Song-Wen Huang

Contact Information

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Objective Systems Design Engineer.

Available Dec. 2017.

Technical Skills

5G, LTE, Wifi, MIMO, OFDMA, 802.11ax, RF IC Design, CDMA, FPGA

C, C++, Python, MATLAB, Verilog, VHDL, SPICE, Linux

Wireless Communication, DSP Algorithm, Spread Spectrum

Optimization, Software Defined Radio Networking (USRP, GNU Radio), Cognitive Radio

Education

State University of New York at Buffalo Aug. 2014 - Dec. 2017.
Ph.D. in Electrical Engineering
Advisor: Dr. Dimitris A. Pados. GPA: 3.92/4.00

National Chiao Tung University Sep. 2009 - Jul. 2011.
M.S. in Electronics Engineering
Thesis Advisor: Dr. Feng-Tsun Chien.

National Chiao Tung University Sep. 2005 - Jun. 2009.
B.S. in Electronics Engineering
Project Advisor: Dr. Hsie-Chia Chang.

Work Experiences

Research Assistant at State University of New York at Buffalo Aug. 2014 - present.

- DSP Algorithm Development and Software Defined Radio Transceiver Circuit Design
- MIMO and Adaptive Beamforming
- Joint Channel Estimation and Data Detection for Spread Spectrum Underwater Acoustics
- Multicarrier Chirp Division Multiplexing in RF and Underwater Communications
- Ultra-wideband Nano-Transceivers in Terahertz Communications

Senior Engineer at Macronix International Co., Ltd., Taiwan Feb. 2013 - May 2014.

- DRAM circuit design and customized NVM-based memory design
- Maintained Design Rule Checking (DRC) command files for semiconductor processes
- Automated generating Question & Answer (QA) patterns for verifying DRC rules

Honors and Awards

2nd Place, Erie Hack Finals, *Cleveland Water Alliance* 2017.

Teaching Assistantship, *State University of New York at Buffalo* 2014 - 2017.

Rank 11th, Undergraduate Score in the Class of EE, *National Chiao Tung University* 2009.

Patent

1 patent is under review.

Publications

Published **2** peer-reviewed papers.

S.-W. Huang, G. Sklivanitis, D. A. Pados, and S. N. Batalama,"Underwater Acoustic Communications Using Quasi-Orthogonal Chirps," in *IEEE Asilomar Conference on Signals, Systems, and Computers, Oct. 2017.* (*accepted*).

S.-W. Huang, Y.-W. Chan, F.-T. Chien and Y.-C. Chung, "Efficient Resource Allocation in Cooperative Cognitive Radio Networks: A Coalitional Game Approach," in *IET International Communication Conference on Wireless Mobile and Computing (CCWMC)*, Nov. 2011.