Expert/Consultant Curriculum Vitae

Professor Zhi Ding

Ph.D. and Fellow of IEEE

Expertise

- Wireless Communication Systems
- Cellular Wireless
- Optical communications
- Signal Processing and Analysis
- Digital Communications
- DSL and Cable Internet Service
- Digital Signal Processing
- WiFi, LTE, WiMAX

Professional Summary

- *Professor of major US universities for over 23 years.*
- *Consulted for major engineering companies such as Nortel, Analog Devices, Intel, and NEC*
- *Worked as expert on multiple patent infringement cases*.
- *Conducted research works on Communications and Signal Processing for over 28 years*.
- *Supervised over 23 PhD students*.
- *Author of more than 100 journal papers and 2 technical books on communication technologies*.

Dr. Zhi Ding has been a professor of electrical engineering at major US universities for 19 years. Since 1995, he has consulted for both engineering companies such as Nortel, Analog Devices, Intel, and worked as expert for major law firms such as Kirkland and Ellis on multiple technical and patent infringement cases. He has been conducting research works on wireless communications and signal processing since 1984. He has supervised over 20 PhD students. He is an author of 100 journal papers and 2 technical books on communication technologies. He has taught classes that cover the fundamentals of signal detection, communications, and systems.

Dr. Ding was appointed as the Child Family Professor of Engineering and Entrepreneurship in 2008. He is currently the steering committee chair of the IEEE Transactions on Wireless Communications. He was elevated to Fellow of IEEE in 2002 by the IEEE Signal Processing Society. He also served as the Technical Program Chair of the IEEE Globecom 2006 (the flagship conference of the IEEE Communications Society), Dr. Ding is an eminent scholar and expert of wireless technologies AND signal processing.

Expert/Consultant Curriculum Vitae

Employment History

From: 2000 **University of California at Davis**
To: Present Davis, CA
Position: *Professor, Department of Electrical and Computer Engineering*

From: 01/1999 **University of Iowa**
To: 09/2000 Iowa City, IA
Position: *Assoc. Professor, Department of Electrical and Computer Engineering*

From: 01/1997 **Hong Kong University of Science and Technology**
To: 12/1997 Hong Kong
Position: *Visiting Associate Professor, Department of Electrical and Electronic Engineering*

From: 09/1995 **Auburn University**
To: 12/1998 Auburn, AL
Position: *09/1995-12/1998: Associate Professor, Department of Electrical and Computer Engineering*
09/1990-08/1995: Assistant Professor, Department of Electrical and Computer Engineering

From: 08/1993 **Australian National University**
To: 09/1993 Canberra, Australia
Position: *Visiting Research Fellow, Faculty of Information Technology and Engineering*

From: 06/1993 **US Air Force Wright Laboratory**
To: 08/1993 Eglin AFB, Florida
Position: *Faculty Research Associate, Armament Directorate*

From: 06/1992 **NASA Lewis Research Center**
To: 08/1992 Cleveland, OH
Position: *Visiting Faculty Research Fellow*

From: 08/1987 **Cornell University**
To: 08/1990 Ithaca, NY
Position: *Research Assistant*

Expert/Consultant Curriculum Vitae

From:	09/1984	**University of Toroto**
To:	08/1987	Toronto, Ontario, Canada
	Position:	*Research Assistant*

Expert Witness/Deposition

Past Client	**Past Services**
BRAMSON, PLUTZIK, MAHLER & BIRKHAEUSER, LLP	Testified at Deposition on Case No. CV 12-05240 PJH UNITED STATES DISTRICT COURT NORTHERN DISTRICT OF CALIFORNIA

Patents (Granted and/or Licensed)

Patent Number	Date Issued	Title
US 6,396,885	Mar.28, 2002	Co-channel interference reduction in wireless communications systems (Nortel)
US 6,463,099	Oct.8, 2002	Blind channel equalizers and methods of blind channel equalization (Licensed)
US 7,379,513	Mar. 20, 2008	Channel estimation in CDMA communications systems using both lower power pilot channel and higher power date channel

Education

1990	Cornell University, Ithaca, NY	Ph.D., Electrical Engineering
1987	University of Toronto, Toronto, Canada	MS, Electrical Engineering
1982	Nanjing Institute of Technology, Nanjing, China	BS, Wireless Engineering

Publications

Books & Book Chapters

[1] B. P. Lathi and Z. Ding, *Modern Digital and Analog Communication Systems,* 4th edition, Oxford University Press, 2009 (in Press).

[2] Zhi Ding and Ye Li, *Blind Equalization and Identification*, Marcel Dekker, New York, 2001.

[3] Z. Ding, "Chapter 7: Linear Predictive Algorithms for Blind Multichannel Identification," in *Signal Processing Advances in Wireless and Mobile Communications*, Vol. I: Trends in Channel Estimation and Equalization, G. B. Giannakis, Y. Hua, P. Stoica, and L. Tong (Editors), Prentice Hall, 2000.

[4] Z. Ding, "Blind Channel Identification and Equalization using Spectral Correlation Measurements: Frequency Domain Analysis," in *Cyclostationarity in Communications and Signal Processing*, William A. Gardner, Ed., pp.417-436, IEEE Press, 1993.

[5] Z. Ding, C. R. Johnson, Jr., and R. A. Kennedy, "Chapter 3: Global Convergence Issues with Linear Blind Adaptive Equalizers," in *Blind Deconvolution*, Simon Haykin, Ed., pp.60-120, Prentice-Hall, 1994.

[6] Z. Ding, "Adaptive Filters for Blind Equalization," in *IEEE DSP Handbook*, Douglas B. Williams, Ed., pp.24.1-24.17, IEEE Press, 1998.

Journal Papers

[1] Xiao Liang; Chun-Ming Zhao; Zhi Ding, ""Piggyback Retransmissions over Wireless MIMO Channels: Shared Hybrid-ARQ (SHARQ) for Bandwidth Efficiency," IEEE Transactions on Wireless Communications, vol.12, no.8, pp.3770,3782, August 2013. doi: 10.1109/TWC.2013.051313.121098

[2] Kun-Yu Wang, Neil Jacklin, Zhi Ding, and Chong-Yung Chi, ``Robust MISO Transmit Optimization under Outage-Based QoS Constraints in Two-Tier Heterogeneous Networks," IEEE Transactions on Wireless Communications, 12 (4):1883-1897, April 2013. doi: 10.1109/TWC.2013.022013.121111

[3] Enyang Xu, Zhi Ding, and S. Dasgupta, ``Target Tracking and Mobile Sensor Navigation in Wireless Sensor Networks", IEEE Transactions on Mobile Computing, 12(1):177 - 186, Jan. 2013.

[4] N. Jacklin and Z. Ding, ``A Linear Programming Based Tone Injection Algorithm for PAPR Reduction of OFDM and Linearly Precoded Systems", IEEE Transactions on Circuits and Systems I, 2013.

[5] F. E. Lapiccirella, X. Liu, and Z. Ding, ``Distributed Control of Multiple Cognitive Radio

Overlay for Primary Queue Stability", IEEE Transactions on Wireless Communications, 12(1):112-122, January 2013. doi:10.1109/TWC.2012.121112.111783

[6] P. Tseng, Z. Ding, and K. Feng, ``Cooperative Self-Navigation in a Mixed LOS and NLOS Environment," IEEE Transactions on Mobile Computing, 2013.

[7] Shafi, A. Bashar, Zhi Ding, and Chengshan Xiao, ``On Secrecy Rate Analysis of MIMO Wiretap Channels Driven by Finite-Alphabet Input," IEEE TRANSACTIONS ON COMMUNICATIONS, 60 (12):3816-3825, Dec. 2012.

[8] Huy-Dung Han and Z. Ding, ``Steepest descent algorithm implementation for multichannel blind signal recovery", IET Communications, 6(18):3196-3203, December 2012.

[9] Y. Wu, C. Xiao and Z. Ding, X. Gao, and S. Jin, ``LINEAR PRECODING FOR FINITE-ALPHABET SIGNALING OVER MIMOME WIRETAP CHANNELS," IEEE Transactions on Vehicular Technology, 61(6): 2599-2612, 2012

[10] Y. Wu, M. Wang, C. Xiao, Z. Ding, X.-Q. Gao ``Linear Precoding for MIMO Broadcast Channels With Finite-Alphabet Constraints", IEEE Transactions on Wireless Communications, 11(8): 2906 - 2920, August 2012

[11] Neil Jacklin, Zhi Ding, Wei Chen, Chunqi Chang, ``Noniterative Convex Optimization Methods for Network Component Analysis" IEEE/ACM Transactions on Computational Biology and Bioinformatics, 9(5):1472-1481, Sept.-Oct. 2012

[12] F.~E. Lapiccirella, Z. Ding, and X. Liu, ``Cognitive Spectrum Access Control Based on Intrinsic Primary ARQ Information", IET Communications, 6(8):900-908, August 2012.

[13] X. Liang, Z. Ding and C. Xiao, ``OPTIMIZED POWER ALLOCATION FOR PACKET RETRANSMISSIONS OF NON-GAUSSIAN INPUTS THROUGH SEQUENTIAL AWGN CHANNELS", IEEE Transactions on Communications, 60(7): 1889-1902, 2012.

[14] T. Miyajima and Zhi Ding, ``Subcarrier Nulling Algorithms for Channel Shortening in Uplink OFDMA Systems," IEEE Transactions on Signal Processing, vol.60, no.5, pp.2374-2385, May 2012.

[15] C. Xiao, Y. R. Zheng, and Z. Ding, ``Globally optimal linear precoders for finite alphabet signals over complex vector Gaussian channels," IEEE Trans. Signal Process., vol.59, pp.3301-3314, July 2011.

[16] Li Zhang, Shu Lin, K. Abdel-Ghaffar, Zhi Ding, and Bo Zhou, ``Quasi-Cyclic LDPC Codes on Cyclic Subgroups of Finite Fields" , IEEE Transactions on Communications, 59(9):2330-2336, Sept. 2011

[17] Z. Muhammad, and Z. Ding, ``Blind Multiuser Detection for Synchronous High Rate Space-Time Block Coded Transmission", IEEE Transactions on Wireless Communications, Issue: 99, July 2011, Page(s): 2171 - 2185.

[18] S. Bashar, Z. Ding, C. Xiao, ``On the Secrecy Rate of Multi-Antenna Wiretap Channel under Finite-Alphabet Input", IEEE Communications Letters, Vol. 15, No. 5, 2011, Page(s): 527-529.

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