Yuhan Su

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PROFILE

MSc student at Trinity College Dublin with a background in optoelectronic engineering, optical measurement and signal processing. Interested in power stability in C- and L-band WDM networks.

EDUCATION

MSc in Electronic Information Engineering 2026-present
Trinity College Dublin, Ireland | Research project supervised by Professor Dan Kilper

Current coursework: Digital Signal Processing, Digital Wireless Communication and Deep Learning.

BEng in Optoelectronic Information Science and Engineering 2022-2026
Nanjing University of Science and Technology, China

Selected coursework: Optics, Analog Electronic Circuits and Digital Logic Circuits.

RESEARCH PROJECTS

Optical power dynamics in C- and L-band WDM networks Ongoing
MSc research project | Trinity College Dublin

- Studying how changes in channel loading and optical amplifier response affect power stability in C- and L-band WDM transmission systems.
- Current work involves reviewing optical-network and amplifier behaviour and defining the parameters for planned simulation and experimental measurements.

1550 nm laser Doppler interferometer for vibration measurement 2025-2026
Bachelor's thesis | Nanjing University of Science and Technology

- Designed and assembled a fibre-based heterodyne Mach-Zehnder measurement system with a 1550 nm DFB laser, fibre coupler, acousto-optic modulator, InGaAs photodetector and piezoelectric vibration source.
- Adjusted optical alignment, polarisation and return-light coupling, then compared acquired interference signals and spectra before and after the changes.
- Processed oscilloscope data in MATLAB using baseline removal, Butterworth band-pass filtering and FFT analysis to identify the dominant vibration frequency.

LBIC imaging of perovskite solar cells 2024-2025
Team research project | Nanjing University of Science and Technology

- Contributed to assembling and testing a light-beam-induced-current imaging setup for spatially resolved characterisation of perovskite solar cells.
- Used existing scan-control software to acquire photocurrent maps at multiple laser wavelengths.
- Processed and visualised the maps to compare local photoresponse and identify regions of reduced response for discussion with the team.

INDUSTRY EXPERIENCE

R&D Testing Intern Dec 2025-May 2026
Nanjing Guorui An Taixin Technology Co., Ltd. | Nanjing, China

- Supported testing and pre-shipment checks for communications electronics using oscilloscopes, spectrum analysers and digital multimeters; compared measured signals with technical requirements.
- Checked indicator-light wiring against a technical drawing, found an incorrect connection, corrected it and retested the unit.
- Used Python to process optical-module test data, compare measurements with specified limits and discuss findings with the engineering team.

TECHNICAL SKILLS

Programming and analysis: MATLAB (filtering, FFT and experimental signal analysis); Python (test-data processing and visualisation).
Optical laboratory work: fibre interferometry, optical alignment, photodetection, scanning measurements and LBIC imaging.
Electronic testing: oscilloscopes, spectrum analysers, digital multimeters, signal generators, wiring inspection and soldering.