

YILING ZHANG

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OBJECTIVE

- Analog & Mixed-Signal IC Design Engineer position emphasizing design and development of high-speed deep sub-micron integrated circuits.

EDUCATION

- Tufts University, Medford, MA* 2006 ~ 2008
Department of Electrical and Computer Engineering
- M.S. in Electrical Engineering GPA: 3.9/4.0
 - Research Assistant in the Advanced Integrated Circuits and Systems Laboratory
- Harbin Institute of Technology (HIT), Harbin, China* 2002 ~ 2006
Department of Microelectronic Science and Technology
- B.E. in Electronic Science and Technology GPA:90/100

HONORS & AWARDS

- ECE Department Chair's Scholarship, Tufts, 2008
- 1st Prize in Analog and Mixed-Signal VLSI Design Contest, Tufts, 2007
- Best Undergraduate Thesis Award, Dept. of Microelectronic Science and Technology, HIT, 2006
- 2nd Prize in National Undergraduate Electronic Design Contest, China, 2005

EXPERIENCE

- Advanced Integrated Circuits and Systems Laboratory, School of Engineering, Tufts*
Research Assistant 2006-2008
- Designed a 10Gbit/s maximum ratio combining imaging diversity receiver system with front-end LNA, SNR detector and signal processing for FSO communication in IBM 90nm CMOS process. Chip submitted through TAPO.
 - Designed a 6Gbit/s CMOS imaging diversity receiver front-end employing select-best combining method using IBM 180nm CMOS process.
 - Designed a 750Mb/s CMOS capacitive feedback transimpedance amplifier with automatic gain control for optical wireless communication using AMI 0.5 μ m process and fabricated through MOSIS foundry.
 - High frequency PCB development, test and measurement. Modeling and simulation of optical wireless communication links using MATLAB, ZEMAX, Mathematica Optica.
- MEMS Center, School of Astronautics, HIT*
State High Technology Development Program (863) of China, Student Researcher 2005-2006
- Proposed an innovative configuration of a silicon-based micro direct methanol fuel cell (μ DMFC) stack and was granted under "863 Program of China" projects. Completed the design, fabrication and measurement of the μ DMFC stack. Filed a Chinese patent for this design.
- Technology Innovation Center, School of Electrical Engineering, HIT*
Leader of a Three-Member Team 2005
- Designed and built a programmable motion-control and line-tracking robot prototype.
 - Designed and built an intravenous delivery speed automatic control system prototype for clinical use.

COURSE PROJECTS & TRAINING

Microwave/RF Circuits Course Project, Tufts

- Designed a low voltage class A power amplifier using ADS Suite

VLSI Course Project, Tufts

- CMOS implementation of simplified IEEE 802.11 receiver MAC layer

Microelectronics Center, HIT

- Training on measurement and testing of microelectronic devices; fabrication and packaging of a bipolar 3DK-12 power switching transistor; and Cadence Suite (Schematic, Layout, Verilog, Simulation)

MEMS Center, HIT

- Training on basic MEMS process (mask layout, oxidation, diffusion, lithography, wet etching, vapor deposition, electrostatic bonding, wire bonding and packaging)

Engineering Training Center, HIT

- Training on PCB design using Protel and hand soldering (surface mount, IC, etc)

RELEVANT COURSEWORK

Switched-Capacitor & A/D D/A Converter Circuits
Analog & Mixed-Signal IC Design
Integrated Circuits for Optical Communication
Introduction to VLSI Design
Microwave Engineering & Microwave Circuits
Communication Systems

Solid State Electronics & Semiconductor Physics
Microelectronic Device Theory
Introduction to Microelectronic Process
Principle and Application of Optoelectronics
MEMS Technology
Digital Signal Processing

CONFERENCE PAPERS

- Yiling Zhang, Valencia Joyner, Ruida Yun, Sameer Sonkusale, “**A 700Mbit/s CMOS Capacitive Feedback Front-End Amplifier with Automatic Gain Control for Broadband Optical Wireless Links,**” Accepted by *IEEE International Symposium on Circuits and Systems*, 2008.
- Yiling Zhang, Valencia Joyner, Shengling Deng, Zhaoran Huang, “**A 6-Gbit/s CMOS Imaging Diversity Receiver Front-End Employing Select-Best Method,**” Accepted by *IEEE International Midwest Symposium on Circuits and Systems*, 2008.
- Yiling Zhang, Valencia Joyner, “**An Analog Front-End Receiver with Desensitization to Input Capacitance for Free Space Optical Communication,**” Accepted by *International Symposium on Communication Systems, Networks and Digital Signal Processing*, 2008.
- Xiaochuan Tang, Yufeng Zhang, Yiling Zhang, Xiaowei Liu, “**A Novel Direct Methanol Fuel Cell Stack Based on MEMS Technology,**” Submitted to *International Symposium on Precision Mechanical Measurements*, 2008.

JOURNAL ARTICLES

- Yiling Zhang, Valencia Joyner, “**Design and Analysis of a Capacitive Feedback Transimpedance Amplifier with Automatic Gain Control for Broadband Optical Wireless Links,**” To be submitted to *IEEE Transactions on Circuits and Systems*.
- Yufeng Zhang, Xiaochuan Tang, Xiaowei Liu, Yiling Zhang, “**Design of a Silicon-Based Direct Methanol Fuel Cell Stack,**” Submitted to *Chinese Journal of Mechanical Engineering*.

PATENTS

- Xiaowei Liu, Yufeng Zhang, Chunguang Suo, Yiling Zhang, “**Silicon-Based Planar Direct Methanol Fuel Cell Stack and Method of Fabrication**”, Harbin Institute of Technology. *Chinese Patent*. Pending.

AFFILIATIONS

- IEEE student member