

Zhen Feng

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EDUCATION

University of Michigan, Ann Arbor, Michigan, US Sep. 2017 –now
Phd student in Electrical and computer Engineering
Advisor: David Blaauw

Peking University, Beijing, China Sep. 2013 – June.2017
BSc. in Microelectronics, School of Electronics Engineering and Computer Science
Overall GPA: 3.79/4.0 (90/100), Major GPA: 3.88/4.0 (93/100), Ranking: 4/48

RESEARCH INTEREST

Low power and high performance RF circuit design, signal processing

PUBLICATION

Zhen Feng, Li-Xuan Chuo, Yao Shi, Yejoong Kim, HunSeok Kim, David Blaauw, "A mm-Scale Sensor Node with a 2.7 GHz 1.3 mW Transceiver using Full-Duplex Self-Coherent Backscattering Achieving 3.5 m Range," IEEE Radio Frequency Integrated Circuits Symposium (RFIC), June 2020

Li-Xuan Chuo, Zhen Feng, Yejoong Kim, Nikolaos Chiotellis, Makoto Yasuda, Satoru Miyoshi, Masaru Kawaminami, Anthony Grbic, David Wentzloff, David Blaauw, and Hun-Seok Kim, "Millimeter-Scale Node-to-Node Radio Using a Carrier Frequency Interlocking IF Receiver for a Fully Integrated 4x4x4mm³Wireless Sensor Node," *IEEE Journal of Solid-State Circuits (JSSC)*, May 2020 ©IEEE

EDUCATION

Short range radio Dec. 2017 – Jan.2019
Advisor: Prof. David Blaauw MICL, Department of ECE, University of Michigan

- Adopt active backscattering method to transmit signal from mm size tag to gateway under low power consumption. Utilize co-design antenna and double band correlation to optimize SNR.

Mm-scale low power long range radio
Jan.2019– in progress

Advisor: Prof. David Blaauw ASIC Lab, Institute of Microelectronics, Peking University

- To achieve a mm-scale radio system which has km operating range, we adopted ultra narrow band to achieve high SNR, design optimized LC oscillator to achieve high stability and low phase noise without Mhz crystal and utilized co-design antenna and self-calibration matching network to design high efficiency power.

COURSE PROJECT

Team project in Antenna Theory Mar. 2018
Design and simulate meander dipole antenna for RFID application

Team Project in VLSI design I Dec 2017
Design the random number generator based on ring oscillator frequency collapse.

AWARD

- May 4th Scholarship of Peking University of 2015-2016
- POSCO Scholarship of Peking University of 2014-2015
- Robin Li Scholarship of Peking University of 2013-2014
- Award for Scientific Research of Peking University of 2014-2015

Research Skill

Cadence, HFSS, Spice, Innovus, Verilog, Matlab, C/C++, Assembly Language

Relevant Graduate Courses

□ Monolithic Amplifier, VLSI design I, Antenna theory, Analog Integrated Circuit, Advanced Solid State Microwave Circuit, Wireless Communication System