Nan Zheng

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OBJECTIVE

Ph.D. degree in Electrical Engineering

EDUCATION

Jun. 2011 **B.E.** in Information Engineering, Shanghai Jiao Tong University, Shanghai, China
GPA: 89/100, Major GPA: 91/100, Rank: 1/24

RESEARCH EXPERIENCE

Development of Circuit-Field Co-Design Method for Active Integrated Antenna (Thesis of Bachelor & Paper under review at IEEE Microwave and Wireless Component Letter)

January 2011 – July 2011

Research Assistant, Center of Microwave and RF Technologies (CMRFT) in Shanghai Jiao Tong University, Shanghai, China
Advisor: Prof. Xianling Liang

- Programmed for the traditional 3D Finite-Difference Time-Domain (FDTD) method.
- Incorporated the network analysis methods into the FDTD.
- Proposed a modified lumped-network FDTD method.
- Proposed a novel circuit and field interface that can avoid the current mismatching effect.

Development of novel RF devices (Paper published at PIERS Letter & Paper submitted to APMC 2011)

January 2010 – October 2010

Research Assistant, Center of Microwave and RF Technologies (CMRFT) in Shanghai Jiao Tong University, Shanghai, China
Advisor: Prof. Liang Zhou

- Proposed a novel dual-band branch structure with two stepped impedance stubs.
- Designed a compact dual-band quadrature hybrid with a very broad achievable frequency ratio.
- Modeled the proposed coupler with lumped elements.
- Validated the design by simulating with HFSS, ADS and fabrication.

Development of a novel inverted-L antenna based on finite ground plane (Paper presented at APMC 2010)

January 2010 – July 2010

Research Assistant, CMRFT in Shanghai Jiao Tong University, Shanghai, China
Advisor: Prof. Bin Yuan

- Measured the Finite Ground Plane (FGP) effect on the performance of inverted-L antenna in cell phone quantitatively by both simulation and measuring in reality.
- Designed a novel inverted-L antenna with a zigzag structure to compensate for the loss due to the FGP effect.
- Validated the efficiency of the new antenna through simulation and fabrication.

Proposal for the Long Term Evolution-Advanced (LTE-A) standard (Proposal submitted)

March 2010 – July 2010

Team member, Institute of Wireless Communication Technologies (IWCT) in Shanghai Jiao Tong University, Shanghai, China
Advisor: Prof. Xinbing Wang

- Proposed a novel and practical LTE-A wireless downlink network model that is highly immune to the Inter Cell Interference (ICI).
- Put forward a semi-dynamic channel source allocation strategy based on space division and load balance.
- Compared the efficiency of the proposed algorithm with several other strategies of Inter Cell Interference Coordination (ICIC) by theoretical evaluations and computer simulations.

Optimization of yagi antenna using multi-objective Genetic Algorithm (GA) **July 2010 – August 2010**

Research Assistant, CMRFT in Shanghai Jiao Tong University, Shanghai, China
Advisor: Prof. Bin Yuan

- Investigating more efficient evaluation methods in GA based on the inherent pattern lies in the converge processes which are observed through simulation results.

- Programmed and simulated for different multi-objective functions to compare their efficiency.

PUBLICATION

- Nan Zheng, Ronghong Jin, Xianling Liang, Junping Gen, "A Modified Lumped-Network Finite-Difference Time-Domain Method", *IEEE Microwave and Wireless Component Letter*. (Under review)
- Liang Zhou, Chenyan Fang, Nan Zheng, Hong-Li Peng, Wen-Yan Yin, Jun-Fa Mao, "Varactor-Tuned Π-shaped Hybrid Branch-Line Coupler with Stepped-Impedance Stubs", *2011 Proc. Asia-Pacific Microw. Conf.*(Under review)
- Nan Zheng, Liang Zhou, "A Novel Dual-band Π-shaped Branch-Line Coupler with Stepped-Impedance Stubs", *Progress In Electromagnetics Research Letters*, Vol. 25, 11-20, 2011.
- Bin Yuan, Xiu Wang, Nan Zheng, Yangbang Cheng, "An Inverted-L Antenna Based on Finite Ground Plane with Zigzag Structure", *2010 Proc. Asia-Pacific Microw. Conf.*, pp. 2025 – 2028, 2010

HONORS AND AWARDS

- 2007-2008, Academic Excellence Scholarship (third-class) of Shanghai Jiao Tong University (15%)
- 2007-2008, Honored with the "3 GOOD STUDENT (who is excellent morally, academically and physically)" prize of Shanghai Jiao Tong University (4%)
- 2008-2009, Academic Excellence Scholarship (Second-class) of Shanghai Jiao Tong University (10%)
- 2008-2009, Honored with the "3 GOOD STUDENT" prize of Shanghai Jiao Tong University (4%)
- 2009-2010, Academic Excellence Scholarship (Second-class) of Shanghai Jiao Tong University (10%)
- 2009-2010, Jidian Electronics Scholarship.
- 2011, Shanghai Outstanding Graduates.

EXTRACURRICULAR ACTIVITIES

Be the Monitor

Monitor**,** SEIEE (School of Electronic, Information and Electrical Engineering), Shanghai Jiao Tong University, Shanghai, China **September 2008 -- Present**

- Organized several class activities including Spring trips, fall trips, New Year celebrations
- Led members in class to win several awards like the First prize in "Tuan Gai Jin"

Work in the Human Resource department in SCDA (Student Career Development Association)

Member**,** SCDA, Shanghai Jiao Tong University, Shanghai **September 2008 – January 2009**

- Made a video to celebrate the six years old birthday for SCDA
- Planed, and led a team to hold a lecture for 100 students about how to allocate their time resource reasonably

Experience the "Job Shadow Day" in General Electric (GE)

Intern, IT department in GE, Shanghai China **Novermber 2008**

- Visited the GE company in Shanghai, saw how the employees there cooperate with each other
- Discussed with the GE engineer about how to put the knowledge learn in University into practice

Be the Expo 2010 Shanghai China Volunteer

Team leader, Expo 2010 Shanghai China, Shanghai China **October 2010**

- Served in the Expo garden as a volunteer for 16 days.
- Led the whole team of volunteers serve for 16 days with zero complaint.
- Won the "Star of Expo volunteer" honor (10%)

SKILLS AND PROFICIENCIES

- Programming languages: C, C++, VB, Matlab, SQL, VHDL, Assembly Language.
- Simulation tools: HFSS, CST, ADS, multisim, Quartus II, Powerdesigner, Modelsim, MAX PLUS II.
- Data Processing: Latex, Origin, Microsoft Office tools.
- Other skills: Public Presentation, leadership.

STANDARD TEST

- GRE: Verbal 580, Quantitative 800, Analytical Writing 3.0
- TOEFL: Reading 30, Listening 25, Speaking 20, Writing 25

REFERENCE

- Available at your request