G. Kevin Zhu

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EDUCATION

McGill University — Montréal, QC
Ph.D. in Electrical Engineering (Electromagnetics) — May 2011

University of New Brunswick — Fredericton, NB
M.Sc. in Electrical Engineering (Wireless Communications) — Oct 2005
B.Sc. in Computer Engineering — May 2003

PROFESSIONAL EXPERIENCE

Ansys, Inc. — Pittsburgh, PA
Senior research and development engineer — Aug 2015 - Present

Research and development engineer II — Jan 2013 - Jul 2015

University of Toronto — Toronto, ON
Post-doctoral fellow, Electrical and Computer Engineering — Sep 2011 - Dec 2012
Advisors: Prof. Costas D. Sarris and Prof. Sean Victor Hum

McGill University — Montréal, QC
Research associate, Physics — May 2011 - Aug 2011
Advisor: Prof. Hong Guo

Research assistant, Electrical and Computer Engineering — Nov 2005 - May 2010
Advisor: Prof. Milica Popović

University of New Brunswick — Fredericton, NB
Research assistant, Electrical and Computer Engineering — Jan 2004 - Aug 2005
Advisors: Prof. Brent R. Petersen and Prof. Bruce G. Colpitts

IBM Canada Ltd. — Markham, ON
Industrial internship, Toronto Software Lab — May 2001 - Aug 2002
Manager: Ed Mischkot

TECHNICAL SKILLS

Programming Languages	C/C++, Matlab, Python, Unix Shell Scripting, Java, VHDL, XML/HTML, SQL
Operating systems	GNU/Linux, Windows
Software Development Tools	Emacs, SVN/GIT, GNU Tools, Visual Studio, Matlab
Professional Software	HFSS, SIwave, SEMCAD, Matlab, Mathematica, Comsol, SPICE, LAPACK/ScaLAPACK, MPI, LabView, IBM WebSphere/DB2, Oracle Database
Equipments	Passive/active microwave devices, testing equipments (VNA, spectrum analyzer, TDR), anechoic chamber, Altera FPGA board

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PATENT

G. Zhu, W. Thiel, and J. E. Bracken, "Systems and methods for modeling asymmetric vias," U.S. Patent 9 715 570, Jul. 25, 2017.

PUBLICATIONS

Thesis

G. K. Zhu, "Application of microwave techniques in breast imaging," Ph.D. dissertation, McGill University, 2011.
G. K. Zhu, "On the separation of distributed antennas for wireless communications," MSc. thesis, University of New Brunswick, 2005.
E. H. McLaughlin, M. A. O'Connor, A. J. Ward, J. S. West, and **G. K. Zhu**, "Communications for a LAN of Sub-aquatic Data Sensors," BSc. thesis, University of New Brunswick, 2003.

Journal Papers

G. K. Zhu, W. Thiel, and J. E. Bracken, "An analytic method for capacitance extraction of asymmetric vias," *IEEE Microw. Wireless Compon. Lett.*, vol. 25, no. 5, pp. 280–282, May 2015.
G. K. Zhu, M. Mojahedi, and C. D. Sarris, "Acoustic precursor wave propagation in viscoelastic media," *IEEE Trans. Ultrason., Ferroelectr., Freq. Control*, vol. 61, no. 3, pp. 505–514, Mar. 2014.
E. Kirshin, B. Oreshkin, **G. K. Zhu**, M. Popović, and M. Coates, "Microwave radar and microwave-induced thermoacoustics: Dual-modality approach for breast cancer detection," *IEEE Trans. Biomed. Eng.*, vol. 60, no. 2, pp. 354–360, Feb. 2013.
G. K. Zhu, "Applying software design patterns in electromagnetic field simulators, " *IEEE Antennas Propag. Mag.*, vol. 52, no. 2, pp. 174–179, 2012.
G. K. Zhu and M. Popović, "Comparison of radar and thermoacoustic techniques in microwave breast imaging," *Progress in Electromagnetics Research B*, vol. 35, pp. 1–14, 2011.
G. K. Zhu and M. Popović, "Spectral difference between microwave radar and microwave-induced thermoacoustic signals," *IEEE Antennas Wireless Propag. Lett.*, vol. 9, no. 1, pp. 1259–1262, 2009.
G. K. Zhu, M. Popović, and Q. Fang, "Microwave-induced thermoacoustics: Assisting microwave tomography," *IEEE Trans. Magn.*, vol. 45, no. 3, pp. 1654 – 1657, 2009.
G. K. Zhu and M. Popović, "Enhancing microwave breast tomography with microwave-induced thermoacoustic imaging," *Applied Computational Electromagnetics Society Journal*, vol. 26, no. 4, 2009.

AWARDS AND SCHOLARSHIP

Sigma Xi, Grants-in-Aid of Research	Dec 2009-Nov 2010
IEEE Antennas & Propagation Society Graduate Fellowship	Jul 2007-Jun 2008
McGill Graduate Studies Fellowship	Sep 2005-Aug 2006
UNB Fredericton Scholarship	Sep 2000-Aug 2001
UNB Scholarship	Sep 1999-Aug 2000

AFFILIATION

Member, IEEE Antenna and Propagation Society	2007-Present
Member, IEEE Microwave Theory and Technologies Society	2007-Present
Member, Society for Industrial and Applied Mathematics	2011-Present
Member, American Physical Society	2011-Present

SERVICE TO PROFESSION

Reviewer for the Journal of Progress In Electromagnetic Research	2009-Present
Reviewer for IEEE International Symposium on Antennas and Propagation	2011-Present
Reviewer for IEEE Transactions on Biomedical Engineering	2014-Present