koledintseva, and J.L. Drewniak, “DC power-bus design using FDTD modeling with dispersive media and surface mount technology components” *IEEE Trans. Electromagn. Compat*., vol. 43, pp. 579-587, November 2001.
70. J. Fan, J.L. Drewniak, H. Shi, and J.K. Knighten, “DC power-bus modeling and design with a mixed-potential integral equation formulation and circuit extraction,” *IEEE Trans. Electromagn. Compat*., vol. 43, pp. 426-436, November 2001.
71. X. Ye, D.M. Hockanson, M. Li, W. Cui, Y. Ren, J.L. Drewniak, and R.E. DuBroff, “EMI mitigation with multi-layer power bus stacks and via stitching of reference planes,” *IEEE Trans. Electromagn. Compat*., vol. 43, pp. 538-548, November 2001.
72. M. Li, J.L. Drewniak, S. Radu, J. Nuebel, T.H. Hubing, R.E. DuBroff, and T.P. Van Doren, “An EMI estimate for shielding enclosure design,” *IEEE Trans. Electromagn. Compat*., vol. 43, pp. 295-304, August 2001.
73. Y. Huang, J. Butler, M. DeSorgo, R.E. DuBroff, T.H. Hubing, J.L. Drewniak, and T.P. Van Doren, “EMI considerations in selecting heatsink thermal gasket materials,” *IEEE Trans. Electromagn. Compat*., vol. 43, pp. 254-260, August 2001.
74. M. Tanaka, Y. Ding, J.L. Drewniak, and H. Inoue, “Diagnosing EMI resulting from high-speed routing between power and ground planes,” *IEICE Trans. on Comm.*, vol. E84-B, no. 7, pp.1970-1972, July 2001.
75. J. Fan, H. Shi, A. Orlandi, J.L. Knighten, and J.L. Drewniak, “Modeling DC power-bus structures with vertical discontinuities using a circuit extraction approach based on a mixed-potential integral equation formulation,” *IEEE Transactions on Advanced Packaging*, vol. 24, pp.143-157, May 2001.
76. D.M. Hockanson, J.L. Drewniak, T.H. Hubing, T.P. Van Doren, and R.E. DuBroff, “FDTD and experimental investigation of EMI from stacked-card PCB configurations,” *IEEE Trans. Electromagn. Compat*., vol. 43, pp. 1-10, February, 2001.
77. X. Ye and J.L. Drewniak, “Incorporating two-port networks with S-parameters into FDTD”, *IEEE Microwave and Wireless Components Letters*, vol. 11, pp. 77-79, February, 2001.
78. M. Li, J. Nuebel, J.L. Drewniak, T.H. Hubing, R.E. DuBroff, and T.P. Van Doren, “EMI from airflow aperture arrays in shielding enclosures – experiments, FDTD, and MOM modeling,” *IEEE Trans. Electromagn. Compat*., vol. 42, pp. 265-275, August, 2000.
79. J. Tichenor, S.D. Sudhoff, and J.L. Drewniak, "Behavioral IGBT modeling for predicting high-frequency effects in motor drives,” *IEEE Transactions on Power Electronics*, vol. 15, pp. 354-360, March 2000.
80. M. Li, J. Nuebel, J.L. Drewniak, T.H. Hubing, R.E. DuBroff, and T.P. Van Doren, “EMI reduction from airflow aperture arrays using dual perforated screens with loss,” *IEEE Trans. Electromagn. Compat*., vol. 42, pp. 135-141, May, 2000.
81. M. Li, X. Luo, and J.L. Drewniak, “FDTD modeling of lumped ferrites,” *IEEE Trans. Electromagn. Compat*., vol. 42, pp. 142-151, May, 2000.
82. M. Li, J. Nuebel, J.L. Drewniak, T.H. Hubing, R.E. DuBroff, and T.P. Van Doren, “ EMI from cavity modes of shielding enclosures – FDTD modeling and measurements,” *IEEE Trans. Electromagn. Compat*., vol. 42, pp. 29-38, February, 2000.
83. S.D. Sudhoff, J.L. Tichenor, and J.L. Drewniak, “Wide-Bandwidth Multi-Resolutional Analysis of a PM Synchronous Machine," *IEEE Transactions on Energy Conversion*, vol. 14, December 1999, pp. 1011-1018.
84. M.W. Ali, T.H. Hubing, and J.L. Drewniak, “A hybrid FEM/MOM technique for electromagnetic scattering and radiation from dielectric objects with attached wires,” *IEEE Trans. Electromagn. Compat*., vol. 39, pp. 304-314, November 1997.
85. H. Shi, F. Sha, J.L. Drewniak, T.H. Hubing, and T.P. Van Doren, “An experimental procedure for characterizing interconnects to the DC power bus on a multi-layer printed circuit board,” *IEEE Trans. Electromagn. Compat*., vol. 39, pp. 279-285, November 1997.
86. D.M. Hockanson, J.L. Drewniak, T.H. Hubing, T.P. Van Doren, F. Sha, C.-W. Lam, and L. Rubin, “Quantifying EMI noise sources resulting from finite-impedance reference planes,” *IEEE Trans. Electromagn. Compat*., vol. 39, pp. 286-297, November 1997.
87. M.D.I. Raza, R.E. DuBroff, and J.L. Drewniak, “Radiation imaging operators applied to the detection of velocity and density contrast boundaries,” *IEEE Trans. Ultrasonics, Ferroelec., Freq. Control*, vol. 44, pp. 1401-1404, November 1997.
88. M. Li, K-P Ma, D.M. Hockanson, J.L. Drewniak, T.H. Hubing, and T.P. Van Doren, “FDTD modeling of thin-slots near corners of shielding enclosures,” *IEEE Trans. Electromagn. Compat*., vol. 39, pp. 225-232, August 1997.
89. K.P. Ma, J.L. Drewniak, T.H. Hubing, and T.P. Van Doren, “A comparison of FDTD algorithms for subcellular modeling of slots in shielding enclosures,” *IEEE Trans. Electromagn. Compat*., vol. 39, pp. 147-155, May 1997.
90. H. Shi and J.L. Drewniak, “Modeling waveguide couplers with an explicit FDTD-discrete surface integral method,” *Microwave and Optical Technology Letters*, vol. 15, no. 4, pp. 208-214, April 1997.
91. D.M. Hockanson, J.L. Drewniak, T.H. Hubing, T.P. Van Doren, F. Sha, and M. Wilhelm, “Investigations of fundamental EMI source mechanisms driving common-mode radiation from printed circuit boards with attached cables,” *IEEE Trans. Electromagn. Compat*., vol. 38, pp. 557-566, November 1996.
92. D.M. Hockanson, J.L. Drewniak, T.H. Hubing, and T.P. Van Doren, “FDTD modeling of common-mode radiation from cables,” *IEEE Trans. Electromagn. Compat*., vol. 38, pp. 376-387, August 1996.
93. J.L. Drewniak and F. Dunn, “An experimentally obtainable heat source due to absorption of ultrasound in biological media,” *J. Acoust. Soc Am*., vol. 100, pp. 1250-1253, August 1996.
94. H. Shi and J.L. Drewniak, “Dispersion comparison for DSI-based and tensor-based non-orthogonal FDTD,” *IEEE Microwave and Guided Wave Lett*., vol. 6, pp. 193-195, May 1996.
95. T.H. Hubing, J.L. Drewniak, T.P. Van Doren, and D. Hockanson, "Power bus decoupling on multi-layer printed circuit boards," *IEEE Trans. Electromagn. Compat*., vol. 37, pp. 155-166, May 1995.
96. E.D. Wheeler, J.L. Boone, and J.L. Drewniak, "A contactless method for measuring the bulk resistance of II-VI compound semiconductors," *Rev. Sci. Inst*., vol. 65, pp. 3844-3847, December 1994.
97. J.L. Drewniak and F. Dunn, "On the equivalence of pulsed and continuous ultrasound in producing temperature elevations resulting from absorption," *J. Acoust. Soc. Japan*, pp. 115-120, February, 1992.
98. K.I. Carnes, J.L. Drewniak, and F. Dunn, In utero measurements of ultrasonically induced fetal mouse temperature increases," *Ultrasound in Medicine and Biology*, vol. 17, pp. 373-382, 1991.
99. J.L. Drewniak and P.E. Mayes, "The synthesis of patterns using a series-fed array of ANnular SEctor Radiating LINe (ANSERLIN) Elements: low-profile, circularly polarized radiators," *IEEE Trans. Antennas Propag*., vol. 39, pp. 184-189, February 1991.
100. J.L. Drewniak, L.A. Frizzell, and F. Dunn, "Errors resulting from finite beamwidth and sample dimensions in the determination of the ultrasonic absorption coefficient," *J. Acoust. Soc. Am*., vol. 88, pp. 967-977, August 1990.
101. J.L. Drewniak, K.I. Carnes, and F. Dunn, "In vitro ultrasonic heating of fetal bone," *J. Acoust. Soc. Am*., vol. 86, pp. 1254-1258, October 1989.
102. J.L. Drewniak and P.E. Mayes, "ANSERLIN: A broadband, low-profile, circularly polarized antenna," *IEEE Trans. Antennas Propag*., vol. 37, pp. 281-288, March 1989.

**Trade Journal and Magazine Articles**

1. Archambeault, B., Zhao, B., Shringapure, K., Drewniak, James L., “Design tips,” *Electromagnetic Compatibility Magazine, IEEE*, vol. 4, issue 2, pp.106-107, 2015.
2. Rimolo-Donadio, Renato ; Selli, Giuseppe ; De Paulis, Francesco ; Gu, Xiaoxiong ; Kwark, Young Hoon ; Drewniak, James L. ; Bruens, Heinz-Dietrich ; Schuster, Christian, “Signal integrity: Efficient, physics-based via modeling: Integration of striplines,” *Electromagnetic Compatibility Magazine, IEEE*, vol. 1, issue 2, pp.74-81, 2012.
3. J.L. Knighten, B.R. Archambeault, J. Fan, G. Selli, Liang Xue, S. Connor, and J.L. Drewniak, “PDN design strategies. 2: Ceramic decoupling capacitors – does location matter?,” *IEEE EMC Society Newsletter*, Winter 2006, pp. 56-67.
4. J.L. Knighten, B.R. Archambeault, J. Fan, G. Selli, S. Connor, and J.L. Drewniak, “PDN design strategies. 1: Ceramic decoupling capacitors – what value should I use?,” *IEEE EMC Society Newsletter*, Fall 2005, pp. 46-53.
5. T. Van Doren, T. Hubing, J. Drewniak, F. Sha, and D. Hockanson, “Stop that noise: EMI - frustrating for many; a rewarding career for a few,” *IEEE Potential Magazine*, pp. 35-39, Nov./Dec. 1995

**Conference Papers**

1. Liu, Q., Jiao, X., Li, J., Khilkevich, V., Drewniak, J., Dixon, P., Arien, Y., “Modeling absorbing materials for EMI mitigation,” *IEEE International Symp. Electromag. Compat.*, Dresden, Germany, August 2015, pp. 1548-1552.
2. Li, J., Zhang, Y., Liu, D., Bhobe, A., Drewniak, J.L., Fan, J., “Radiation physics from two-wire transmission lines,” *IEEE Symposium on Electromagnetic Compatibility and Signal Integrity, EMCSI 2015,* Santa Clara, CA, March 2015, pp. 160-164.
3. Tsiklauri, M., Zvonkin, M., Dikhaminjia, N., Fan, J., Drewniak, J.L., “Frequency-domain interpolation of long structures for system-level signal integrity analysis,” *IEEE Symposium on Electromagnetic Compatibility and Signal Integrity, EMCSI 2015,* Santa Clara, CA, March 2015, pp. 335-340.
4. Qi, Y., Fan, J., Bi, Y.H., Yu, W., Drewniak, J.L., “ A planar low-profile meander antenna design for wireless terminal achieving low self-interference,” *IEEE Symposium on Electromagnetic Compatibility and Signal Integrity, EMCSI 2015,* Santa Clara, CA, March 2015, pp. 320-323.
5. Zhao, B., Huang, C., Shringarpure, K., Fan, J., Archambeault, B., Achkir, B., Connor, S., Cracraft, M., Cocchini, M., Ruehli, A. and Drewniak, J.L., “Analytical PDN voltage ripple calculation using simplified equivalent circuit model of PCB PDN,” *IEEE Symposium on Electromagnetic Compatibility and Signal Integrity, EMCSI 2015,* Santa Clara, CA, March 2015, pp. 133-138.
6. Wei, L., Shringarpure, K., Ruehli, A., Wheeler, E. and Drewniak, J.L., “Plane-pair PEEC models for PDN using sub-meshing,” In *Electrical Performance of Electronic Packaging and Systems (EPEPS), IEEE 23rd Conference,* October 2014,pp. 159-162.
7. Tian, X., Halligan, H., Li, X., Kim,K., Chen, H., Connor, S., Archambeault, B., Cracraft, M., Ruehli, A., Drewniak, J.L., “Modeling electromagnetic radiation at high‐density PCB/connector interfaces,” *IEEE International Symp. Electromag. Compat.*, Raleigh, NC, August 2014, pp. 97-102.
8. [Jiao, X.](http://www.scopus.com/authid/detail.url?authorId=55899525000&amp;eid=2-s2.0-84893200570),  [Maheshwari, P.](http://www.scopus.com/authid/detail.url?authorId=7007149908&amp;eid=2-s2.0-84893200570),  [Khilkevich, V.](http://www.scopus.com/authid/detail.url?authorId=55670974300&amp;eid=2-s2.0-84893200570), [Pommerenke, D.](http://www.scopus.com/authid/detail.url?authorId=35517386300&amp;eid=2-s2.0-84893200570),  [Dixon, P.](http://www.scopus.com/authid/detail.url?authorId=7007149908&amp;eid=2-s2.0-84893200570),  [Arien, Y.](http://www.scopus.com/authid/detail.url?authorId=55670974300&amp;eid=2-s2.0-84893200570), [Bhobe, A.](http://www.scopus.com/authid/detail.url?authorId=35517386300&amp;eid=2-s2.0-84893200570), [Li, J.](http://www.scopus.com/authid/detail.url?authorId=35517386300&amp;eid=2-s2.0-84893200570), [Li, X.](http://www.scopus.com/authid/detail.url?authorId=35517386300&amp;eid=2-s2.0-84893200570), [Pommerenke, D.](http://www.scopus.com/authid/detail.url?authorId=35517386300&amp;eid=2-s2.0-84893200570), [Drewniak, J.](http://www.scopus.com/authid/detail.url?authorId=35517386300&amp;eid=2-s2.0-84893200570)L., “EMI mitigation with lossy material at 10GHz,” *IEEE International Symp. Electromag. Compat.*, Raleigh, NC, August 2014, pp. 150-154.
9. [Shringarpure, K.](http://www.scopus.com/authid/detail.url?authorId=55899525000&amp;eid=2-s2.0-84893200570),  [Zhao, B.](http://www.scopus.com/authid/detail.url?authorId=7007149908&amp;eid=2-s2.0-84893200570),  [Wei, L.](http://www.scopus.com/authid/detail.url?authorId=55670974300&amp;eid=2-s2.0-84893200570), [Archambeault, B.](http://www.scopus.com/authid/detail.url?authorId=35517386300&amp;eid=2-s2.0-84893200570),  [Ruehli, A.](http://www.scopus.com/authid/detail.url?authorId=7007149908&amp;eid=2-s2.0-84893200570),  [Cracraft, M.](http://www.scopus.com/authid/detail.url?authorId=55670974300&amp;eid=2-s2.0-84893200570),  [Cocchini, M.](http://www.scopus.com/authid/detail.url?authorId=35517386300&amp;eid=2-s2.0-84893200570),  [Wheeler, E.](http://www.scopus.com/authid/detail.url?authorId=35517386300&amp;eid=2-s2.0-84893200570), [Fan, J.](http://www.scopus.com/authid/detail.url?authorId=35517386300&amp;eid=2-s2.0-84893200570), [Drewniak, J.](http://www.scopus.com/authid/detail.url?authorId=35517386300&amp;eid=2-s2.0-84893200570)L., “On finding the optimal number of decoupling capacitors by minimizing the equivalent inductance of the PCB PDN,” *IEEE International Symp. Electromag. Compat.*, Raleigh, NC, August 2014, pp. 218-223.
10. [Li, J.](http://www.scopus.com/authid/detail.url?authorId=55899525000&amp;eid=2-s2.0-84893200570),  [Toor, S.](http://www.scopus.com/authid/detail.url?authorId=7007149908&amp;eid=2-s2.0-84893200570),  [Bhobe, A.](http://www.scopus.com/authid/detail.url?authorId=55670974300&amp;eid=2-s2.0-84893200570),  [Drewniak, J.](http://www.scopus.com/authid/detail.url?authorId=35517386300&amp;eid=2-s2.0-84893200570)L., [Fan, J.](http://www.scopus.com/authid/detail.url?authorId=35517386300&amp;eid=2-s2.0-84893200570), “Radiation physics and EMI coupling path determination for optical links,” *IEEE International Symp. Electromag. Compat.*, Raleigh, NC, August 2014, pp. 576-581.
11. [Yoon, C.](http://www.scopus.com/authid/detail.url?authorId=55899525000&amp;eid=2-s2.0-84893200570),  [Tsiklauri, M.](http://www.scopus.com/authid/detail.url?authorId=7007149908&amp;eid=2-s2.0-84893200570),  [Zvonkin, M.](http://www.scopus.com/authid/detail.url?authorId=55670974300&amp;eid=2-s2.0-84893200570), [Razmadze, A.](http://www.scopus.com/authid/detail.url?authorId=35517386300&amp;eid=2-s2.0-84893200570),  [Aflaki, A.](http://www.scopus.com/authid/detail.url?authorId=7007149908&amp;eid=2-s2.0-84893200570),  [Kim, J.](http://www.scopus.com/authid/detail.url?authorId=55670974300&amp;eid=2-s2.0-84893200570),  [Chen, B.](http://www.scopus.com/authid/detail.url?authorId=35517386300&amp;eid=2-s2.0-84893200570), [Fan, J.](http://www.scopus.com/authid/detail.url?authorId=35517386300&amp;eid=2-s2.0-84893200570), [Drewniak, J.](http://www.scopus.com/authid/detail.url?authorId=35517386300&amp;eid=2-s2.0-84893200570)L., “Design criteria of automatic fixture removal (AFR) for asymmetric fixture de‐embedding,” *IEEE International Symp. Electromag. Compat.*, Raleigh, NC, August 2014, pp. 654-659.
12. [Shringarpure, K.](http://www.scopus.com/authid/detail.url?authorId=55899525000&amp;eid=2-s2.0-84893200570),  [Zhao, B.](http://www.scopus.com/authid/detail.url?authorId=7007149908&amp;eid=2-s2.0-84893200570),  [Archambeault, B.](http://www.scopus.com/authid/detail.url?authorId=35517386300&amp;eid=2-s2.0-84893200570),  [Ruehli, A.](http://www.scopus.com/authid/detail.url?authorId=7007149908&amp;eid=2-s2.0-84893200570),  [Fan, J.](http://www.scopus.com/authid/detail.url?authorId=35517386300&amp;eid=2-s2.0-84893200570), [Drewniak, J.](http://www.scopus.com/authid/detail.url?authorId=35517386300&amp;eid=2-s2.0-84893200570)L., “Effect of narrow power fills on PCB PDN noise,” *IEEE International Symp. Electromag. Compat.*, Raleigh, NC, August 2014, pp. 839-844.
13. Tsiklauri, M.,  [Zvonkin, M.](http://www.scopus.com/authid/detail.url?authorId=7007149908&amp;eid=2-s2.0-84893200570),  [Fan, J.](http://www.scopus.com/authid/detail.url?authorId=35517386300&amp;eid=2-s2.0-84893200570), [Drewniak, J.](http://www.scopus.com/authid/detail.url?authorId=35517386300&amp;eid=2-s2.0-84893200570)L., “Causality and delay and physics in real systems,” *IEEE International Symp. Electromag. Compat.*, Raleigh, NC, August 2014, pp. 961-966.
14. Chada, A.R., Fan, J., Drewniak, J.L., Mutnury, B. , “Estimation of mode conversion and crosstalk impact from a single-ended aggressor to a differential victim using statistical BER analysis*,” IEEE 64th Electronic Components and Technology Conference*, ECTC 2014, Orlando, FL, May 2014, pp. 2081-2087.
15. Koledintseva, M.Y., Rakov, A.V., Koledintsev, A.I., Drewniak, J.L., Hinaga, S., “Elimination of conductor foil roughness effects in characterization of dielectric properties of printed circuit boards,” *DesignCon2014*.
16. [Faraji, P.](http://www.scopus.com/authid/detail.url?authorId=55899525000&amp;eid=2-s2.0-84893200570), [Drewniak, J.L.](http://www.scopus.com/authid/detail.url?authorId=7007149908&amp;eid=2-s2.0-84893200570), [McBain, D.S.](http://www.scopus.com/authid/detail.url?authorId=55670974300&amp;eid=2-s2.0-84893200570), [Pommerenke, D.](http://www.scopus.com/authid/detail.url?authorId=35517386300&amp;eid=2-s2.0-84893200570), “SE measurements with a TEM cell to study gasket reliability,” *IEEE Symp. Electromag. Compat.*, Denver, CO, August 2013, pp. 462-465.
17. [Radchenko, A.](http://www.scopus.com/authid/detail.url?authorId=36188611900&amp;eid=2-s2.0-84893188713), [Bishop, J.](http://www.scopus.com/authid/detail.url?authorId=7402084922&amp;eid=2-s2.0-84893188713), [Johnson, R.](http://www.scopus.com/authid/detail.url?authorId=8629041400&amp;eid=2-s2.0-84893188713), [Dixon, P.](http://www.scopus.com/authid/detail.url?authorId=8525021700&amp;eid=2-s2.0-84893188713), [Koledintseva, M.](http://www.scopus.com/authid/detail.url?authorId=6602769309&amp;eid=2-s2.0-84893188713), [Jobava, R.](http://www.scopus.com/authid/detail.url?authorId=6701564812&amp;eid=2-s2.0-84893188713), [Pommerenke, D.](http://www.scopus.com/authid/detail.url?authorId=35517386300&amp;eid=2-s2.0-84893188713), [Drewniak, J](http://www.scopus.com/authid/detail.url?authorId=7007149908&amp;eid=2-s2.0-84893188713)., “Sheet absorbing material modeling and application for enclosures,” *IEEE Symp. Electromag. Compat.*, Denver, CO, August 2013, pp. 645-650.
18. [Rakov, A.](http://www.scopus.com/authid/detail.url?authorId=56020509800&amp;eid=2-s2.0-84893188121), [Koledintseva, M.](http://www.scopus.com/authid/detail.url?authorId=6602769309&amp;eid=2-s2.0-84893188121), [Drewniak, J.](http://www.scopus.com/authid/detail.url?authorId=7007149908&amp;eid=2-s2.0-84893188121), [Hinaga, S.](http://www.scopus.com/authid/detail.url?authorId=35310537300&amp;eid=2-s2.0-84893188121), “Major error and sensitivity analysis for characterization of laminate dielectrics on PCB striplines,” *IEEE Symp. Electromag. Compat.*, Denver, CO, August 2013, pp. 852-857.
19. Hinaga, S., Rakov, A.V., Koledintseva, M.Y., Drewniak, J.L., “Insertion loss reduction through non-roughening inner-layer surface treatments,” *Techn. Conf. IPC Expo/APEX* *2014*, Las Vegas, March 2014.
20. [Chada, A.R.](http://www.scopus.com/authid/detail.url?authorId=26030904700&amp;eid=2-s2.0-84883436814), [Wu, S.](http://www.scopus.com/authid/detail.url?authorId=55612102500&amp;eid=2-s2.0-84883436814), [Fan, J.](http://www.scopus.com/authid/detail.url?authorId=35309991700&amp;eid=2-s2.0-84883436814), [Drewniak, J.L.](http://www.scopus.com/authid/detail.url?authorId=7007149908&amp;eid=2-s2.0-84883436814), [Mutnury, B.](http://www.scopus.com/authid/detail.url?authorId=12242136700&amp;eid=2-s2.0-84883436814), [De Araujo, D.N.](http://www.scopus.com/authid/detail.url?authorId=6701820380&amp;eid=2-s2.0-84883436814), “Efficient complex broadside coupled trace modeling and estimation of crosstalk impact using statistical BER analysis for high volume, high performance printed circuit board designs,” *IEEE 63rd Electronic Components and Technology Conference, ECTC 2013*, Las Vegas, May 2013, pp. 2095-2101.
21. [Shringarpure, K.](http://www.scopus.com/authid/detail.url?authorId=36976454000&amp;eid=2-s2.0-84883708614), [Pan, S.](http://www.scopus.com/authid/detail.url?authorId=35311928900&amp;eid=2-s2.0-84883708614), [Kim, J.](http://www.scopus.com/authid/detail.url?authorId=55206105800&amp;eid=2-s2.0-84883708614), [Achkir, B.](http://www.scopus.com/authid/detail.url?authorId=26648098900&amp;eid=2-s2.0-84883708614), [Archambeault, B.](http://www.scopus.com/authid/detail.url?authorId=55360814600&amp;eid=2-s2.0-84883708614), [Fan, J.](http://www.scopus.com/authid/detail.url?authorId=35309991700&amp;eid=2-s2.0-84883708614), [Drewniak, J](http://www.scopus.com/authid/detail.url?authorId=7007149908&amp;eid=2-s2.0-84883708614)., “Innovative PDN design guidelines for practical high layer-count PCBs,” *DesignCon2013*, vol. 2, January 2013, pp. 1290-1314.
22. J. Li, Y.-J. Zhang, A.Y. Gafarov, S. De, M.Y. Koledintseva, J. Marchand, D.Hess, T.Durant, J.L. Drewniak, and J. Fan “EMI reduction evaluation with flexible absorbing materials and ferrite cores applied on cables”, *IEEE Symp. Electromag. Compat.*, Pittsburg, PA, 2012, pp. 646-651
23. J. Zhang, , A. Ciccomancini Scogna, J. Fan, B. Archambeault, J. Drewniak, A. Orlandi, “A hybrid stack-up of printed circuit board for high-speed networking systems,” *IEEE Symp. Electromag. Compat.*, Pittsburg, PA, 2012, pp. 554-559.
24. M.Y. Koledintseva, A. Razmadze, A. Gafarov, S. De, S. Hinaga, and J.L. Drewniak, “PCB conductor surface roughness as a layer with effective material parameters”, *IEEE Symp. Electromag. Compat.*, Pittsburg, PA, 2012, pp. 138- 142. (Symposium Best Paper Award)
25. S. De, A.Y. Gafarov, M.Y. Koledintseva, S. Hinaga, R.J. Stanley, and J.L. Drewniak, “Semi-automatic copper foil surface roughness detection from PCB microsection images”, *IEEE Symp. Electromag. Compat.*, Pittsburg, PA, 2012, pp. 132-137.
26. J. Li, M.Y. Koledintseva, A.G. Razmadze, A.Y. Gafarov, Y.-J. Zhang, J.L. Drewniak, J. Fan, and J. Shenhui, “Permeability and permittivity uncertainty effect on modeling absorbing coatings and ferrites on cables”, *IEEE Symp. Electromag. Compat.*, Pittsburg, PA, 2012, pp. 74- 79.
27. S. Hinaga, S. De, A.Y. Gafarov, M.Y. Koledintseva, and J.L. Drewniak, “Determination of copper foil surface roughness from microsection photographs”, *Techn. Conf. IPC Expo/APEX* *2012*, Las Vegas, April 2012.
28. Koledintseva, M.Y., Drewniak, J.L., Hinaga, S. “Effect of anisotropy on extracted dielectric properties of PCB laminate dielectrics,” *IEEE International Symposium on Electromagnetic Compatibility*, pp. 514-517, August 2011.
29. Xiao, J., Pommerenke, D., Drewniak, J.L., Shumiya, H., Yamada, T., Araki, K., “ Model of secondary ESD for a portable product,” *IEEE International Symposium on Electromagnetic Compatibility*, pp. 56-61, August 2011.
30. Kim, J., De, S., Shringarpure, K., Pan, S., Achkir, B., Fan, J., Drewniak, J.L., “Analytical expressions for transfer function of supply voltage fluctuation to jitter at a single-ended buffer*,” IEEE International Symposium on Electromagnetic Compatibility*, pp. 422-427, August 2011.
31. Koledintseva, M.Y., Koul, A., Hinaga, S., Drewniak, J.L. “Differential and extrapolation techniques for extracting dielectric loss of printed circuit board laminates,” *IEEE MTT-S International Microwave Symposium Digest*, 2011.
32. H. Wang, Y. Zhang, J. L. Drewniak, J. Fan, and B. Archambeault, “Capacitance calculation for offset via structures using an integral approximation approach based on finite element method,” 43rd *International Symposium on Microelectronics (IMAPS2010)*, Raleigh, North Carolina, October 31-November 4, 2010.
33. N. Radhakrishnan, B. Achkir, J. Fan, and J. L. Drewniak, “Stressed jitter analysis for physical link characterization,” *IEEE International Symposium on Electromagnetic Compatibility*, Fort Lauderdale, FL, July 25-30, 2010.
34. J. Zhang, Q. B. Chen, J. Fan, J. L. Drewniak, A. Orlandi, and B. Archambeault, “DC blocking via structure optimization and measurement correlation for SerDes channels*,” IEEE International Symposium on Electromagnetic Compatibility*, Fort Lauderdale, FL, July 25-30, 2010.
35. J. Kim, B. Archambeault, J. L. Drewniak, and J. Fan, “Analysis of mutual inductance effect between decoupling capacitors on planar power bus,” *2010 Asia-Pacific Symposium on Electromagnetic Compatibility*, Beijing, China, April 12-16, 2010.
36. Z. Yu, J. Fan, S. Connor, B. Archambeault, and J. L. Drewniak, “Modeling of noise coupling inside multilayer printed circuit boards using cavity model and segmentation technique,” *2010 Asia-Pacific Symposium on Electromagnetic Compatibility*, Beijing, China, April 12-16, 2010.
37. S. Connor, L. Ren, J. Kim, B. Archambeault, J. Fan, and J. L. Drewniak, “Using the cavity resonance method for fast calculation of power plane impedance,” *DesignCon 2010*, Santa Clara, CA, February 1-4, 2010.
38. V. Khilkevich, V. Sivarajan, D. Liu, B. Achkir, H. Ning, M. Koledintseva, J. Drewniak, “A systematic approach to PCB material characterization using time-domain TRL calibration”, *DesignCon 2010*, Santa Clara, California, February 1 - 4, 2010.
39. J. Kim, L. Ren, J. Fan, J.L. Drewniak, “Extraction of equivalent inductance in package-PCB hierarchical power distribution network,” *18th Conference on Electrical Performance of Electronic Packaging*, Portland, OR, October 19-21, 2009.
40. A. Rajagopal, B. Achkir, M. Koledinteseva, A. Koul, and J. Drewniak, “Material Parameter Extraction Using Time-Domain TRL (t-TRL) Measurements,” *IEEE International Symposium on Electromagnetic Compatibility*, Austin, TX, August 17-21, 2009.
41. L. Ren, J. Kim, G. Feng, B. Archambeault, J.L. Knighten, J.L. Drewniak, and J. Fan, “Frequency-dependent via inductances for accurate power distribution network modeling,” *IEEE International Symposium on Electromagnetic Compatibility*, Austin, TX, August 17-21, 2009.
42. A. Koul, P. K. R. Anmula, M. Y. Koledintseva, J. Drewniak, and S. Hinaga, “Improved Technique for Extracting Parameters of Low-Loss Dielectrics on Printed Circuit Boards,” *IEEE International Symposium on Electromagnetic Compatibility*, Austin, TX, August 17-21, 2009.
43. J. Xu, M.Y. Koledintseva, Y. He, R.E. DuBroff, and J.L. Drewniak, “Measurement of Electromagnetic Parameters and FDTD Modeling of Ferrite Cores,” *IEEE International Symposium on Electromagnetic Compatibility*, Austin, TX, August 17-21, 2009.
44. J. Zhang, Q. B. Chen, J. L. Drewniak, and A. Orlandi, “Using a Single-Ended TRL Calibration Pattern to De-embed Coupled Transmission Lines,” *IEEE International Symposium on Electromagnetic Compatibility*, Austin, TX, August 17-21, 2009.
45. A. Koul, A. Conrad, R. Jackson, A. Packard, J. Song, E. Wheeler, and J.L. Drewniak, “Developing an SI Tool Set for Engineering Design Discovery, Physical Insight, and Education,” *IEEE International Symposium on Electromagnetic Compatibility*, Austin, TX, August 17-21, 2009.
46. J. Chen and J. Drewniak, “Integral Equation Methods (MOM) in Numerical Modeling,” *IEEE International Symposium on Electromagnetic Compatibility*, Austin, TX, August 17-21, 2009.
47. J. Drewniak, “Block-by-Block Link-Path Analysis and Design with Physics-Based Models,” *IEEE International Symposium on Electromagnetic Compatibility*, Austin, TX, August 17-21, 2009.
48. S. Mittal, J. Zhang, D. Pommerenke, J. L. Drewniak, K. Hu, and X. Dong, “Active Probes for Creating H-Field Probes for Flat Frequency Response,” *IEEE International Symposium on Electromagnetic Compatibility*, Austin, TX, August 17-21, 2009.
49. H. Wang, W. Cheng, J. Zhang, J. Fisher, L. Zhu, J.L. Drewniak, and J. Fan, “Investigation of mixed-mode input impedance of multi-layer differential vias for impedance matching with traces,” *IEEE International Symposium on Electromagnetic Compatibility*, Austin, TX, August 17-21, 2009.
50. A.R. Chada, Y. Zhang, G. Feng, J.L. Drewniak, and J. Fan, “Impedance of an infinitely large parallel-plane pair and its applications in engineering modeling,” *IEEE International Symposium on Electromagnetic Compatibility*, Austin, TX, August 17-21, 2009 (**Leo L. Beranek Anechoic Chamber Student Travel Grant Award**).
51. J. Song, E. Wheeler, D. Pommerenke, and J.L. Drewniak, “Development of a Concept Inventory Test for Signal and Power Integrity in Electronic Design,” *39th IEEE* *Frontiers in Education Conference,* San Antonio, TX, Oct 18-21, 2009.
52. S. Pan, J. Fan, and J.L. Drewniak, “Equivalent characteristic impedance and propagation constant for multi-layer via structures,” *2009 International Symposium on Electromagnetic Compatibility*, Kyoto, Japan, July 20-24, 2009.
53. Scott Hinaga, Marina Y. Koledintseva, Praveen K. Reddy Anmula, and James L. Drewniak, “Effect of Conductor Surface roughness upon Measured Loss and Extracted Values of PCB Laminate Material Dissipation Factor,” IPC 2009 APEX/EXPO, Las Vegas, NV, March 2009.
54. S. Cicerone, A. Orlandi, B. Archambeault, S. Connor, J. Fan, and J.L. Drewniak, “Cavities’ Identification Algorithm for Power Integrity Analysis of Complex Boards,” accepted for publication in *The 20th International Zurich Symposium on Electromagnetic Compatibility*, Zurich, Switzerland, January 12-16, 2009, pp. 253-256.
55. Yaojiang Zhang, J. Fan, A.R. Chada, and J.L. Drewniak, “A concise multiple scattering method for via array analysis in a circular plate pair,” *Electrical Design of Advanced Packaging and Systems Symposium 2008*, Seoul, Korea, December 10-12, 2008, pp. 143-146.
56. Xin Chang, B. Archambeault, M. Cocchini, F. De Paulis, V. Sivarajan, Yaojiang Zhang, Jun Fan, S. Connor, A. Orlandi, and J.L. Drewniak, “Return via connections for extending signal link path bandwidth of via transitions,” *EMC Europe 2008*, Hamburg, Germany, September 8-12, 2008.
57. B. Archambeault, M. Cocchini, G. Selli, J. Fan, J.L. Knighten, S. Connor, A. Orlandi, and J.L. Drewniak, “Design methodology for PDN synthesis on multi-layer PCBs,” *EMC Europe 2008*, Hamburg, Germany, September 8-12, 2008.
58. Yaojiang Zhang, Xiaopeng Dong, Zhenwei Yu, F. DePaulis, Gang Feng, J.A. Mix, D. Hua, K. Slattery, J.L. Drewniak, Jun Fan, “Efficient prediction of RF Interference in a shielding enclosure with PCBs using a general segmentation method,” *EMC Europe 2008*, Hamburg, Germany, September 8-12, 2008.
59. Yaojiang Zhang, Q.B. Chen, Zhiqiang Qiu, J.L. Drewniak, A. Orlandi, “Extraction of casual RLGC models from measurements for signal link path analysis,” *EMC Europe 2008*, Hamburg, Germany, September 8-12, 2008.
60. G. Muchaidze, Huang Wei, Jin Min, Shao Peng, J. Drewniak, D. Pommerenke, “Automated near-field scanning to identify resonances,” *EMC Europe 2008*, Hamburg, Germany, September 8-12, 2008.
61. K. Araki, Fengchao Xiao, Y. Kami, H. Bishnoi, J.L. Drewniak, “Modeling Interference coupling between two orthogonal strip lines on adjacent layers,” *EMC Europe 2008*, Hamburg, Germany, September 8-12, 2008.
62. V. Ricchiuti, A. Orlandi, J.L. Drewniak, F. DePaulis, “Characterization of serial links at 5.5Gbps on FR4 backplanes,” *EMC Europe 2008*, Hamburg, Germany, September 8-12, 2008.
63. J. Fan, M. Cocchini, B. Archambeault, J.L Knighten, Xin Chang, J.L. Drewniak, S. Connor, “Noise coupling between signal and power/ground nets due to differential vias transitioning through power/ground plane pair,” *Proc.* *IEEE International Symposium on Electromagnetic Compatibility*, Detroit, MI, August 18-22, 2008.
64. M. Cocchini, J. Fan, B. Archambeault, J.L Knighten, Xin Chang, J.L. Drewniak, Yaojiang Zhang, S. Connor, “Noise coupling between power/ground nets due to differential vias transitions in a multilayer PCB,” *Proc.* *IEEE International Symposium on Electromagnetic Compatibility*, Detroit, MI, August 18-22, 2008.
65. M. Cocchini, Wheling Cheng, Jianmin Zhang, J. Fisher, J. Fan, J. Drewniak, and Yaojiang Zhang, “Differential vias transition modeling in a multilayer printed circuit board,” *Proc.* *IEEE International Symposium on Electromagnetic Compatibility*, Detroit, MI, August 18-22, 2008.
66. M.A. Cracraft, J.L. Drewniak, “Analysis of distributed coupling along nonparallel traces using PEEC with phase term expansions,” *Proc.* *IEEE International Symposium on Electromagnetic Compatibility*, Detroit, MI, August 18-22, 2008.
67. Ji Chen, J. Drewniak, “Integral equation methods (MOM) in numerical modeling,” *Proc.* *IEEE International Symposium on Electromagnetic Compatibility*, Detroit, MI, August 18-22, 2008.
68. J. Drewniak, “Block-by-block link-path analysis and design with physics-based models,” *Proc.* *IEEE International Symposium on Electromagnetic Compatibility*, Detroit, MI, August 18-22, 2008.
69. J. Drewniak, “FIT numerical modeling for EMI Discovery and #x201C;Design#x201D,” *Proc.* *IEEE International Symposium on Electromagnetic Compatibility*, Detroit, MI, August 18-22, 2008.
70. M. Koledintseva, James Drewniak, and Yaojiang Zhang, “Engineering of Ferrite-Based Materials for Shielding Enclosures,” Abstracts of Moscow Int. Symposium on Magnetism, Moscow State University, Moscow, Russia, June 20-26, 2008.
71. R. Rimolo-Donadio, A.J. Stepan, H.D. Bruns, J.L. Drewniak, C. Schuster, “Simulation of Via Interconnects Using Physics-Based Models and Microwave Network Parameters,” *IEEE Workshop on Signal Propagation on Interconnects*, May 2008.
72. C. Schuster, G. Selli, Y.H. Kwark, M.B. Ritter, J.L. Drewniak, “Progress in representation and validation of physics-based via models” *IEEE Workshop on Signal Propagation on Interconnects*, May 2008.
73. XJianfeng Xu, Wen-Yan Yin, Jun-Fa Mao, Le-Wei Li, J.L. Drewniak, “Analysis of the thermal effects of GaAs FETs under the high-powered electromagnetic pulses,” *International Conference on Microwave and Millimeter Wave Technology,* vol. 3, 21-24 April 2008, pp 1531-1434
74. M.Y. Koledintseva, J.L. Drewniak, T.P. Van Doren, D.J. Pommerenke, M. Cocchini, D.M. Hockanson, “Method of Edge Currents for Calculating Mutual External Inductance in a Microstrip Structure,” *Progress in Electromagnetics Research*, PIER 80, 197-224, 2008.
75. I. Zamek, P. Boyle, Z. Li, S. Sun, X. Chen, S. Chandra, T. Li, D. Beetner, J. Drewniak, “Modeling FPGA Current Waveform and Spectrum and PDN Noise Estimation,” *DesignCon*, Feb. 2008
76. X. Chen, M. Cracraft, Y. Zhang, J. Zhang, J.L. Drewniak, B. Archambeault, S. Connor, “An efficient implementation of parallel FDTD”, *Proc. IEEE Symposium on Electromagnetic Compatibility,* 9-13 July. 2007, Honolulu, Hawaii
77. S. Li, K. Hu, D. Beetner, J. Drewniak, J. Reck, M. O’Keefe, Kai Wang, Xiaopeng Dong, K. Slattery, “Development and application of a high-resolution thin-film probe”, *Proc. IEEE Symposium on Electromagnetic Compatibility,* 9-13 July 2007, Honolulu, Hawaii
78. G. Selli, M. Cocchini, J.L. Knighten, B. Archambeault, J. Fan, S.R. Connor, A. Orlandi, J.L. Drewniak, “Early time charge replenishment of the power delivery network in multi-layer PCBs”, *Proc. IEEE Symposium on Electromagnetic Compatibility,* 9-13 July. 2007, Honolulu, Hawaii
79. M.Y. Koledintseva, S.K.R. Chandra, J.L. Drewniak, J.A. Lenn, “Engineering of absorbing gasket between metal plates”, *Proc. IEEE Symposium on Electromagnetic Compatibility,* 9-13 July. 2007, Honolulu, Hawaii
80. S. Deng, D. Pommerenke, T. Hubing, J. Drewniak, D. Beetner, Shin Dongshik, Kim Sungnam, Hocheol Kwak, “Mode suppressed TEM cell design for high frequency IC measurements”, *Proc. IEEE Symposium on Electromagnetic Compatibility,* 9-13 July. 2007, Honolulu, Hawaii
81. D. Wu, R. Qiang, J. Chen, C. Liu, M. Koledintseva, J.L. Drewniak, B. Archambeault, “Numerical modeling for periodic composite media for electromagnetic shielding application”, *Proc. IEEE Symposium on Electromagnetic Compatibility,* 9-13 July. 2007, Honolulu, Hawaii
82. J. Chen, J.L. Drewniak, R.E. DuBroff, J.L. Knighten, J. Fan, J. Flavin, “Predictive modeling of the effects of skew and imbalance on radiated EMI from cables”, *Proc. IEEE Symposium on Electromagnetic Compatibility,* 9-13 July. 2007, Honolulu, Hawaii
83. G. Feng, Y. Zhang, J.L. Drewniak, L. Zhang, “SPICE-Compatible cavity and transmission line model for power bus with narrow slots”, *Proc. IEEE Symposium on Electromagnetic Compatibility,* 9-13 July. 2007, Honolulu, Hawaii
84. Xiaohe Chen, J.L. Drewniak, Jianmin Zhang, M. Cracraft, B. Archambeault, S. Connor, “Large Scale Signal and Interconnect FDTD Modeling for BGA Package,” *IEEE Conference on Electrical Performance of Electronic Packaging,* Oct. 2006, pp 299-302.
85. K. Hu, H. Weng, D. Beetner, D. Pommerenke, J. Drewniak, K. Lavery, J. Whiles,  “Application of chip-level EMC in automotive product design”, *Proc. IEEE Symposium on Electromagnetic Compatibility,* Aug. 2006, Portland, OR
86. Shishuang Sun, D. Pommerenke, J. Drewniak, Kai Xiao, Sin-Ting Chen, Tzong-Lin Wu, “Characterizing package/PCB PDN interaction from a full-wave finite-difference formulation”, *Proc. IEEE Symposium on Electromagnetic Compatibility,* Aug. 2006, Portland, OR
87. Shishuang Sun, J. Drewniak, D. Pommerenke, “Common-mode radiation resulting from hand-assembled cable bundles on automotive platforms”, *Proc. IEEE Symposium on Electromagnetic Compatibility,* Aug. 2006, Portland, OR
88. M. Koledintseva, P.C. Ravva, J. Drewniak, A.A. Kitaitsev, A.A. Shinko, “Engineering of ferrite-graphite composite media for microwave shields”, *Proc. IEEE Symposium on Electromagnetic Compatibility,* Aug. 2006, Portland, OR
89. Rui Qiang, Ji Chen, Jingyu Huang. M. Koledintseva, R. DuBroff, J. Drewniak, Fan Yang, “Numerical analysis of sandwiched composite-FSS structures”, *Proc. IEEE Symposium on Electromagnetic Compatibility,* Aug. 2006, Portland, OR
90. Shishuang Sun, Gang Feng, Chong Ding, D.J. Pommerenke, J.L. Drewniak, “A method for characterizing EMI coupling paths and source properties in complex systems”, *Proc. IEEE Symposium on Electromagnetic Compatibility,* Aug. 2006, Portland, OR
91. Gang Feng, G. Selli, K. Chand, Mauro Lai, Liang Xue, J.L. Drewniak, B. Archambeault, S. Connor, “Analysis of Noise coupling result from overlapping power areas within power delivery networks”, *Proc. IEEE Symposium on Electromagnetic Compatibility,* Aug. 2006, Portland, OR
92. M.A. Cracraft, J.L. Drewniak, “Crosstalk analysis for nonparallel transmission lines using PEEC with a dynamic Green’s function formulation”, *Proc. IEEE Symposium on Electromagnetic Compatibility,* Aug. 2006, Portland, OR
93. Jianmin Zhang, J.L. Drewniak, D.J. Pommerenke, Zhiping Yang, “Influence of an extended stub at connector ports on singal launches and TRL de-embedding”, *Proc. IEEE Symposium on Electromagnetic Compatibility,* Aug. 2006, Portland, OR
94. Jiamin Zhang, J.L. Drewniak, D.J. Pommerenke, R.E. DuBroff, Zhiping Yang, Wheling Cheng, J. Fisher, S. Camerlo, “Signal link-path characterization up to 20 GHz based on a stripling structure”, *Proc. IEEE Symposium on Electromagnetic Compatibility,* Aug. 2006, Portland, OR
95. M. Lai, J.L. Drewniak, V. Ricchiuti, A. Orlandi, G. Antonini, “Modeling of the IC’s switching currents on the power bus of a high speed digital board,” *ÍEEE Workshop on Signal Propagation on Interconnects,* 9-12 May 2006, pp 51-54.
96. Jianmin Zhang, M.Y. Koledintseva, D.P. Pommerenke, J.L. Drewniak, K.N. Rozanov, G Antonini, A. Orlandi “Extraction of Dispersive Material Parameters Using Vector Network Analyzers and Genetic Algorithms” *Proc. in Instrumentation and Measurement Technology Conference,* 24-26 April 2006, pp. 462-467.
97. J.Y. Huang, P.C Ravva, M.Y. Koledintseva, R.E. DuBroff, J.L. Drewniak,  B. Archambeault, and K.N. Rozanov “Design of a metafilm-composite dielectric shielding structure using a genetic algorithm”, *Proc. Progress In Electromagnetic Research Symposium (PIERS2006 Cambridge)*, Cambridge, MA, USA, 26-29 March 2006, pp. 297-301.
98. J.Y. Huang, P.C Ravva, M.Y. Koledintseva, R.E. DuBroff, J.L. Drewniak,  B. Archambeault, and K.N. Rozanov “Design of a metafilm-composite dielectric shielding structure using a genetic algorithm”, *Progress In Electromagnetic Research Symposium (PIERS 2006 Cambridge)*, Abstracts, Cambridge, MA, USA, 26-29 March 2006, pp. 332.
99. M.Y. Koledintseva, P.C Ravva, J.L. Drewniak, M. Sabirov, V.V. Bodrov, I.V. Sourkova, and V.I. Sourkov, “Power absorption of near field of elementary radiators in proximity of a composite layer”, *Proc. Progress in Electromagnetic Research Symposium (PIERS 2006 Cambridge*), Cambridge, MA, USA, 26-29 March 2006, pp. 15-21.
100. M.Y. Koledintseva, P.C Ravva, J.L. Drewniak, M. Sabirov, V.V. Bodrov, I.V. Sourkova, and V.I. Sourkov, “Power absorption of near field of elementary radiators in proximity of a composite layer”, *Progress in Electromagnetic Research Symposium (PIERS), Abstracts*, Cambridge, MA, USA, 26-29 March 2006, p. 25.
101. E. Matoglu, N. Pham, G. Selli, M. Lai, S. Connor, J.L. Drewniak, B. Archambeault, D. Wang, D. Kuhn, R. Hashemi, D.N. deAraujo, M. Cases, B. Wilkie, B. Herrman, P. Patel, “Voltage regulator module noise analysis for high-volume server applications,” *Proc. IEEE 14th Topical Meeting on Electrical Performance of Electronic Packaging,* 24-26 Oct. 2005, pp. 267-270.
102. G. Selli, J.L. Drewniak, R.E. DuBroff, J. Fan, J.L. Knighten, N.W. Smith, B. Archambeault, S. Grivet-Talocia, F. Canavero, “Complex power distribution network investigation using SPICE based extraction from first principle formulations,” *Proc. IEEE 14th Topical Meeting on Electrical Performance of Electronic Packaging,* 24-26 Oct. 2005, pp. 263-266.
103. Shaowei Deng, T.H. Hubing, J.L. Drewniak, Jun Fan, J.L. Knighten, N.W. Smith, “Application of transmission line models to backpanel plated through-hole via design,” *Proc. IEEE 14th Topical Meeting on Electrical Performance of Electronic Packaging,* 24-26 Oct. 2005, pp. 99-102.
104. M. Koledintseva, P.C. Ravva, R. Dubroff, J. Drewniak, K. Rozanov, B. Archambeault, “Engineering of composite media for shields at microwave frequencies,” *Proc. IEEE Symposium on Electromagnetic Compatibility,* Aug. 2005, Chicago, IL, pp.169-174.
105. G. Antonini, A.C. Scogna, A. Orlandi, V. Ricchiuti, G. Selli, S. Luan, J.L. Drewniak, ”Validation of circuit extraction procedure by means of frequency and time domain measurements,”, *Proc. IEEE Symposium on Electromagnetic Compatibility,* Aug. 2005, Chicago, IL, vol. 1, pp.45-50.
106. Kai Xiao, D.J. Pommerenke, J.L. Drewniak, “A three-dimensional FDTD subgridding method with separate spatial and temporal subgridding interface,” *Proc. IEEE Symposium on Electromagnetic Compatibility,* Aug. 2005, Chicago, IL, vol. 2, pp.578-583.
107. G. Selli, J.L. Drewniak, R.E. DuBroff, J. Fan, J.L. Knighten, N.W. Smith, D. McCoy, B. Archambeault, “Power integrity investigation of by means of the segmentation method,” *Proc. IEEE Symposium on Electromagnetic Compatibility,* Aug. 2005, Chicago, IL, vol 2, pp.655-659.
108. Jianmin Zhang, D.J. Pommerenke, J.L. Drewniak, R.E. DuBroff, Zhiping Yang, Wheling Cheng, J. Fisher S. Camerlo, “A hybrid approach to decrease port influence in transmission line characterization,” *Proc. IEEE Symposium on Electromagnetic Compatibility,* Aug. 2005, Chicago, IL, pp.684-689.
109. S. Deng, T.H. Hubing, J.L. Drewniak, J. Fan, J.L. Knigthen and N.W. Smith, “Application of transmission line models to backpanel plated through hole via design,” *Proc. 14th IEEE Topical Meeting on Electrical Performance of Electronic Packaging , Oct.*. 2005, Austin, TX, pp. 99-102.
110. G. Selli, J.L. Drewniak, J. Fan, J.L. Knighten, N.W. Smith, D. McCoy, B. Archambeault, S. Grivet-Talocia, and F. Canavero, “Complex power distribution network investigation using SPICE based extraction from first principle formulations,” *Proc. 14th IEEE Topical Meeting on Electrical Performance of Electronic Packaging , Oct.*. 2005, Austin, TX, pp. 263-266.
111. E. Matoglu, N. Pham, G. Selli, M. Lai, S. Connor, J.L. Drewniak, B. Archambeault, D. Wang, D. Kuhn, R. Hascemi, D.N. de Araujo, M. Cases, B. WIlkie, B Herman and P. Patel, “Voltage regulator module noise analysis for high-volume server applications,” *Proc. 14th IEEE Topical Meeting on Electrical Performance of Electronic Packaging , Oct.*. 2005, Austin, TX, pp. 267-270.
112. C. A. Grosvenor, R. Johnk, D. Novotny, S. Canales, J. Baker-Jarvis, M. Janezic, J.L. Drewniak, M. Koledintseva, J. Zhang, P. Ravva, “Electrical material property measurements using a free-field, ultra-wideband system [dielectric measurements],” Electrical Insulation and Dielectric Phenomena, CEIDP '04, 2004 Annual Report Conference, pp. 174 – 177, October 17-20, 2004
113. L. Zhang, B. Archambeault, S. Conner, J.L. Knighten, J. Fan, N.W. Smith, R. Alexander, R.E. DuBroff, J.L. Drewniak, “A time domain approach to estimate current draw from SMT decoupling capacitors” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Santa Clara, CA, pp. 377-382, August 9-13, 2004.
114. J. Mao, C. Wang, L. Zhang, R.E. DuBroff, J.L. Drewniak, A. Orlandi, G. Antonini, “An efficient analysis method for the power bus impedance,” *Proc. of EMC EUROPE 2004*, International Symposium on EMC, Eindhoven, The Netherlands, September 6-10, 2004.
115. G. Selli, M. Lai, S. Luan, J.L. Drewniak, R.E. DuBroff, J. Fan, J. Knighten, N.W. Smith, G. Antonini, A. Orlandi, B. Archambeault, S. Connor, “Validation of equivalent circuits extracted from S-parameter data for eye-pattern evaluation”*IEEE Electromagnetic Compatibility Symposium Proceedings*, Santa Clara, CA, pp. 666-671, August 9-13, 2004.
116. S. Luan, G. Selli, J.L. Drewniak, A. De Luca, G. Antonini, A.C. Scogna, A. Orlandi, “Extraction of a SPICE via model from full-wave modeling for differential signaling,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Santa Clara, CA, pp. 577-582, August 9-13, 2004.
117. S. Sun, G. Liu, D.J. Pommerenke, J.L. Drewniak, R. W. Kautz, C. Chen, “Anticipating EMI and on-board interference in automotive platforms” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Santa Clara, CA, pp. 792-797, August 9-13, 2004.
118. S. Deng; J. Mao; T. Hubing, J.L. Drewniak, J. Fan; Knighten, N.W. Smith, R. Alexander, “Effects of open stubs associated with plated through-hole vias in backpanel designs” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Santa Clara, CA, pp. 1017-1022, August 9-13, 2004.
119. L. Zhang, B. Archambeault, S. Conner, J.L. Knighten, J. Fan, N.W. Smith, R. Alexander, R.E. DuBroff, J.L. Drewniak, “A circuit approach to model narrow slot structures in a power bus” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Santa Clara, CA, pp. 401-406, August 9-13, 2004.
120. B. Archambeault, S. Connor, J. Zhang, J.L. Drewniak, M. Lai, A. Orlandi, G. Antonini, A. Ruehli, “Comparison of via equivalent circuit model accuracy using quasi-static and full-wave approaches” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Santa Clara, CA, pp. 994-999, August 9-13, 2004.
121. J. Mao, J.L. Drewniak, G. Antonini, A. Orlandi, “Extraction of SPICE-type equivalent circuits of signal via transitions using the PEEC method” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Santa Clara, CA, pp. 980-983, August 9-13, 2004.
122. J. Zhang, M.Y. Koledintseva, J.L. Drewniak, G. Antonini, A. Orlandi, “Extracting R, L, G, C parameters of dispersive planar transmission lines from measured S-parameters using a genetic algorithm” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Santa Clara, CA, pp. 572-576, August 9-13, 2004.
123. H. Shim, T. Hubing, T. Van Doren, R.E. DuBroff, J.L. Drewniak, D.J. Pommerenke, R. Kaires, “Expert system algorithms for identifying radiated emission problems in printed circuit boards” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Santa Clara, CA, pp. 57-62 August 9-13, 2004.
124. Y. Kayano, M. Tanaka, H. Inoue, J.L. Drewniak, “A study on the correspondence of common-mode current in electromagnetic radiation from a PCB with a guard-band” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Santa Clara, CA, pp. 209-214, August 9-13, 2004.
125. S. Seguin, M.A. Cracraft, J.L. Drewniak, “Static and quasi-dynamic load balancing in parallel FDTD codes for signal integrity, power integrity, and packaging applications” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Santa Clara, CA, pp. 107-112, August 9-13, 2004.
126. K. Xiao, D.J. Pommerenke, and J.L. Drewniak, “A three-dimensional FDTD sub-gridding algorithm based on interpolation of current density”, *IEEE Electromagnetic Compatibility Symposium Proceedings*, Santa Clara, CA, pp. 118-128, August 9-13, 2004.
127. G. Selli, J.L. Drewniak, D.J. Pommerenke, “An extrapolation procedure to shorten time-domain simulations,”*IEEE Electromagnetic Compatibility Symposium Proceedings*, Santa Clara, CA, pp. 113-117, August 9-13, 2004.
128. Rui Qiang, Dagang Wu, J. Chen, C. Wang, J.L. Drewniak, “A CN-FDTD scheme and its application to VLSI interconnects/substrate modeling” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Santa Clara, CA, pp. 97-101, August 9-13, 2004.
129. M.Y. Koledintseva, J. Wu, J. Zhang, J.L. Drewniak, K.N. Rozanov, “Representation of permittivity for multiphase dielectric mixtures in FDTD modeling” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Santa Clara, CA, pp. 309-314, August 9-13, 2004.
130. S. Sun, D. Pommerenke, J.L. Drewniak, and G. Chen. “Signal loss, spatial resolution, and sensitivity of long coaxial crack sensors.” *Proc. 11th SPIE Annual Symposium on Smart Structures and Materials*, San Diego, California, March 11-18, pp. 786-797, 2004.
131. G. Selli, J. Zhang, M. Lai, A. De Luca, A. Ciccomancini Scogna, B. Archambeault, G. Antonini, J.L. Drewniak, A. Orlandi, J. Fan, J.L. Knighten, “3D modelling and circuit model extraction of vias in multilayer Printed circuit boards,” *Proc. of PIERS ’04*, Pisa, Italy, 28- 31 March, 2004.
132. J. Mao, G. Antonini, A. Orlandi, J.L. Drewniak, “Efficient capacitance calculations for PEEC circuit analysis,” *Proc. of PIERS ’04,* Pisa, Italy, 28- 31 March, 2004.
133. J. Wu, M. Koledintseva, J.L. Drewniak, and D.J. Pommerenke, “FDTD modeling of isotropic dispersive magnetic materials,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Boston, MA, pp. 904-909, August 2003.
134. J. Zhang, M. Koledintseva, G. Antonini, J.L. Drewniak, K. Rozanov, and A. Orlandi, “Reconstruction of the parameters of Debye and Lorentzian dispersive media using a genetic algorithm,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Boston, MA, pp. 898-903, August 2003.
135. C. Wang, and J.L. Drewniak, “Quantifying the effects of EMI and SI of source imbalances in differential signaling,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Boston, MA, pp. 865-868, August 2003.
136. S. Luan, G. Selli, J. Fan, M. Lai, J.L. Knighten, N.W. Smith, R. Alexander, G. Antonini, A. Ciccomancini, A. Orlandi, and J.L. Drewniak, “SPICE model libraries for via transitions,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Boston, MA, pp. 859-864, August 2003.
137. C. Wang, J.L. Drewniak, and J. Nadolny, “Anticipating EMI using transfer functions and signal integrity information,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Boston, MA, pp. 695-698, August 2003.
138. J. Mao, C. Wang, G. Selli, B. Archambeault, and J.L. Drewniak, “Memory DIMM DC power distribution analysis and design,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Boston, MA, pp. 597-602, August 2003.
139. G. Liu, D.J. Pommerenke, J.L. Drewniak, R. W. Kautz, and C. Chen, “Anticipating vehicle-level EMI using a multi-step approach,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Boston, MA, pp. 419-424, August 2003.
140. M.A. Cracraft, X. Ye, C. Wang, S. Chandra, and J.L. Drewniak, “Modeling issues for full-wave numerical simulation,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Boston, MA, pp. 335-340, August 2003.
141. G. Chen, H. Mu, D. Pommerenke, and J.L. Drewniak, “Continuous coaxial-cable sensors for monitoring of RC structures with electrical time-domain reflectometry,” in *Smart Structures & Mater. 2003: Smart Sys. & NDE for Civil Infrastructures*, C. C. Liu, Ed.., Proc. SPIE, vol. 5057, pp. 410-421, March 2-6, 2003.
142. G. Liu, Y. Ding, C. Chen, R. Kautz, J.L. Drewniak, and D.J. Pommerenke, “A dual-current-probe method for characterizing common-mode loop impedance,” *Proceedings of the 20th IEEE Instrumentation and Measurement Technology Conference*, Vail, CO, pp. 1239-1244, May 2003.
143. G. Chen, H. Mu, D. Pommerenke, and J.L. Drewniak, “Continuous coaxial-cable sensors for health monitoring of civil infrastructures,” *Proc. US-Japan Workshop on Smart Struct. Sys*., Building Research Institute, Tsukuba, Japan, pp. 301-314, October 18-19, 2002.
144. M.Y. Koledintseva, K.N. Rozanov, A. Orlandi, and J.L. Drewniak, “Extraction of the Lorentzian and Debye parameters of dielectric and magnetic dispersive materials for FDTD modeling,” *XVIth Joint Congress Electromagnetic Fields and Materials & Microwave Measurements*, Bratislava, Slovakia, p. 39, September 2002.
145. M.Y. Koledintseva, J.L. Drewniak, and D.J. Pommerenke, “FDTD analysis of printed circuit boards containing wideband dielectric media,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Minneapolis, MN, pp. 830-833, August 2002.
146. G. Liu, C. Chen, Y. Tu, and J.L. Drewniak, “Anticipating full-vehicle EMI from module level testing in automobiles,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Minneapolis, MN, pp. 982-986, August 2002.
147. J. Mao, B. Archambeault, J.L. Drewniak, and T.P. Van Doren, “Estimating DC power bus noise,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Minneapolis, MN, pp. 1032-1036, August 2002.
148. L. Zhang, C. Wang, K. Slattery, M. Yamaguchi, K. Arai, R.E. DuBroff, J.L. Drewniak, D.J. Pommerenke, and T.H. Hubing, “Field extraction from near-field scanning for a microstrip structure,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Minneapolis, MN, pp. 589-592, August 2002.
149. C. Wang, J.L. Drewniak, J. Fan, J. K. Knighten, R. Alexander, and N. Smith, “Transmission-line modeling of vias in differential signals,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Minneapolis, MN, pp. 249-252, August 2002.
150. M.Y. Koledintseva, J.L. Drewniak, T.P. Van Doren, and T.M. Hockanson, “External parasitic inductance in microstrip and stripline structures of finite size,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Minneapolis, MN, pp. 244-248, August 2002.
151. F. Centola, D.J. Pommerenke, K. Xiao, and J.L. Drewniak, “Alternatives to gaskets in shielding an enclosure”, *IEEE Electromagnetic Compatibility Symposium Proceedings*, Minneapolis, MN, pp. 205-209, August 2002.
152. S. Luan, F. Xiao, W. Liu, J. Fan, Y. Kami, J.L. Drewniak, and R.E. DuBroff, “Modeling noise coupling from non-parallel PCB trace routing,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Minneapolis, MN, pp. 109-112, August 2002.
153. H. Wang, C. L. Guo, T.H. Hubing, J.L. Drewniak, R.E. DuBroff, and T.P. Van Doren, “Application of higher-order FEM elements to the analysis of microstrip structures,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Minneapolis, MN, pp. 1015-1019, August 2002.
154. C. Wang, J. Fan, J.L. Knighten, N.W. Smith, R. Alexander, and J.L. Drewniak, “The effects of via transitions on differential signals,” *10th Topical Meeting on Electrical Performance of Electronics Packaging*, Cambridge, Massachusetts, pp. 39-42, October 29-31, 2001.
155. W. Cui, J. Fan, S. Luan, and J.L. Drewniak, “Modeling shared-via decoupling in a multi-layer structure using the CEMPIE approach,” *10th Topical Meeting on Electrical Performance of Electronics Packaging*, Cambridge, Massachusetts, pp. 265-268, October 29-31, 2001.
156. J. Fan, S. Luan, and J.L. Drewniak, “Including SMT ferrite beads in DC power bus and high-speed I/O line modeling,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Montreal, Canada, pp. 336-339, August 2001.
157. C.N. Olsen, T.P. Van Doren, T.H. Hubing, J.L. Drewniak, and R.E. DuBroff, “Improving the high-frequency attenuation of shunt capacitor, low-pass filters,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Montreal, Canada, pp. 487-489, August 2001.
158. M. Xu, T.H. Hubing, J. Chen, J.L. Drewniak, T.P. Van Doren, and R.E. DuBroff, “Mitigating power bus noise with embedded capacitance in PCB designs,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Montreal, Canada, pp. 496-500, August 2001.
159. X. Ye, G. Liu, and J.L. Drewniak, “Investigation of PCB layout parasitics in EMI filtering of I/O lines,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Montreal, Canada, pp. 501-504, August 2001.
160. M.Y. Koledintseva, J.L. Drewniak, and X. Ye, “Representation of gyromagnetic composite media for FDTD modeling,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Montreal, Canada, pp. 555-558, August 2001.
161. W. Cui, J. Fan, H. Shi, and J.L. Drewniak, “DC power bus noise isolation with power islands,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Montreal, Canada, pp. 899-903, August 2001.
162. C. Wang, J.L. Drewniak, J.L. Knighten, D. Wang, R. Alexander, and T.M. Hockanson, “Grounding of heatpipe/heatspreader and heatsink structures for EMI mitigation,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Montreal, Canada, pp. 916-920, August 2001.
163. R. Araneo, C. Wang, X. Gu, S. Celozzi, and J.L. Drewniak, “Differential signaling in PCBs: modeling and validation of dielectric losses and effects of discontinuities,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Montreal, Canada, pp. 933-938, August 2001.
164. W. Cui, D.P. Berg, J.L. Drewniak, and R.E. DuBroff, “Coupling paths in multi-layer printed circuit boards for electromagnetic interference and immunity – experiments and FDTD modeling, *Proceedings of the SPIE*, vol. 4394, Orlando, FL, April 16-20, 2001, pp. 132-138.
165. C. Wang, X. Ye, J.L. Drewniak, J.L. Knighten, D. Wang, and R. Alexander, “FDTD modeling of EMI due to a heatspreader/heatpipe structure,” *Proceedings of the 14th International Zurich Symp. And Technical Exhibition on EMC*, Zurich, Switzerland, pp. 541-544, February 20-22, 2001.
166. J. Fan, J.L. Drewniak, J.L. Knighten, N.W. Smith, and, A. Orlandi, “Calculation of self and mutual inductances associated with vias in a DC power bus structure from a mixed-potential integral equation formulation,” *Proceedings of the 14th International Zurich Symp. And Technical Exhibition on EMC*, Zurich, Switzerland, pp. 521-526, February 20-22, 2001.
167. M. Xu, T. Hubing, J. Drewniak, T. Van Doren, and R. DuBroff, “Modeling printed circuit boards with embedded decoupling capacitance,” ,” *Proceedings of the 14th International Zurich Symp. And Technical Exhibition on EMC*, Zurich, Switzerland, pp. 515-520, February 20-22, 2001.
168. J. Fan, J.L. Knighten, N.W. Smith, and J.L. Drewniak, “Modeling a DC power bus with a circuit extraction approach based on a mixed-potential integral equation formulation,” *URSI National Radio Science Meeting*, Boulder, CO, p. 199, January 8-11, 2001.
169. X. Ye, J. Fan, M. Koledintseva, and J.L. Drewniak, “DC power bus design with FDTD modeling including a dispersive media,” *9th Topical Meeting on Electrical Performance of Electronics Packaging*, Scottsdale, AZ, pp. 55-58, October 23-25, 2000.
170. J. Fan, J.L. Drewniak, and J.L. Knighten, “DC power bus modeling using a circuit extraction approach based on a mixed potential integral equation formulation and an iterative equation solver,” *9th Topical Meeting on Electrical Performance of Electronics Packaging*, Scottsdale, AZ, pp. 143-146, October 23-25, 2000.
171. W. Cui, X. Ye, M. Li, J.L. Drewniak, and T.M. Hockanson, “DC power bus modeling and design with FDTD,” *4th European Symposium on Electromagnetic Compatibility*, Brugge, Belgium, vol. 2, pp. 291-295, September 11-15, 2000.
172. T. Hubing, M. Xu, J. Chen, J.L. Drewniak, T.P. Van Doren, and R.E. DuBroff, “Printed circuit board power bus decoupling using embedded capacitance,” *4th European Symposium on Electromagnetic Compatibility*, Brugge, Belgium, vol. 1, pp. 639-642, September 11-15, 2000.
173. J. Fan, J.L. Drewniak, H. Shi, and J.L. Knighten, “Modeling and design of DC power buses on multi-layer PCBs including dielectric losses,” *4th European Symposium on Electromagnetic Compatibility*, Brugge, Belgium, vol. 1, pp. 575-579, September 11-15, 2000.
174. M. Xu, Y. Ji, T.H. Hubing, T.P. Van Doren, and J.L. Drewniak, “Development of a closed-form expression for the input impedance of power-ground plane structures,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Washington, DC, pp. 77-82, August 2000.
175. D. Berg, M. Tanaka, Y. Ji, X. Ye, J.L. Drewniak, T.H. Hubing, R.E. DuBroff and T.P. Van Doren, “FDTD and FEM/MOM modeling of EMI resulting from a trace near a PCB edge”, *IEEE Electromagnetic Compatibility Symposium Proceedings*, Washington, DC, pp. 135-140, August 2000.
176. T.M. Zeeff, T.H. Hubing, J.L. Drewniak, R.E. DuBroff, and T.P. Van Doren, “EMC analysis of an 18 LCD monitor,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Washington, DC, pp. 169-173, August 2000.
177. J. Chen, M. Xu, T.H. Hubing, J.L. Drewniak, and T.P. Van Doren, “Experimental evaluation of power bus decoupling on a 4-layer printed circuit board,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Washington, DC, pp. 335-338, August 2000.
178. H. Wang, Y. Ji, T.H. Hubing, J.L. Drewniak, T.P. Van Doren, and R.E. DuBroff, “Experimental and numerical study of the radiation from microstrip bends,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Washington, DC, pp. 739-741, August 2000.
179. J. Fan, J.L. Knighten, A. Orlandi, N.W. Smith, and J.L. Drewniak, “Quantifying decoupling capacitor location,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Washington, DC, pp. 761-766, August 2000.
180. Y. Ji, T.H. Hubing, and J.L. Drewniak, “Finite element modeling of patch antenna and cavity sources,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Washington, DC, pp. 811-814, August 2000.
181. X. Ye, T.M. Hockanson, M. Li, W. Cui, S. Radu, J.L. Drewniak, T.P. Van Doren, T.H. Hubing, and R.E. DuBroff, “The EMI benefits of ground plane stitching in multi-layer power bus stacks,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Washington, DC, pp. 833-838, August 2000.
182. X. Ye, W. Cui, D.P. Berg, R.E. DuBroff, and J.L. Drewniak, “Detection of electronic mines, timers, and fuses through electromagnetic interference signatures and stimulated emissions,” *Proceedings of the SPIE*, vol. 4038, Orlando, FL, April 24-28, 2000, pp. 66-77.
183. J. Fan, H. Shi, J.L. Knighten, and J.L. Drewniak, “An MPIE-based circuit extraction technique and its application to power bus modeling in high-speed digital designs,” *Proceedings of the 16th Annual Review of Progress in Applied Computational Electromagnetics*, Monterey, CA, pp. 130-137, March 2000.
184. B. Archambeault and J.L. Drewniak, “EMI model validation and standard challenge problems,” *Proceedings of the 16th Annual Review of Progress in Applied Computational Electromagnetics*, Monterey, CA, pp. 431-435, March 2000.
185. W. Cui, X. Ye, B. Archambeault, D. White, M. Li, and J.L. Drewniak, “Modeling EMI resulting from a signal via transition through power/ground layers,” *Proceedings of the 16th Annual Review of Progress in Applied Computational Electromagnetics*, Monterey, CA, pp. 436-443, March 2000.
186. M. Li, X. Luo, and J.L. Drewniak, “FDTD modeling of lumped ferrites,” *XXVIth URSI General Assembly Proceedings*, Toronto, Ontario, Canada, p.663, August 13-21, 1999.
187. M. Li, J.L. Drewniak, T.H. Hubing, R.E. DuBroff, T.P. Van Doren, “Slot and aperture coupling for airflow aperture arrays in shielding enclosure designs,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Seattle, WA, pp. 35-39, August 1999.
188. Y. Ji, J. Chen, T.H. Hubing, J.L. Drewniak, “Application of a hybrid FEM/MOM method to a canonical PCP problem,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Seattle, WA, pp. 91-96, August 1999.
189. W. Cui, M. Li, X. Luo, J.L. Drewniak, T.H. Hubing, T.P. Van Doren, R.E. DuBroff, “Anticipating EMI from coupling between high-speed digital and I/O lines,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Seattle, WA, pp. 189-194, August 1999.
190. M. Xu, S. Radu, J.L. Knighten, J.L. Drewniak, T.H. Hubing, L.O. Hoeft, J.T. DiBene II, “Signal Induced EMI in fiber-channel cable-connector assemblies,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Seattle, WA, pp. 201-205, August 1999.
191. T. Zeeff, C.E. Olsen, T.H. Hubing, J.L. Drewniak, R.E. DuBroff, “Microstrip coupling algorithm validation and modification based on measurements and numerical modeling,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Seattle, WA, pp. 323-327, August 1999.
192. X. Ye, J. Nadolny, J.L. Drewniak, T.H. Hubing, T.P. Van Doren, D.E. DuBroff, “EMI associated with inter-board connection for module-on-backplane and stacked-card configurations,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Seattle, WA, pp. 797-802, August 1999.
193. J. Fan, Y. Ren, J. Chen, T.M. Hockanson, H. Shi, J.L. Drewniak, T.H. Hubing, T.P. Van Doren, R.E. DuBroff, “RF isolation using power islands in DC power bus design,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Seattle, WA, pp. 838-843, August 1999.
194. J.L. Knighten, L.O. Hoeft, S. Radu, M. Xu, J.L. Drewniak, “Observed shielding variations in cable assemblies intended for differential signaling of 1.0625 gigabit/second data rates,” *Proceedings Of the 13th International Zurich Symp. And Technical Exhibition on EMC*, Zurich, Switzerland, pp. 5-10, February 1999.
195. M. Li, S. Radu, J.L. Drewniak, T. Hubing, T.P. Van Doren, and R.E. DuBroff, “An EMI estimate for shielding enclosure design,” *Proceedings Of the 13th International Zurich Symp. and Technical Exhibition on EMC*, Zurich, Switzerland, pp. 369-374, February 1999.
196. J. Fan, J.L. Drewniak, T.H. Hubing, R.E. DuBroff, and T.P. Van Doren, “Incorporating vertical discontinuities in power bus modeling using a mixed-potential integral equation and circuit extraction formulation,” *Proceedings of the 7th Topical Meeting on Electrical Performance of Electronic Packaging*, West Point, NY, pp. 171-174, October 1998.
197. H. Shi, J. Fan, J.L. Drewniak, T.H. Hubing, and T.P. Van Doren, “Modeling multilayered PCB power-bus designs using an MPIE based circuit extraction technique,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Denver, CO, pp. 647-651, August 1998.
198. D. Hockanson, J.L. Drewniak, R.E. DuBroff, T.H. Hubing, and T.P. Van Doren, “Considerations for magnetic-field coupling resulting in radiated EMI,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Denver, CO, pp. 808-813, August 1998.
199. S. Radu, T. Zeeff, J. Nuebel, J.L. Drewniak, T.P. Van Doren, and T.H. Hubing, “An impact of layer stack-up on EMI,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Denver, CO, pp. 828-833, August 1998.
200. M. Li, S. Radu, J. Nuebel, J.L. Drewniak, T.H. Hubing, and T.P. Van Doren, “Design of airflow aperture arrays in shielding enclosures,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Denver, CO, pp. 1059-1063, August 1998.
201. X. Luo, M. Li, and J.L. Drewniak, “Time history extrapolation for FDTD modeling of shielding enclosure designs and EMI antenna geometries,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Denver, CO, pp. 1172-1177, August 1998.
202. T. Hubing, N. Kashyap, J.L. Drewniak, T.P. Van Doren, and R.E. DuBroff, “Expert system algorithms for EMC analysis,” *Proceedings of the 14th Annual Review of Progress in Applied Computational Electromagnetics*, Monterey, CA, pp. 905-910, March 1998.
203. N. Kashyap, T. Hubing, J.L. Drewniak, and T.P. Van Doren, “An expert system for predicting radiated EMI from PCB’s,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Austin, TX, pp. 444-449, August 1997.
204. W. Cui, H. Shi, X. Luo, F. Sha, J.L. Drewniak, T.P. Van Doren, and T. Anderson, “Lumped-element sections for modeling coupling between high-speed digital and I/O lines,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Austin, TX, pp. 260-265, August 1997.
205. M. Li, Y. Ji, S. Radu, J. Nuebel, W. Cui, J.L. Drewniak, T.H. Hubing, and T.P. Van Doren, “EMI from apertures at enclosure cavity mode resonances,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Austin, TX, pp. 183-187, August 1997.
206. T.M. Hockanson, J.L. Drewniak, J. Nuebel, and J.C. Parker, “Investigation of split ground planes at the connector for EMI control,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Austin, TX, pp. 177-182, August 1997.
207. S. Radu, M. Li, J. Nuebel, T.M. Hockanson, Y. Ji, J.L. Drewniak, T.H. Hubing, and T.P. Van Doren, “Investigation of internal partitioning in metallic enclosures for EMI control,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Austin, TX, pp. 172-176, August 1997.
208. S. Radu, Y. Ji, J. Nuebel, J.L. Drewniak, T.P. Van Doren, and T.H. Hubing, “Identifying an EMI source and coupling path in a computer system with sub-module testing,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Austin, TX, pp. 165-170, August 1997.
209. D.S. Britt, T.M. Hockanson, F. Sha, J.L. Drewniak, T.H. Hubing, and T.P. Van Doren, “Effects of gapped ground planes and guard traces on radiated EMI,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Austin, TX, pp. 159-164, August 1997.
210. J. Tichenor, S.D. Sudhoff, and J.L. Drewniak, “Behavioral IGBT modeling for predicting high-frequency effects in motor drives,” *Proceedings of the Naval Symposium on Electric Machinery*, Newport, RI, July 1997.
211. J. Tichenor, K. Corzine, S.D. Sudhoff, and J.L. Drewniak, “High-frequency characterization of a 3-phase induction motor,” *Proceedings of the Naval Symposium on Electric Machinery*, Newport, RI, July 1997.
212. M. Li, S. Radu, J. Nuebel, J.L. Drewniak, T.H. Hubing, T.P. Van Doren, "Reducing EMI through shielding enclosure perforations employing lossy materials : FDTD modeling and experiments", *Proceedings of the 13th Annual Review of Progress in Applied Computational Electromagnetics*, Monterey, CA, pp. 1070-1076 , March 1997.
213. H. Shi, F. Yuan, F. Sha, J.L. Drewniak, T.H. Hubing, and T.P. Van Doren, “Simulation and measurement for decoupling on multilayer PCB DC power buses,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Santa Clara, CA, pp. 430-435, August 1996.
214. K-P Ma, J.L. Drewniak, T.H. Hubing, and T.P. Van Doren, “A comparison of an FDTD thin-slot algorithm and method of moments for modeling slots near corners,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Santa Clara, CA, pp. 386-390, August 1996.
215. T.M. Hockanson, C. W. Lam, J.L. Drewniak, T.H. Hubing, and T.P. Van Doren, “Experimental and numerical investigation of fundamental radiation mechanisms in PCB designs with attached cables,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Santa Clara, CA, pp. 305-310, August 1996.
216. T.H. Hubing, J.L. Drewniak, T.P. Van Doren, and N. Kashyap, “An expert system approach to EMC modeling,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Santa Clara, CA, pp. 200-203, August 1996.
217. K-P Ma, H. Shi, M. Li, D. Hockanson, and J.L. Drewniak, “Comparison of FDTD thin slot algorithms for modeling slots on corners in shielding enclosures,” *1996 URSI Radio Science Digest*, Baltimore, MD, p. 188, June 1996.
218. N.N. Schultz, K.H. Schulz, M.L. Crow, and J.L. Drewniak, “Dual career academic searches for engineering faculty positions,” *Proceedings of the 1996 ASEE Annual Conference*, Washington, DC, June 1996.
219. T.H. Hubing and J.L. Drewniak, “Computer modeling tools for EMC,” *Proceedings of the 12th Annual Review of Progress in Applied Computational Electromagnetics*, Monterey, CA, pp. 857-860, March 1996.
220. J.L. Drewniak, T.H. Hubing, T.P. Van Doren, and F. Sha, "Determining and modeling radiated emissions from high-speed digital designs," *IEEE Electromagnetic Compatibility Symposium Proceedings*, Atlanta, GA, pp. 465-470, August 1995.
221. J.L. Drewniak, T.H. Hubing, T.P. Van Doren, and F. Sha, "Integrating EMC laboratory exercises into undergraduate electromagnetics," *IEEE Electromagnetic Compatibility Symposium Proceedings*, Atlanta, GA, pp. 35-40, August 1995.
222. K.P. Ma and J.L. Drewniak, "A comparison of FDTD algorithms for subcellular modeling of seams in shielding enclosures," *IEEE Electromagnetic Compatibility Symposium Proceedings*, Atlanta, GA, pp. 157-162, August 1995.
223. H. Shi and J.L. Drewniak, "Study of interconnect via design by the discrete surface integral methods," *IEEE Electromagnetic Compatibility Symposium Proceedings*, Atlanta, GA, pp. 228-233, August 1995.
224. T.M. Hockanson, J.L. Drewniak, T.H. Hubing, and T.P. Van Doren, "FDTD modeling of thin wires for simulating common-mode radiation from structures with attached cables," *IEEE Electromagnetic Compatibility Symposium Proceedings*, Atlanta, GA, pp. 168-173, August 1995.
225. T.H. Hubing, J.L. Drewniak, T.P. Van Doren, F. Sha, and M. Wilhelm, "An experimental investigation of 4-layer printed circuit board decoupling,” *IEEE Electromagnetic Compatibility Symposium Proceedings*, Atlanta, GA, pp. 308-312, August 1995.
226. J.L. Drewniak, T.H. Hubing, and F. Sha (invited), “Determining and modeling radiated emissions from high-speed digital designs,” *Progress in Electromagnetics Research Symp. Proc*., Seattle, WA, p. 951, July 1995.
227. J.L. Drewniak, T.H. Hubing, T.P. Van Doren, and J. D. Shaw, “EMI sources resulting from finite impedance reference structures,” *1995 URSI Radio Science Digest*, Newport Beach, CA, p. 322, June 1995.
228. T.M. Hockanson, J.L. Drewniak. T.H. Hubing, and T.P. Van Doren, “Shielding enclosure radiation enhancement due to attached cables,” *1995 URSI Radio Science Digest*, Newport Beach, CA, p. 40, June 1995.
229. H. Shi and J.L. Drewniak, “Waveguide coupler modeling with the discrete surface integral-FDTD method,” *1995 URSI Radio Science Digest*, Newport Beach, CA, p. 177, June 1995.
230. R.L. Hill, T.P. Van Doren, T.H. Hubing, J.L. Drewniak, and F. Gisn, "Common-mode currents induced on wires attached to multilayer printed wire boards with segmented ground planes," *IEEE Electromagnetic Compatibility Symposium Proceedings*, Chicago, IL, pp. 116-220, August 1994.
231. T.H. Hubing, T.P. Van Doren, and J.L. Drewniak, "Identifying and quantifying printed circuit board inductance," *IEEE Electromagnetic Compatibility Symposium Proceedings*, Chicago, IL, pp. 205-208, August 1994.
232. D. Hockanson, J.L. Drewniak, T.H. Hubing, and T.P. Van Doren, "Application of the finite-difference time-domain method to radiation from shielded enclosures," *IEEE Electromagnetic Compatibility Symposium Proceedings*, Chicago, IL, pp. 83-88, August 1994.
233. J.L. Drewniak, T.H. Hubing, T.P. Van Doren, and P. Baudendistal, "Modeling power bus decoupling on multilayer printed circuit boards," *IEEE Electromagnetic Compatibility Symposium Proceedings*, Chicago, IL, pp. 456-461, August 1994.
234. J.L. Drewniak, T.H. Hubing, and T.P. Van Doren, "Investigation of fundamental mechanisms of common-mode radiation from printed circuit boards with attached cables," *IEEE Electromagnetic Compatibility Symposium Proceedings*, Chicago, IL, pp. 110-115, August 1994.
235. T.H. Hubing, C. Lim, and J. Drewniak, "A geometry description language for 3D electromagnetic analysis codes," *Proceedings of the 10th Annual Review of Progress in Applied Computational Electromagnetics*, Monterey, CA, pp. 410-415, August 1994.
236. T.H. Hubing, P. Grover, T.P. Van Doren, J.L. Drewniak, and L. Hill, "An algorithm for automated printed circuit board layout and routing evaluation," *IEEE Electromagnetic Compatibility Symposium Proceedings*, Dallas, TX, pp. 318-321, August 1993.
237. J.L. Drewniak, T.H. Hubing, and T.P. Van Doren, "New ideas on common-mode radiation from printed circuit boards," *1993 URSI Radio Science Digest*, p. 346, June 1993.
238. K.I. Carnes, J.L. Drewniak, and F. Dunn, "In utero measurement of fetal mouse temperature increases," presented at the American Institute of Ultrasound in Medicine Conference, March, 1990.
239. J.L. Drewniak, K.I. Carnes, and F. Dunn, (invited), "In vitro ultrasonic heating of fetal bone," *Journ. Acoust. Soc. Am.*, vol. 86 (S1), p. S28, November 1989.
240. J.L. Drewniak, K.I. Carnes, and F. Dunn, "Measured temperature rise in fetal bone exposed, in vitro, to ultrasound," *Journal of Ultrasound In Medicine, Proceedings of the 1988 World Federation for Ultrasound in Medicine and Biology Meeting*, Vol. 7 (supplement), p. 263, October 1988.
241. P.E. Mayes, J.L. Drewniak, J. Bowen, and J. Gentle, "Simple, low-profile, circularly polarized arrays," presented at the *Jet Propulsion Laboratory Mobile Satellite Conference*, May 1988.
242. J.L. Drewniak and P.E. Mayes, "Power division by element design in a circularly polarized, series-fed array," *IEEE AP-S International Symposium Digest*, pp. 798-801, June 1987.
243. J.L. Drewniak, P.E. Mayes, D. Tanner, and J. Woodruff, "A dual circular polarization, radiating-line antenna," *IEEE AP-S International Symposium Digest*, pp. 348-351, June 1987.
244. J.L. Drewniak, P.E. Mayes, D. Tanner, and R. Waller, "A log-spiral, radiating-line antenna," *IEEE AP-S International Symposium Digest*, pp. 773-776, June 1986.
245. P.E. Mayes, D. Tanner, R. Waller, J.L. Drewniak, T. Szmurlo, A. Boris, and D. Kunkee, "Some broadband, low-profile antennas," *Proc. 1985 Antenna Applications Symposium*, University of Illinois, Urbana, IL, September 1985.