

# Tianyu Fang

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## Education

College of Electrical and Information Engineering, Hunan University

September 2020-June 2024

Major: Electronic and Information Engineering

GPA: 3.53/4.0; 86.76/100

## Paper

**Progress and Comparison in Nondestructive Detection, Imaging and Recognition Technology for Defects of Wafers, Chips and Solder Joints**, lead author

Note: It is delivered to *Nondestructive Testing and Evaluation*, SCI Q3

- Familiarized optical, acoustic, magnetic, etc. imaging NDT and recognition technology of chip defects

**Application Analysis of Nondestructive Testing Technology in Aerospace Engineering**, second author

Note: It is adopted by the 3rd Aviation Engineering Forum, Hangzhou in April 2023

- Completed the draft of the article independently; reviewed the main research of NDT testing technology of aerospace equipment in the ground and space environment at home and abroad

## Project Experience

**The Mathematical Contest in Modelling**

January 2022-May 2022

- Gained the **Honorable Mention**
- Took charge of data processing with Python and MATLAB; assisted in the establishment of models; chart drawing, derivation of mathematical formulae, symbols and literature management

**Hunan College Students Electronic Design Contest**

June 2022-August 2022

- Designed a signal modulation measurement device for measuring and displaying modulation degree and maximum frequency deviation, identifying modulation types, and outputting the original un-modulated signal
- Hardware welding, wiring, module parameter selection; programs and code debugging, mainly to realize the communicate between ARM-XMU development boards or board with OLED

## Course Designs

September 2021-June 2023

- **MATLAB (Simulink)**: Analysed the performance of the digital baseband transmission system on the course *Principles of Communication*; realize noise reduction by Spectral subtraction algorithm on the course *Digital Signal Processing*; draw the smith chart and analyse impedance matching on the course *RF Electronic Circuits*
- Used **CST Studio** to simulate mobile phone antenna on the course *System Modelling and Simulation*; used **Keil** for Bluetooth, DMA and other modules functional realisation, and **Protues 8** for circuits simulation on the course *Embedded System and Application*

## Intelligent Medical Image Processing

October 2021-December 2021

- Learned the basic knowledge on courses related to ML and DL from Andrew Ng in Stanford
- Simple ML-based classification of lesion site localisation in medical images such as breast cancer using Python

## Internship Experience

**ACTRI: Aeronautics Computing Technology Research Institute, Assistant Software Engineer** July 2023-August 2023

- Learned the network development process based on time: AFDX→TTP/TTE→TSN and other network protocols
- Learned about the differences in reliability and other performance between military airborne/ civilian airborne/ carborne
- Got familiar with drive process and debugged the 615A switch, mainly for driver configuration
- Learned the process of data copying and flowing, RDMA, operating system transplanting and cppcheck

**Shaanxi Xinlai Electric Power Construction Group Co. Ltd**

January 2022-February 2022

- Real-time monitoring, data analysis and fault handling of power system; inspection and maintenance of power grid equipment

## Skills

- **Programming/Software**: skilled in Python, C language, MATLAB, Keil, CST Studio, Protues 8, Multisim, etc.
- **Language**: IELTS 6.5 (Listening 6.5; Reading 6.5; Writing 6.5; Speaking 6.0)