

Yifan Huang

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Education

- SAT** **University of Xi 'an Jiaotong-Liverpool**, Telecommunications Engineering Sept 2021 – May 2025
- **Grade:** junior-70, senior-72
 - **Coursework:** EEE109-77,EEE112-68,MEC104-82,MEC202-80 ,MEC208-79,EEE211-93,CAN207-91,CAN309-82
 - **Publication:**A second-author paper on GaN HEMT detrapping and thermal reflection (submitted and under review)

Experience

- Surf**, Member Supervisor: Guanying Chu
June 2022 – Aug 2022
- Title: Distributed Maximum Power Point Tracking (DMPPT) for Photovoltaic Systems
 - This study utilizes MATLAB/Simulink to investigate a fault diagnosis and fault-tolerant control scheme for photovoltaic generation systems (PGS) based on a distributed maximum power point tracking (DMPPT) architecture.
- Industrial project** , Member Supervisor: Quan Zhang
March 2024 – May 2024
- Title: Collaborative Development of an Intelligent Machine Workstation with B&R.
 - This project focuses on remotely controlling robotic arms and proposes a control system to address issues such as low grasping efficiency and imprecise machine control during autonomous lifting. The solution is implemented using:
 - B&R PLC as the core controller.
 - Touchscreen HMI for human-machine interaction.
 - Camera, pressure sensors, and a host computer to enhance efficiency and precision of the robotic arm.
- Surf**, Member Supervisor: Huiqing Wen
June 2024 – Aug 2024
- Title: Research on Junction Temperature and Thermal Resistance of GaN Power Devices
 - This project focuses on studying the junction temperature and thermal resistance of fabricated GaN power devices, which are critical for their reliability and performance. A thermal network model is developed to analyze heat dissipation characteristics and optimize device design.
- FYP**, Member Supervisor: Huiqing Wen
June 2024 – Aug 2024
- Title: Junction temperature monitoring and thermal resistance research based on GaN devices
 - Replicated and optimized a pulse-based method (J. Joh et al.) to extract thermal resistance (R_{th}) in GaN HEMTs through charge trapping time constants (τ), validating its low-cost advantages over infrared thermography.

Technologies

Languages: [Chinese-Native][English-Fluent]

Technologies:

- Matlab, Quartus (verilog),Altium Designer(PCB),LTspice,VisUAL2,clion64(C,C++),Sentaurus(TCAD)

- Latex
- Proficient in video editing software