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Tengxiang Zhang

EDUCATION

Master of Science in Engineering, Electrical Engineering, May 2013

The University of Texas at Austin   GPA: 3.76/4

Courses: Electromagnetic Field Theory, Electrodynamics, Analog IC Design,
Antenna Theory and Practice, RFIC Design, Algorithm,
Wireless Communication Lab, Nanophotonics, Metamaterial,
Microwave and Radio Frequency Engineering, Computational Electromagnetics

Bachelor of Science, Electrical Engineering, June 2011

Southeast University   GPA: 89.8/100

- School of Information Science & Engineering, 09/09-06/11
- Chien-Shiung Wu Honors College, 09/07-06/09

Courses: Microcomputer Systems & Interfaces, Computing Architecture, Antenna,
Microwave Engineering, Communication Systems

PROFESSIONAL EXPERIENCE

RF Engineer/ Product Manager   **07/15-present**

Tomoon Technology, Inc., Beijing

- Led the BLE beacon product line, participated in market research, product definition, project management, mass production, hardware deployment, and customer maintenance
- Designed RF circuits and antenna for BLE beacon and wearable devices
- Developed RF bench evaluation and test environment

Product & Test Engineer   **06/13-03/15**

Silicon Laboratories, Austin, Texas

- Worked on RF semiconductor products test hardware and software development.
- Designed and debugged various RF PCB test board.
- Developed various RF test cases, like phase noise, ACPR, etc.
- Experience with 802.15.4 standard, ARM-Cortex architecture, and JTAG/SW/SPI/UART.

Summer Intern   **05/12-08/12**

Silicon Laboratories, Austin, Texas

- Designed a RF module serving as a RF test instrument.
- Fit 21 chips in 1"x1.33" 4 signal layer PCB board using Altium.
- Developed RF calibration algorithm using Perl and C; performed hardware debugging.

RESEARCH EXPERIENCE

Graduate Research Assistant, Electrical & Computer Engineering Department   **08/11-05/13**

The University of Texas at Austin

- Created a simplified laptop electromagnetic model in CST.
- Simulated the radiation performance for different angles between lid and keyboard.
- Implemented EVS (electromagnetic visibility study) to optimize antenna position.

Research Assistant, State Key Laboratory of Millimeter Wave   **05/09-06/11**

Southeast University

- Realized a Half Maxwell Fisheye Lens Antenna with gain > 20dB, beamwidth <12°
  and S11 < -15dB ranging from 12 GHz to 18 GHz.
- Measured the reflection coefficient, 2D field distribution, and radiation performance in anechoic chamber.

SELECTED PROJECTS

Individual Project, Beamformer Simulation   11/12-12/12
- Investigated different beamforming algorithms.
- Simulated maximum ratio combining and least mean square beamformers in MATLAB.

Individual Project, Direct Down-conversion Receiver LNA and Mixer Design   04/12-05/12
- Designed broadband LNA and mixer in 180nm CMOS process.
- Completed schematic design and simulation in Cadence.

Individual Project, Planar Inverted-F Antenna   04/12-05/12
- Designed a dual-band PIFA working at 900MHz and 1800MHz by slotting the patch.
- Designed an electrically small PIFA with metamaterial-based substrate, achieved a size deduction of 30%, and gain enhancement of 1dB.

Individual Project, Ku Band LNA Design   12/10-01/11
- Designed a Ku-band Low Noise Amplifier using two MGF4941. The simulation shows gain above 20dB and NF below 1dB.
- Completed the design and simulation by using Agilent-ADS, layout by Altium.

LANGUAGE & TECHNICAL SKILLS
- C/C++, Python, Java, Assembly Language, HTML, CSS
- MATLAB, CST, Altium, Cadence, AWR, HFSS, LabVIEW, COMSOL, Agilent-ADS
- Vector network analyzer, Spectrum analyzer, High frequency signal generator

EXTRA-CURRICULAR ACTIVITIES

Participant and Winner, Microsoft Research Asia Young Fellowship Summer Camp   05/10-05/10
- Invited as one of the top 5 students from honors college.
- Made a presentation about programmable waveguide and won Excellent Award.

Participant and Winner, International Industrial/Academic Leadership Program   11/10-12/10
- Studied and presented project *Applying Fitts Law to Study Human Movement in Laparoscopic Surgery*, Chung Yuan Christian University, Chungli, Taiwan.

Team Member and Winner, International Mathematical Contest in Modeling   11/09-01/10
- Created mathematical model in MATLAB and awarded Meritorious Winner Team

Team Member, Debate Team of Southeast University   10/07-12/08
- Won golden medal in Debate Competition of Six Universities in Yangzi River area.

PUBLICATION

Hui Feng Ma, Ben Geng Cai, **Teng Xiang Zhang**, Yan Yang, Wei Xiang Jiang and Tie Jun Cui.
"Three-Dimensional Gradient-Index Materials and Their Applications in Microwave Lens Antennas",
IEEE Transactions on Antennas & Propagation, vol.21, 2013