

# **Xueshan Zhang**

Master of Science. **Nanoelectronics** 

- 20.08.1994
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### Social Network -



Github

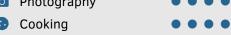
Git Page

### About Me -

- Goal-oriented team player and deadline catcher:
- Able to work with multiple tasks and multi-cultural background;
- Solid knowledge of programming tool and environments, e.g Linux, python;
- Intensive experience with embedded firmware

### Interests -

Photography



Music

Fitness



Master of Science, Nanoelectronics GPA: 13.6/20.0 (Cum Laude)

10.2018 -Technische Universität Dresden (TU Dresden) Dresden, Germany 02.2020 In-depth studies on electronics technology, e.g. 'Molecular Electronic', 'Nano Optics' and etc.

09.2017 -Katholieke Universiteit Leuven (KU Leuven) Leuven, Belgium Take in fundamental and also state-of-art knowledge in semiconduc-02.2020

tors field, e.g. 'Semiconductor Devices', 'Semiconductor Physics', 'Mesoscopic Physics', 'Integrated Circuits Packaging' and 'Electrical Components, Circuits and Sensors' and etc.

Bachelor of Engineering, Material Science and Engineering GPA: 3.35/4.0 (Top 20 %)

09.2013 -University of Jinan (UJN) Jinan, China 07.2017 Enhanced understanding of material science by courses 'Quantum Physics', 'Materials Physics', 'Material Science Foundation' and etc.

## Work Experience

Validation Engineer (Yangtze Memory 01.2021 -Technologies) 03.2023

Tasks & Achievements:

- Build test bench for post-Silicon Nand Flash storage devices;
- Trouble shoot front-end and back-end function, and performance bugs by debugging with linux kernel, scripts and hardware tools (e.g. protocol analyzer);
- Understand the operating principle of power management ICs through data sheets and its influence on the connected sub components via different channels;
- Design algorithms and strategies to identify fundamental pattern, or trends in data by data analysis;

### Learning Outcomes:

- Experience with high-speed peripheral PCIe bus validation and debugging;
- Experience with protocols, e.g NVMe, ATA Security, and PCIe;
- Experience with general connectivity IPs (I2C and UART);
- Experience with data analysis via Pandas, NumPy and etc.;
- Program mainly with Python, and a few with C++, html and shell scripts.

06.2020 -**Process Support Engineer (Applied Materials)** 12.2020

Tasks & Achievements:

- Measure critical parameters on eBeam-source wafer images with knowledge on eBeam imaging and image segmentation;
- Distinguish the types of process defects based on a large quantity of eBeam images using binary search tree algorithm, and analyze which stage of process may cause such defects;

#### Learning Outcomes:

- Image processing;
- Soft binning and binary search tree algorithm.

### **Patents**

An algorithm of SSD competitor 03.2023 analysis with PCMark10 Software Xueshan Zhang

Automated deployment of software testing environment

Yangtze Memory Technologies

Yangtze Memory Technologies

Shanghai, China

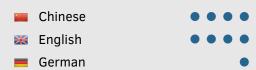
Jinan, China

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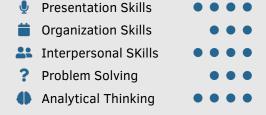
## Languages



### Hard Skills



## Soft Skills



## **Projects**

### Germany

04.2019 – 10.2019 Investigating High-Performance Semiconductor

Coating Recipes on a mechanically flexible, plastic CFAED, Dresden substrate

Tasks & Achievements:

- Design the architecture of organic thin film transistor (OFET), manufacture it according to design flow;
- Evaluate comprehensively the process defects of thin film component, I-V performance of OFET as a whole and performance reliability of OFETs;

#### Learning Outcomes:

- Device failure analysis;
- Device Design.

11.2018 – 04.2019

# Thermo-Optic Effect on Waveguide in Mach Zehnder Modulator

TU Dresden, Dresden

Tasks & Achievements:

- Design an integrated optics structure and simulate the thermooptic influence on the output optical signals in simulation software 'Lumerical';
- Develop a method of achieving higher throughput of light modes and simulated signals with higher accuracy;

#### Learning Outcomes:

- Finite Element Method;
- Integrated optics design;
- Data visualization with Matlab.

#### Belgium

03.2018 – 05.2018

# Acoustic Characterization of PMUT for Gesture Recognization

IMEC, Leuven

Tasks & Achievements:

- Evaluate performance of designed PMUT arrays and analyze test results:
- Present test results based on existing PMUT structure and propose advice on changing PMUT's design to improve single PMUT performance while avoiding cross-talk among neighboring PMUTs.

#### Learning Outcomes:

- Signal sensitivity analysis;
- Data visualization with MATLAB.

## **O** Referee

Singapore Yiau Yee Chia

**Applied Materials** 

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Germany Stefan Mannsfeld

Center for Advancing Electronics stefan.mannsfeld@tu-dresden.de

Belgium Steven De Feyter

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