

T. Emilie van Deventer

Associate Professor
Currently on Leave



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T. Emilie van Deventer received the Diplome Universitaire de Technologie from the [Institut Universitaire de Technologie of Marseille](#), France, and the B.S.E., M.S.E. and Ph.D. degrees in Electrical Engineering from the [University of Michigan](#), USA. She worked in the acoustic field for Bruel & Kjaer from 1982 to 1983. From 1985 to 1992, she was a research assistant in the [Radiation Laboratory](#) at the University of Michigan. In August 1992, she joined the University of Toronto as an Assistant Professor in the Department of Electrical and Computer Engineering where she holds the NSERC/Bell Canada/Nortel Junior Industrial Research Chair in Electromagnetics. Her research interests include the numerical modeling of microwave and millimeter-wave structures with application to EMC/EMI problems. Dr. van Deventer was awarded an [URSI](#) Young Scientist Fellowship in 1993.

Professional Activities:

Dr. van Deventer is the founder and current chairperson of the IEEE Joint Chapter on Electromagnetics and Radiation, including the [Electromagnetic Compatibility](#), [Antennas & Propagation](#), and [Microwave Theory & Techniques](#) Societies in the [IEEE Toronto Section](#), and a member of Eta Kappa Nu and Tau Beta Pi. She chaired the Local Arrangements Committee for the General Assembly of the International Union of Radio Science, 13-21 August, 1999, held at the University of Toronto. She is a registered Professional Engineer in the Province of Ontario.

Teaching Activities:

Professor van Deventer is currently on leave

Graduate Students:

- Ramesh Abhari
 - Xidong Wu
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Research Interests:

- Electromagnetic characterization of high-speed circuits for telecommunications applications.
 - Computational electromagnetics (RF frequency and time domain techniques).
 - Electromagnetic compatibility.
 - Antenna modelling and design.
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Selected Publications:

Refereed Journal Publications

T.E. van Deventer, P.B. Katehi, "Generalized Boundary conditions with applications to submillimeter and optical waveguides", *Radio Science*, vol. 31, no. 6, pp. 1407-1416, Nov/Dec. 1996

F. Jatou, T.E. van Deventer, "Modelling of high frequency multilayered interconnects using parallel processing techniques", *International Journal of Numerical Modelling: Electronic Networks, Devices and Fields*, vol.8, pp.233-242, 1995.[\[abstract\]](#)

T.E. van Deventer, P.B. Katehi, A.C. Cangellaris, "Analysis of conductor losses in high-speed interconnects", *IEEE Trans. Microwave Theory Tech.*, vol. 42, No. 1, pp. 78-83, Jan. 1994

T.E. van Deventer, P.B. Katehi, "A novel method for the characterization of LSE-type dielectric waveguides", *IEEE Trans. Magnetics*, vol. 29, pp. 1584-1588, March 1993

T.E. van Deventer, P.B. Katehi, J.Y. Josefowicz, D.B. Rensch, "High frequency characterization of high-temperature superconducting thin film lines", *Journal of Electromagnetics*, vol. 11, pp. 255-268, May 1991

T.E. van Deventer, P.B. Katehi, A.C. Cangellaris, "An integral equation method for the evaluation of conductor and dielectric losses in high frequency interconnects", *IEEE Trans. Microwave Theory Tech.*, vol. 37, No. 12, pp. 1964-1972, Dec. 1989

F.T. Ulaby, T.E. van Deventer, J.R. East, T.F. Haddock, M.E. Coluzzi, "Millimeter-wave bistatic scattering from ground and vegetation targets," *IEEE Trans. Geosci. Remote Sensing*, vol. 26, no. 3, pp. 229-243, May 1988

M.T. Hallikainen, F.T. Ulaby, T.E. van Deventer, "Extinction behavior of dry snow in the 18- to 90- GHz range," *IEEE Trans. Geosci. Remote Sensing*, vol. 25, no. 6, pp. 737-745, Nov. 1987

Refereed Conference Papers

X. Wu, G. Eleftheriades, T.E. van Deventer, "A 30 GHz Circularly Polarized Substrate Lens Antenna for Wireless Communications", *Proc.1998 ANTEM*, Ottawa, Canada, August 1998. [accepted]

R. Abhari, T.E. van Deventer, "Analysis of Microvia Interconnects", *Proc.1998 IEEE MTT-S Int. Symp.*, Baltimore, MD, June 1998. [accepted]

R. Abhari, T.E. van Deventer, "A study of vias and microvias", *2nd IEEE International Workshop on Signal Propagation on Interconnects*, Travemünde, Germany, May 1998

T.E. van Deventer, "Antenna Research and Development in Canada", *1997 SBMO/IEEE MTT-S International Microwave and Optoelectronics Conference*, Natal, Brazil, pp. 561-566, Aug. 1997

P. M. Smith, T.E. van Deventer, "Microwave and optoelectronics education and research in Canada," *1997 SBMO/IEEE MTT-S International Microwave and Optoelectronics Conference*, Natal, Brazil, p. 587, Aug. 1997

T.E. van Deventer, "Interconnects for High-Speed Architectures", *Progress In Electromagnetics Research Symposium (PIERS'97)*, Cambridge, MA, p. 367, July 1997

X. Wu, T.E. van Deventer, "Analysis of crosstalk in vertical interconnects", *Proc. 26th European Microwave Conference 1996*, Prague, Czech Republic, vol. 1, pp. 524-527, Sept. 1996 [[abstract](#)]

H.M. Fahmy, T.E. van Deventer, "A discretized integral equation approach for solving microstrip embedded in inhomogeneous waveguides", *Proc.1996 IEEE MTT-S Int. Symp.*, San Francisco, CA, vol. 2, pp. 719-722, June 1996. (Third Prize in Symposium Student Paper Award contest)

H.M. Fahmy, T.E. van Deventer, "A modified method of lines for open and shielded structures", *1995 SBMO/IEEE MTT-S International Microwave and Optoelectronics Conference*, pp. 837-841, Rio de Janeiro, Brazil, July 1995 [[abstract](#)]

H.M. Fahmy, T.E. van Deventer, "A novel hybrid method of lines - integral equation technique for modelling planar circuits", *Progress In Electromagnetics Research Symposium*, p. 875, Seattle, WA, July 1995

T.E. van Deventer, P.B. Katehi, "Electromagnetic coupling in multilayered planar microwave and millimeter wave circuits", *XXIVth General Assembly of the International Union of Radio Science*, p. 139, Kyoto, Japan, August 1993

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