Resume

1. Personal Information

First Name: WEIKAI Family Name: XU
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2. Professional Experience

Associate Professor on Communication and Information Systems, Dept. of Communication Engineering in SIST, Xiamen University, 2012.8- present.
Academic Visitor, School of Electrical and Electronic Engineering of Newcastle University, UK, 2013.11-2014.11.
Assistant Professor on Communication and Information Systems, Dept. of Communication Engineering in SIST, Xiamen University, 2006.8- 2012.7.
Teacher Assistant on Communication and Information Systems, Dept. of Communication Engineering in SIST, Xiamen University, 2003.8- 2006.7.

3. Education Experience

Ph.D on Circuits and Systems, Xiamen University, Sept., 2007- June, 2011.
MS on Communications and Systems, Chongqing University of Posts & Telecomm., China, Sept., 2000 - June, 2003
BS on Electronics Engineering, Chongqing Three Gorges College, China, Sept., 1996- July, 2000.

4. Academic and Technological Achievements

A. Journal Papers(only indexed by SCI & EI)

[1] **Weikai Xu**, Lin Wang, and Chong-yung Chi, "A Simplified GCS-DCSK Modulation and Its Performance Optimization," *International Journal of Bifurcations and Chaos*, accepted.

[2] Guixian Chen, Lin Wang, **Weikai Xu**, and Guanrong Chen, "Carrier Index Differential Chaos Shift Keying Modulation," *IEEE Trans. Circuits and Syst.-II*, accepted.

[3] Tingting Huang, Lin Wang, **Weikai Xu**, and Francis C. M. Lau, "A Multilevel Code-Shifted Differential-Chaos-Shift-Keying System," *IET Communications*, 10(10), pp. 1189-1195, May 2016.

[4]Mingzi Wang, Wei Zhang, **Weikai Xu**, Yuemao Shen, Liangcheng Du, **"**Optimization of genome shuffling for high-yield production of the antitumor deacetylmycoepoxydiene in an endophytic fungus of mangrove plants," *Applied*

Microbiology and Biotechnology, DOI:10.1007/s00253-016-7457-0.

[5] Yi Fang, Lin Wang, Pingping Chen, Jing Xu, Guanrong Chen, and **Weikai Xu**, ”Design and Analysis of a DCSK-ARQ/CARQ System Over Multipath Fading Channels,” *IEEE Trans. Circuits and Syst.-I,* 62(6), pp. 1637-1647, 2015. (SCI, JCR2)

[6] **Weikai Xu**, Zheng Yang, Zhiguo Ding, Lin Wang and Pingzhi Fan, "Wireless Information and Power Transfer in Two-Way Relaying Network with Non-Coherent Differential Modulation," *EURASIP Journal on Wireless Communications and Networking*, 2015:131, DOI**:** 10.1186/s13638-015-0368-4.

[7] **Weikai Xu,** Lin Wang, Guanrong Chen, "Performance Analysis of the CS-DCSK/BPSK Communication System," *IEEE Trans. Circuits and Syst.-I,* 61(9), pp. 2624-2633, 2014. (SCI, JCR2)

[8] **Weikai Xu**, Lin Wang, G. Kolumban, "A New Data Rate Adaption Communications Scheme for Code-Shifted Differential Chaos Shift Keying Modulation, "*International Journal of Bifurcations and Chaos*, 22(8), 2012. (SCI, JCR3)

[9] **Weikai Xu**, Lin Wang, G. Kolumban, "A Novel Differential Chaos Shift Keying Modulation Scheme," *International Journal of Bifurcations and Chaos*, 21(3), Mar, 2011. (SCI, JCR3)

[10] **Weikai Xu**, Lin Wang, Guanrong Chen, "Performance of DCSK Cooperative Communication Systems over Multipath Fading Channels," *IEEE Trans. Circuits and Syst.-I* , 50(1), Jan., 2011.（SCI, JCR3）

[11] Xin Min, **Weikai Xu**, Lin Wang, Guanrong Chen, "Promising Performance of an FM-DCSK UWB System under Indoor Environments," *IET Transaction on Communications*, 4(2), Jan. 2010. (SCI, JCR4)

[12] **Weikai Xu**, Lin Wang, "Performance Simulation of WCDMA Down-link Based on LDPC Codes," *Journal of System Simulations*, 2007, 19(4). **(**EI**, in Chinese**)

[13] **Weikai Xu**, Lin Wang, Performance Simulation of LDPC Codes through SPW Platform, *Journal of System Simulations*, 2005, 17(10). (EI, **in Chinese**)

B. Conference Papers (only international)

[1] **Weikai Xu** and Lin Wang, “CIM-DCSK: A Differential Chaos Shift Keying Scheme with Code-Index Modulation,” in Proc. of ISCIT, Sept. 26-28, 2016, Qingdao, China.

[2] Jiyu Bao, **Weikai Xu**, Lin Wang, and Tingting Huang, “Performance analysis and sub-carriers power allocation for MC-QCSK,” in *Proc. of IEEE WCSP*, Qct. 15-17, 2015, Nanjing, China.

[3] **Weikai Xu**, Lin Wang, Tingting Huang, "Optimal power allocation in MC-DCSK communication system," in *Proc. of IEEE ISCIT*, Sept. 24-26, 2014,pp.313-317, Incheon, Korea, 2014.

[4] Tingting Huang, Lin Wang, **Weikai Xu**, Guofa Cai, "Adaptive Retransmission Mechanism for SIMO FM-DCSK UWB System," in *Proc. of IEEE ISCIT*, Sept. 4-6, 2013, Samui Island, Thailand.

[5] **Weikai Xu**, Lin Wang, "Performance of CM-TR UWB Communication System in the Presence a Single Narrow Band Interferer," in *Proc. of IEEE International*

Conference on Ultra-Wideband (*ICUWB* 2013, 15-18, Sept. 2013, Sydney Australia.
[6] Zhixiong Chen, **Weikai Xu**, Jin Huang, Lin Wang**,** "Performances of CS-DCSK UWB Communication System in the Presence of Narrow Band Interferers, " in *Proc. of 12th IEEE IUCC*, June 25-27th,2012,Liverpoool, UK(EI,ISTP)
[7] Jin Huang, Zhexin Xu, **Weikai Xu**, Lin Wang, "Error Performance Analysis of Opportunistic Relaying System Based on DCSK, in *Proc. of 12th IEEE IUCC*, June 25-27th,2012,Liverpoool, UK (EI,ISTP)
[8] **Weikai Xu**, Lin Wang, Francis C.M. Lau, "Multiple-Stream Code-Multiplexed Transmitted-Reference Ultra-Wideband Systems," in *Proc. of the 6th WiCOM/IEE*E, Sept 22nd to 25th, 2010, Chengdu, China (EI)
[9] Jing Xu, **Weikai Xu**, Lin Wang, Guanrong Chen, "Design and Simulation of a Cooperation Communication System Based on DCSK/FM-DCSK," in *Proc. ISCAS 2010/IEEE*, 30th-2th,June 2010, Paris, France (EI)
[10] Shaoyuan Chen, **Weikai Xu**, Lin Wang, Kyung Sup Kwak, "Performance of FM-DCSK UWB with Timing Error," in *Proc.ISCIT 2009/IEEE*, Sept.28-30, 2009, Incheon, Korea(EI)
[11] Xin Min, **Weikai Xu**, Lin Wang, "An SIMO FM-DCSK UWB Scheme for Low-rate WPAN Applications," in *Proc. ISCIT 2009/IEEE*, Sept.28-30, 2009, Incheon, Korea(EI)
[12] Yang Shanshan, **Xu Weikai**, Wang Lin, Wei Qinfang, "Performance of STBC-IDMA System over Quasi-Static Rayleigh Fading Channel," in *Proc. ICCCAS2008/IEEE*, May 25-27th, 2008, Xiamen, China (EI)
[13] Chen Liming, **Xu Weikai**, Wang Lin, "Performance of Improved FM-DCSK system Based on Differential-coding Method," in *Proc. ICCCAS2008/IEEE*, May 25-27th, 2008, Xiamen, China(EI)
[14] Min Xiao, Lin Wang, **Weikai Xu,** Haibin Wang, "Advantages of Product Accumulate Codes over Regular LDPC Codes under AWGN Channel, " in *Proc. ICSP2006/IEEE*, Nov.16-20, 2006, Guilin, China(EI,ISTP)

C. Book

Lin Wang**, Weikai Xu**, Principle and Its Applications of Approaching Capacity Channel Encoder and Decoder, Press of People Post, 2007(in Chinese)

D. China Patents

[1] Dongfu Xie,**Weikai Xu**, Lin Wang**,** and others, Practical Patent: Wireless Multi Media Game Systems in Home, No:200720009025.3, Authorization Time: 06/13/2008.
[2] Lin Wang, Yong Li, **Weikai Xu**, Gang Chen, Invention Patent: Decoding Method Based on PEG for Q-ary LDPC Codes, No: ZL200510057105.1, Authorization Time: 10/25/2008.
[3] Lin Wang**,** Dongfu Xie, **Weikai Xu**, and others, Invention Patent: Decoding Implementation Based on Pipeline for LDPC Codes, No: ZL200710092476.2, Authorization Time: 02/24/2010.
[4] **Weiaki Xu**, Lin Wang, and others, Invention Patent: A Modem Based on

Code-Shifted Differential Chaos Shift Keying Scheme. No. CN101980492A.
[5] **Weiaki Xu**, and others, Invention Patent: A Cooperative Traffic Flow Collecting Method Using Chaotic Ultra-Wideband, ZL 201310027097.0.

E. Research Fields:

Design and ***analysis*** of chaotic communication systems, ultra-wideband (UWB) systems, energy harvesting in communication system.

F. Leader of Research

1) National Science Foundation of China (No. 61001073, 2011.1-2013.12): Key Technologies for UWB System Based on DCSK.
2) National Science Foundation of Fujian Province (No. 2013J01256, 2013.1－2015.12)：Key Technologies for Cooperative Network based on CS-DCSK UWB.

G. Professional Activities

IEEE member
Reviewer of IEEE Trans. on Circuits and Systems Part I/II, IEEE Trans. on Communications, IEEE Trans. on Vehicular Technology.