SI TANG

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EDUCATION

Beihang University (BUAA) Beijing, China
M.S. in Electronic Science and Technology Sep. 2020 – Feb. 2023

- GPA: 3.54/4.0 **(Top 20%)** | Supervised by Prof. Zhengpeng Wang
- Core Modules: Microwave Engineering, EDA RF integrated circuit, Matrix Theory, Antenna Theory and Engineering, Advanced Electromagnetic Theory etc.
- Final Year Thesis: Efficient Amplitude and Phase Calibration for Broadband Phased Array Based on Element Spatial Transmission Matrix

Beijing University of Posts and Telecommunications (BUPT) Beijing, China
B.S. in Opto-electronic Information Science and Engineering Sep. 2016 – Jun. 2020

- GPA: 3.51/4.0 **(Top 10%)**
- Core Modules: Telecommunication Principles, Wireless Transmission Technologies and Networking, Electromagnetic Fields and Waves, Digital Circuits and Logic Design, Optical Fiber Communications System, Signal and Systems, Probability Theory and Stochastic Processes etc.
- Final Year Thesis: MIMO Throughput Measurement for 5G Terminals Based on Over-the-Air Testing

PUBLICATIONS

PREPRINT PAPER

1. **Si Tang**, Z. Wang, C. Pan, Rui Su, W. Fan and Steven Gao, "A Fast and Efficient Calibration Method for Phased Array Antennas using Fourier-Structured Excitation Matrix," *IEEE Trans. Antennas Propag*. (IN REVISION)

PUBLISHED PAPERS

1. **Si Tang**, and Z. Wang, "Fast Phased Array Calibration Method Based on Multiple Measuring Probes," in *2020 IEEE 3rd International Conference on Electronic Information and Communication Technology (ICEICT)*, Shenzhen, China, 2020, pp. 311-313. **(Best Paper Award)**
2. Z. Yu, Z. Wang, S. Zhu, **Si. Tang**, and Y. Tang, "A Novel Ultra-Wideband Plane Wave Generator Antenna Array for OTA Test," in *2021 IEEE 4th International Conference on Electronic Information and Communication Technology (ICEICT)*, Xi'an, China, 2021, pp. 489-492.
3. **Si Tang,** and Zhengpeng Wang, "Analysis of Terminal 4 × 4 MIMO OTA Test System Using Carrier Aggregation Technology, " (IN CHINESE) *in Proceedings of NCMMW*, Shanghai, China, Sep. 2020, pp. 49-51.

PATENTS

PUBLISTED PATENT

1. **Si Tang,** Zhengpeng Wang, 2022. Short-range parallel wireless transmission system and method based on matrix inversion. CN112994768A, filed Feb 5, 2020, and granted Aug 30, 2022.
2. Zhengpeng Wang, **Si Tang**. 2021. Phased-array antenna phase calibration measurement system and method. CN111987462A, filed Aug 21, 2020, and granted Jun 29, 2021.

RESEARCH EXPERIENCE

BUAA (Beijing Key Laboratory for Microwave Sensing and Security Applications) Beijing, China
Research assistant to Professor Zhengpeng Wang Jul. 2021 – Jun. 2023
5G Millimeter-wave Measurement Platform Implementation

- Design a novel far-field array calibration setup realized by a Compact Antenna Test Range (CATR) with offset-focus multiple feeds to offer robust massive array calibration results and high measurement efficiency;
- Propose a novel construction method for excitation matrix, where phase differences introduced by the spatial locations of the multiple probes are perfectly incorporated into the Fourier-structured matrix;
- Verify the feasibility of the algorithm by MATLAB and CST simulation;
- Measure the amplitude-phase distribution of the CATR quiet zone.

BUAA (Beijing Key Laboratory for Microwave Sensing and Security Applications) Beijing, China
Research assistant to Professor Zhengpeng Wang Jan. 2019 – Jun. 2021
Near-field OTA Test Anechoic Chamber Research and Verification

- Research on amplitude-only transmission matrix measurement algorithms;
- Optimize the condition number of transmission matrix based on MATLAB, and verify the effectiveness of the algorithm;
- Implement a CST Simulation of inverse matrix placement for multi-channel wireless connection;
- Analyse the impact of wideband carrier aggregation techniques based on proposed algorithms;
- Improved the stability of the measurement system by proposing an optimal probe layout in the millimeter waveband, providing measurement services for companies such as OPPO and OnePlus.

INTERNSHIP

GuoYu Mirowave Group (Intelligent Antennas Measurement System) Beijing, China
Research assistant to Chief of Research Zonghe Ning Sep. 2020 – Present

- Investigate and research on the state-of-art phased array calibration algorithm
- Research on antenna design and Over-the-Air Technology.

BUPT (School of Electronic Engineering) Beijing, China
Research assistant to Smart Wireless Mobile Information Technology Research Center Sep. 2018 – Jun. 2019

- Research on EMR information security based on deep learning, using Convolutional Neural Networks in Python to perform decryption on a single-chip microcontroller running the AES128 encryption algorithm;
- Additive manufacturing layout optimization in MATLAB using genetic algorithms;
- Design of a Java-based optical devices management system.
- Served as a teaching assistant for analog circuit course, assisting students about the application of STM32 and MSP430 single-chip microcontroller.

SELECTED AWARDS AND HONORS

- First Prize Scholarship of Beihang University (**top 20%** students) for two consecutive years; 2020-21
- Outstanding Graduate Student Award of Beijing City (**top 5%** students of the university); 07/2020
- Postgraduate recommendation award from Beijing University of Posts and Telecommunications 07/2020
- Company Scholarship from Yangtze Optical Fiber and Cable Joint Stock Limited Company (**1/78**); 10/2019
- Second Prize Scholarship of BUPT (**top 30%** students) for two consecutive years. 2017-18

ADDITIONAL INFORMATION

Computer Skills

- Programming languages: MATLAB, Java, Python, VHDL, C, C++;
- Simulation software: CST, ADS, Ansys;

English qualifications

- IELTS Overall: 6.5 (Reading: 6, Listening: 7, Writing: 6， speaking6.5); Test Date: Jul. 2, 2022

Referrers

- Zhengpeng Wang
  Email: zpwang@buaa.edu.cn
  School: Beihang University
  Title: Professor

- Zonghe Ning
  Email: ningzonghe@g-mt.cn
  Company: GuoYu Mirowave Group
  Title: Chief Researcher

  (Other two contacts will be provided upon request after successful round(s) of evaluations or interviews, to avoid delay in corresponding with them.)

  Yong Li

  Wei Fan