

Wenhao Wu

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OBJECTIVE	A postdoc position in signal processing, wireless communication, data science and related fields.	
EDUCATION	Ph.D. Candidate in Electrical and Computer Engineering	2012 - 2017
	(expected) University of California, Davis, Davis, CA Advisor: Prof. Zhi Ding Cumulative GPA: 3.96	
	M.S. in Electrical and Computer Engineering	2012 - 2014
	University of California, Davis, Davis, CA	
	B.S. in Electrical Engineering	2008 - 2012
	Tsinghua University, Beijing, China	
TECHNICAL SKILLS	<ul style="list-style-type: none">• Wireless Communication, Signal Processing, Statistical Learning.• Java, Python, C/C++, Matlab/GNU Octave, R.• Experience with HTML, XML, JavaScript, D3, CSS and SQL.	
RESEARCH INTERESTS	Trans-Layer Design of RObust Header Compression: (with Prof. Zhi Ding) Designing adaptive ROHC compressor exploiting various imperfect and delayed trans-layer information to take the optimal actions (e.g. compression level, feedback request, etc.) based on a POMDP framework [1, 2].	
	Modulation Diversity for HARQ: (with Prof. H. Mittelmann, Prof. Zhi Ding) Modulation diversity design for various wireless channels with HARQ by solving Quadratic Assignment Problems (QAPs) to reduce bit error rate (BER) [3–5].	
	Cooperative multi-cell MIMO downlink precoding with finite-alphabet inputs: (with Prof. Zhi Ding, Prof. Chengshan Xiao) Optimal linear precoder design for multi-cell MIMO downlink channel and finite-alphabet inputs with distributed implementation. [6, 7].	
EXPERIENCE	Core Engineer Intern	07/2014 - 09/2014
	Range Networks, San Francisco, CA. Supervisor: James Peroulas. Implemented and tested the GMSK modulator of openBTS. Complete the software implementation of LTE PRACH receiver.	
	Teaching Assistant	01/2013 - 04/2013
	EEC 180A Digital Systems, Dept. ECE, UC Davis. Supervisor: Prof. Bevan Baas.	

COURSE PROJECTS	NYC Taxi Data Pickup Prediction (STA 208) 06/2016 Predicting hourly taxi pickup per NTA in NYC using TLC trip record and NOAA weather dataset.
	Inferring the Night Life Hotspot from Taxi Trip Data (MAT 280) 06/2016 Clustering neighborhoods in NYC based on daily taxi pickup-dropoff patterns.
	A Solution Manual for: The Elements of Statistical Learning 01/2016
	An Introduction to Algebraic Multigrid (MAT 228C) 06/2013
	WLAN RSSI-Based Indoor Localization And Tracking (ECS 257) 03/2013 Implementation and demonstration of various localization And tracking with real-world RSSI data and floor plan.
HONORS & AWARDS	Third-class Excellent Social Service Scholarship 10/2011 Tsinghua University, Beijing, China
	Honor of Excellent Leader of the Student Association for S&T 04/2011 Tsinghua University, Beijing, China
	First-class Outstanding Scholarship (Samsung Scholarship) 12/2009 Tsinghua University, Beijing, China
	Second-class Outstanding Freshman Scholarship 12/2008 Tsinghua University, Beijing, China
WEBSITES	LinkedIn: https://www.linkedin.com/in/wenhao-wu-0ab2494b Github: https://github.com/huragok
SELECTED PUBLICATIONS	<ul style="list-style-type: none"> [1] W. Wu, Z. Ding, "On Efficient Packet Switched Wireless Networking: A Markovian Approach to Trans-layer Design of Bidirectional ROHC ", in preparation. [2] W. Wu, Z. Ding, "On Efficient Packet Switched Wireless Networking: A Markovian Approach to Trans-layer Design and Optimization of ROHC", <i>IEEE Trans. Wireless Commun.</i>, submitted for publication. [3] W. Wu, H. Mittelmann and Z. Ding, "Modulation Design for MIMO-CoMP HARQ", <i>IEEE Commun. Lett.</i>, to be published. [4] W. Wu, H. Mittelmann and Z. Ding, "Modulation Design for Two-Way Amplify-and-Forward Relay HARQ," <i>IEEE Wireless Commun. Lett.</i>, vol. 5, no. 3, pp. 244-247, June 2016. [5] W. Wu, H. Mittelmann, and Z. Ding, "Statistical analysis of a posteriori channel and noise distribution based on HARQ feedback, preprint: arXiv:1601.04131v1, 2016. [6] W. Wu, K. Wang, W. Zeng, Z. Ding, and C. Xiao, "Cooperative multi-cell MIMO downlink precoding with finite-alphabet inputs," <i>IEEE Trans. Commun.</i>, vol. 63, no. 3, pp. 766-779, Mar. 2015. [7] W. Wu, K. Wang, Z. Ding, and C. Xiao, "Cooperative multi-cell MIMO downlink precoding for finite-alphabet inputs," in <i>IEEE Proc. Int. Conf. Acoust., Speech, Signal Process.</i>, May 2014, pp. 464-468.