



# Tianyu Fang

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## Education

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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

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

Note: *Nondestructive Testing and Evaluation*, SCI Q3

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

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

Note: Adopted by the 3rd Aviation Engineering Forum, Hangzhou in April 2023

- Reviewed the main research of NDT of aerospace equipment in the ground and space at home and abroad

## Project Experience

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**The Mathematical Contest in Modelling**

January 2022-May 2022

Note: Gained the Honorable Mention

- Took charge of data processing with 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)**

- ◆ *Principles of Communication*: Analysed the performance of the digital baseband transmission system
- ◆ *Digital Signal Processing*: Realized noise reduction by Spectral subtraction algorithm
- ◆ *RF Electronic Circuits*: Drew the smith chart and analysed impedance matching

- **CST Studio**

- ◆ *Electronic Information System Modelling and Simulation*: Simulated the performance of mobile phone antenna

- **Keil & Protues 8**

- ◆ *Embedded System and Application*: Bluetooth, DMA, OpenMv camera and other modules function realisation with circuits simulation

**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

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**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 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

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

## **Skills**

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- **Programming/Software:** 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)
- **Document Creation:** Markdown