

Curriculum vitae

PERSONAL INFORMATION

Youchao Wang

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WORK EXPERIENCE

Jan 2021 – Jun 2021

Internship

Huawei Technologies Sweden & UK

Research on the theory and simulation of Fourier optics based optical processor.

Jan 2020 – Present

Undergraduate Supervision Tutor

St. John's College, University of Cambridge, UK

Give individual supervision courses to second-year Engineering students at St John's College.

Course Part IB Paper 6, including Linear Systems and Control, Communications, Fourier Transforms & Signal and Data Analysis.

Jan 2019 – Mar 2019

Part Time Research Assistant

Department of Engineering, University of Cambridge, UK

Supervisor: Dr. Phillip Stanley-Marbell

Embedded system circuit design and embedded system software development.

Aug 2018 – Sep 2018

Research Assistant

Department of Engineering, University of Cambridge, UK

Supervisor: Dr. Phillip Stanley-Marbell

Research topic: Deriving physically-inspired sensor signal invariants using a physics specification language.

Jul 2017 – Sep 2017

Research Assistant

School of Electrical and Electronic Engineering, University of Manchester, UK

Supervisors: Prof. Bruce Grieve and Prof. Christopher Collins

Research topic: "Internet of Things" LoRaWAN Sensor System for Protecting Rivers and Watercourses

EDUCATION

2019 – Present

PhD in Engineering

University of Cambridge

Electrical Engineering Division, Department of Engineering

2018 – 2019

M.Phil. in Engineering

University of Cambridge

Electrical Engineering Division, Department of Engineering

2016 – 2018

B.Eng. in Electronic Engineering

University of Manchester

First class honours. GPA top 1%. Second year direct entry.

2014 – 2018 **B.Eng. in Electrical Engineering** North China Electric Power University, Beijing
Joint 2+2 programme with University of Manchester.

PROJECT PORTFOLIO

- 2019 – Present **Opto-electronic neural network processor for deep learning applications**
Ph.D. Degree Research Project, Supervisor: Prof. Timothy Wilkinson
Focus: Optical information processing, Fourier optics, Spatial light modulator, Machine learning algorithms, FPGA, Hardware and software co-design.
- 2019 – Present **Spatial Light Modulator Driver Platform for Holographic Displays**
Research Side-Project, Supervisor: Prof. Timothy Wilkinson
Focus: Spatial light modulator display driver, Computer generated holograms, PCB hardware design, FPGA firmware implementation.
- 2019 **Computer Generated Holography on a Digital Signal Processor System**
M.Phil. Degree Research Project, Supervisor: Prof. Timothy Wilkinson
Focus: Computer generated holograms, Digital signal processing, Algorithm implementation.
- 2018 – 2019 **Sensor Data Fusion using Automated Dimensional Function Synthesis**
M.Phil. Degree Research Project, Supervisor: Dr. Phillip Stanley-Marbell
Focus: Miniature hardware system design, Firmware implementation, Physics specification language compiler design.
- 2017 – 2018 **IoT Water Quality Monitoring System for Protecting Watercourses**
Research Project, Supervisors: Prof. Bruce Grieve and Prof. Christopher Collins
Focus: Low-cost turbidity sensor design, Low power embedded system design, LoRaWAN system integration.

PERSONAL SKILLS

Mother tongue English

Other languages

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
French	C1	C2	B2	C1	C2
	Diplôme d'études en langue française (DELF) B1				
German	A2	A2	A2	A2	A2

Levels: A1 and A2: Basic user – B1 and B2: Independent user – C1 and C2: Proficient user
[Common European Framework of Reference for Languages](#)

Communication skills

- team work: I have worked in various types of teams from research teams to national league hockey. For 2 years I coached my university hockey team
- mediating skills: I work on the borders between young people, youth trainers, youth policy and researchers, for example running a 3 day workshop at CoE Symposium “Youth Actor of Social Change”, and my continued work on youth training programmes
- intercultural skills: I am experienced at working in a European dimension such as being a rapporteur at the CoE Budapest “youth against violence seminar” and working with refugees.

Organisational / managerial skills

- whilst working for a Brussels based refugee NGO “Convivial” I organized a “Civil Dialogue” between refugees and civil servants at the European Commission 20th June 2002
- during my PhD I organised a seminar series on research methods

Digital competences

SELF-ASSESSMENT				
Information Processing	Communication	Content creation	Safety	Problem solving
Basic user	Independent user	Proficient user	Independent user	Basic user

[Digital competences - Self-assessment grid](#)

Computer skills – competent with most Microsoft Office programmes
– experience with HTML

Other skills Creating pieces of Art and visiting Modern Art galleries. Enjoy all sports particularly hockey, football and running. Love to travel and experience different cultures.

Driving licence A, B

ADDITIONAL INFORMATION

Publications *How to do Observations: Borrowing techniques from the Social Sciences to help Participants do Observations in Simulation Exercises*, Coyote EU/CoE Partnership Publication, (2002).