

Publications by the Author Concerning Transmission Lines

A. BOOKS

- [A.1] *Introduction to Electromagnetic Fields*, 2d ed., McGraw-Hill, NY, 1987 (with S.A. Nasar).
- [A.2] *Analysis of Linear Circuits*, McGraw-Hill, NY, 1989.
- [A.3] *Introduction to Electromagnetic Compatibility*, John Wiley Interscience, NY, 1992.
- [A.4] *Essential Engineering Equations*, CRC Press, Boston, MA, 1991 (with S.A. Nasar).

B. GENERAL

- [B.1] "Application of Multiconductor Transmission Line Theory to the Prediction of Cable Coupling—Vol. I—Multiconductor Transmission Line Theory," Technical Report, Rome Air Development Center, Griffiss AFB, NY, RADC-TR-76-101, April 1976. (A0258028)
- [B.2] "Lumped Model Approximations of Transmission Lines: Effect of Load Impedances on Accuracy," Technical Report, Rome Air Development Center, Griffiss AFB, NY, RADC-TR-82-286, Vol. IV E, August 1984 (with W.W. Everett, III).
- [B.3] "On Uniform Multimode Transmission Lines," *IEEE Trans. on Microwave Theory and Techniques*, MTT-21, 556–558 (1973).
- [B.4] "Useful Matrix Chain Parameter Identities for the Analysis of Multiconductor Transmission Lines," *IEEE Trans. on Microwave Theory and Techniques*, MTT-23, 756–760 (1975).
- [B.5] "Solution of the Transmission Line Equations for Three-Conductor Lines in Homogeneous Media," *IEEE Trans. on Electromagnetic Compatibility*, EMC-20, 216–222 (1978).
- [B.6] "Computation of Crosstalk in a Multiconductor Transmission Line," *IEEE Trans. on Electromagnetic Compatibility*, EMC-23, 352–358 (1981).
- [B.7] "On the Superposition of Inductive and Capacitive Coupling in Crosstalk Prediction Models," *IEEE Trans. on Electromagnetic Compatibility*, EMC-24, 335–343 (1982).

- [B.8] "Estimation of Crosstalk in Three-Conductor Transmission Lines," *IEEE Trans. on Electromagnetic Compatibility*, EMC-26, 182-192 (1984).
- [B.9] "Analysis of Electromagnetic Coupling in Branched Cables," *Proc. 1979 IEEE International Symposium on Electromagnetic Compatibility*, San Diego, CA, October 1979.
- [B.10] "Adequacy of Low-Frequency, Crosstalk Prediction Models," *Proc. 4th Symposium and Technical Exhibition on Electromagnetic Compatibility*, Zurich, Switzerland, March 1981.
- [B.11] "Coupling to Transmission Lines: An Overview," *Proc. 1983 International Symposium and Technical Exhibition on Electromagnetic Compatibility*, Zurich, Switzerland, March 1983.
- [B.12] "A Simple Technique for Estimating Crosstalk," *Proc. 1983 IEEE International Symposium on Electromagnetic Compatibility*, Washington, DC, August 1983.
- [B.13] "Lumped Circuit Modeling of Transmission Lines," *Proc. 1985 IEEE International Symposium on Electromagnetic Compatibility*, Wakefield, MA, August 1985 (with L. Monroe).
- [B.14] "Derivation of Common Impedance Coupling from the Transmission-Line Equations," *IEEE Trans. on Electromagnetic Compatibility*, EMC-34, 315-319 (1992).
- [B.15] "Literal Solutions for Time-Domain Crosstalk on Lossless Transmission Lines," *IEEE Trans. on Electromagnetic Compatibility*, EMC-34, 433-444, 1992.

C. PER-UNIT-LENGTH PARAMETERS

- [C.1] "Computation of the Capacitance Matrix for Dielectric-Coated Wires," Technical Report, Rome Air Development Center, Griffiss AFB, NY, RADC-TR-74-59, March 1974, (with J.C. Clements).
- [C.2] "Applications of Multiconductor Transmission Line Theory to the Prediction of Cable Coupling—Vol. II—Computation of the Capacitance Matrices for Ribbon Cables," Technical Report, Rome Air Development Center, Griffiss AFB, NY, RADC-TR-76-101, April 1976, (with A.E. Feather). (A025029).
- [C.3] "Two-Dimensional Systems of Dielectric-Coated, Cylindrical Conductors," *IEEE Trans. on Electromagnetic Compatibility*, EMC-17, 238-248 (1975) (with J.C. Clements and A.T. Adams).
- [C.4] "Computation of the Transmission Line Inductance and Capacitance Matrices from the Generalized Capacitance Matrix," *IEEE Trans. on Electromagnetic Compatibility*, EMC-18, 175-183 (1976) (with A.E. Feather).
- [C.5] "Reference Potential Terms in Static Capacitance Calculations via the Method of Moments," *IEEE Trans. on Electromagnetic Compatibility*, EMC-20, 267-269 (1978).
- [C.6] "Application of Moment Methods to the Characterization of Ribbon Cables," *Computers and Electrical Engineering*, 4, 173-184 (1977) (with A.E. Feather).
- [C.7] "Application of Moment Methods to the Characterization of Ribbon Cables," *Proc. International Symposium on Innovative Numerical Analysis in Applied Engineering Science*, Paris, France, May 1977 (with A.E. Feather).

- [C.8] "Moment Method Calculation of the Per-Unit-Length Parameters of Cable Bundles," *Proc. 1994 IEEE International Symposium on Electromagnetic Compatibility*, Chicago, IL, August 1994, (with J.S. Savage and W.T. Smith).

D. CABLE HARNESSES

- [D.1] "Applications of Multiconductor Transmission Line Theory to the Prediction of Cable Coupling—Vol. III—Prediction of Crosstalk in Random Cable Bundles, Technical Report, Rome Air Development Center, Griffiss AFB, NY, RADC-TR-76-101, February 1977. (A038316).
- [D.2] "Sensitivity of Multiconductor Cable Coupling to Parameter Variations," *Proc. 1974 IEEE International Symposium on Electromagnetic Compatibility*, July 16–18, San Francisco, CA.
- [D.3] "Sensitivity of Crosstalk to Variations in Wire Position in Cable Bundles," *Proc. 1987 International Symposium and Technical Exhibition on Electromagnetic Compatibility*, Zurich, Switzerland.
- [D.4] "Sensitivity of Crosstalk to Variations in Wire Position in Cable Bundles," *Proc. IEEE International Symposium on Electromagnetic Compatibility*, Atlanta, GA, September 1987.

E. RIBBON CABLES

- [E.1] "Applications of Multiconductor Transmission Line Theory to the Prediction of Cable Coupling—Vol. IV—Prediction of Crosstalk in Ribbon Cables," Technical Report, Rome Air Development Center, Griffiss AFB, NY, RADC-TR-76-101, February 1978. (A053548).
- [E.2] "Prediction of Crosstalk in Ribbon Cables: Comparison of Model Predictions and Experiment Results," *IEEE Trans. on Electromagnetic Compatibility*, EMC-20, 394–406 (1978).
- [E.3] "Prediction of Crosstalk in Ribbon Cables," *IEEE International Symposium on Electromagnetic Compatibility*, Atlanta, GA, June 1978.

F. SHIELDED WIRES

- [F.1] "Applications of Multiconductor Transmission Line Theory to the Prediction of Cable Coupling—Vol. VIII—Prediction of Crosstalk Involving Braided-Shield Cables," Technical Report, Rome Air Development Center, Griffiss AFB, NY, RADC-TR-76-101, August 1980.
- [F.2] "Prediction of Crosstalk in Flatpack, Coaxial Cables," Technical Report, Rome Air Development Center, Griffiss AFB, NY, RADC-TR-82-286, Vol. IV F, December, 1984 (with W.E. Beech).
- [F.3] "Effect of Pigtailed on Crosstalk to Braided-Shield Cables," *IEEE Trans. on Electromagnetic Compatibility*, EMC-22, 161–172 (1980).

- [F.4] "Transmission-Line Modeling of Shielded Wires for Crosstalk Prediction," *IEEE Transactions on Electromagnetic Compatibility*, EMC-23, 345-351 (1981).
- [F.5] "Effect of Pigtailed on Coupling to Shielded Wires," *Proc. IEEE International Symposium on Electromagnetic Compatibility*, San Diego, CA, October 1979.
- [F.6] "Prediction of Crosstalk in Flatpack, Coaxial Cables," *Proc. 1984 IEEE International Symposium on Electromagnetic Compatibility*, San Antonio, Texas, April 1984 (with W.E. Beech).
- [F.7] "Literal Solution of the Transmission-Line Equations for Shielded Wires," *Proc. 1990 IEEE International Symposium on Electromagnetic Compatibility*, Washington, DC, August 1990 (with B.A. Bowles).
- [F.8] "Symbolic Solution of the Multiconductor Transmission-Line Equations for Lines Containing Shielded Wires," *IEEE Trans. on Electromagnetic Compatibility*, EMC-33, 149-162 (1991) (with B.A. Bowles).

G. TWISTED PAIRS OF WIRES

- [G.1] "Applications of Multiconductor Transmission Line Theory to the Prediction of Cable Coupling—Vol. V—Prediction of Crosstalk Involving Twisted Wire Pairs," Technical Report, Rome Air Development Center, Griffiss AFB, NY, RADC-TR-76-101, February 1978. (A053559).
- [G.2] "Crosstalk in Twisted-Wire Circuits," Technical Report, Rome Air Development Center, Griffiss AFB, NY, RADC-TR-82-286, Vol. IV C, November 1982 (with M.B. Jolly).
- [G.3] "Prediction of Crosstalk in Balanced, Twisted Pair Circuits," Technical Report, Rome Air Development Center, Griffiss AFB, NY, RADC-TR-82-286, Vol. IV D, August 1984 (with D. Koopman).
- [G.4] "Prediction of Crosstalk Involving Twisted Pairs of Wires, Part I, A Transmission Line Model for Twisted Wire Pairs," *IEEE Trans. on Electromagnetic Compatibility*, EMC-21, 92-105 (1979) (with J.A. McKnight).
- [G.5] "Prediction of Crosstalk Involving Twisted Pairs of Wires, Part II, A Simplified, Low-Frequency Prediction Model," *IEEE Trans. on Electromagnetic Compatibility*, EMC-21, 105-114 (1979) (with J.A. McKnight).
- [G.6] "Sensitivity of Crosstalk in Twisted-Pair Circuits to Line Twist," *IEEE Trans. on Electromagnetic Compatibility*, EMC-24, 359-364 (1982) (with M. Jolly).
- [G.7] "Sensitivity of Coupling to Balanced, Twisted Pair Lines to Line Twist," *Proc. 1983 International Symposium and Technical Exhibition on Electromagnetic Compatibility*, Zurich, Switzerland, March 1983 (with D. Koopman).
- [G.8] "Prediction of Crosstalk in Twisted Pairs of Wires, A Simplified, Low-Frequency Model," *Proc. IEEE International Symposium on Electromagnetic Compatibility*, Atlanta, GA, June 1978.
- [G.9] "Coupling to Twisted-Pair Transmission Lines," *Proc. 4th Symposium and Technical Exhibition on Electromagnetic Compatibility*, Zurich, Switzerland, March 1981.
- [G.10] "Crosstalk in Balanced, Twisted-Pair Circuits," *Proc. 1981 IEEE International Symposium on Electromagnetic Compatibility*, Boulder, CO, August 1981 (with M.B. Jolly).

H. EFFECTS OF INCIDENT FIELDS

- [H.1] "Applications of Multiconductor Transmission Line Theory to the Prediction of Cable Coupling—Vol. VI—A Digital Computer Program for Determining Terminal Currents Induced in a Multiconductor Transmission Line by an Incident Electromagnetic Field," Technical Report, Rome Air Development Center, Griffiss AFB, NY, RADC-TR-76-101, February 1978. (A053560).
- [H.2] "Coupling of Electromagnetic Fields onto Transmission Lines: A Comparison of the Transmission Line Model and the Method of Moments," Technical Report, Rome Air Development Center, Griffiss AFB, NY, RADC-TR-82-286, Vol. IV A, November 1982 (with R.T. Abraham).
- [H.3] "Efficient Numerical Computation of the Frequency Response of Cables Illuminated by an Electromagnetic Field," *IEEE Trans. on Microwave Theory and Techniques*, MTT-22, 454–457 (1974).
- [H.4] "Frequency Response of Multiconductor Transmission Lines Illuminated by an Incident Electromagnetic Field," *IEEE Trans. on Electromagnetic Compatibility*, EMC-18, 183–190 (1976).
- [H.5] "Frequency Response of Multiconductor Transmission Lines Illuminated by an Incident Electromagnetic Field," *Proc. 1975 IEEE International Symposium on Electromagnetic Compatibility*, San Antonio, TX, October 1975.
- [H.6] "WIRE, A Digital Computer Program for Determining Terminal Currents Induced on a Multiconductor Transmission Line by an Incident Electromagnetic Field," *Proc. 1978 National Aerospace and Electronics Convention*, Dayton, OH, May 1978.
- [H.7] "Coupling of Electromagnetic Fields to Transmission Lines," *Proc. 1981 IEEE International Symposium on Electromagnetic Compatibility*, Boulder, CO, August 1981 (with R.T. Abraham).
- [H.8] "Coupling of Electromagnetic Fields to Transmission Lines," *Proc. 1982 IEEE International Symposium on Electromagnetic Compatibility*, Santa Clara, CA, September 1982 (with D.F. Herrick).
- [H.9] "Bounds on Currents Induced in Transmission Lines by Incident Fields," *Proc. 1984 IEEE Southeastcon*, Louisville, KY, April 1984 (with D.R. Bush).

I. DIGITAL COMPUTER PROGRAMS

- [I.1] "Applications of Multiconductor Transmission Line Theory to the Prediction of Cable Coupling—Vol. VII—Digital Computer Programs for the Analysis of Multiconductor Transmission Lines," Technical Report, Rome Air Development Center, Griffiss AFB, Rome NY, RADC-TR-76-101, July 1977. (A046662).
- [I.2] "SHIELD, A Digital Computer Program for Computing Crosstalk between Shielded Cables," Technical Report, Rome Air Development Center, Griffiss AFB, NY, RADC-TR-82-286, Vol. IV B, November 1982.
- [I.3] "SHIELD—A Digital Computer Program for the Prediction of Crosstalk to Shielded Cables," *Proc. 1983 International Symposium and Technical Exhibition on Electromagnetic Compatibility*, Zurich, Switzerland, March 1983.

- [I.4] "A Simple SPICE Model for Coupled Transmission Lines," *Proc. 1988 IEEE International Symposium on Electromagnetic Compatibility*, Seattle, WA, September 1988.

J. PRINTED CIRCUIT BOARDS

- [J.1] "Modeling Crosstalk on Printed Circuit Boards," Technical Report, Rome Air Development Center, Griffiss AFB, NY, RADC-TR-85-107, July 1985 (with W.W. Everett, III).
- [J.2] "Modeling of Printed Circuit Boards for the Prediction of Crosstalk and Ground Drop," *IBM J. Research and Development*, 33, 33-50 (1989).
- [J.3] "Printed Circuit Board EMC," *Proc. 1985 International Symposium and Technical Exhibition on Electromagnetic Compatibility*, Zurich, Switzerland, March 1985.
- [J.4] "Printed Circuit Board Crosstalk," *Proc. 1985 IEEE International Symposium on Electromagnetic Compatibility*, Wakefield, MA, August 1985 (with W.W. Everett, III).
- [J.5] "Modeling and Prediction of Ground Shift on Printed Circuit Boards," *Proc. 1986 IERE Symposium on Electromagnetic Compatibility*, University of York, England, September 1986.

K. POWER TRANSMISSION LINES

- [K.1] "Solutions of the Transmission Line Equations for Lossy Conductors and Imperfect Earth," *Proc. IEE (London)*, 122, 177-182 (1975).
- [K.2] "A Modal Decomposition for Power Transmission Lines with Imperfect Earth Return," *Proc. IEE (London)*, 124, 647-648 (1977).