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personal website: https://renkewang.com

Renke Wang

PhD candidate in Signal Processing, Electrical and Electronic Engineering Department

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EDUCATION

PhD, Signal Processing – Imperial College London   2021 – 2025

Research interests: Mathematics for Signal Processing, Spectral Analysis, Computational Imaging, Mathematics for Inverse Problems, Machine Learning for Computational Imaging

MSc, Communications and Signal Processing – Imperial College London   2019 – 2020

Overall GPA: First Class Honors

Core Modules: Large Dimensional Data Processing, Wavelets and Applications, Probability and Stochastic Process, Pattern Recognition, Adaptive Signal Processing and Machine Intelligence, Information Theory

BSc, Electronic Information and Engineering – TongJi University   2015 – 2019

Overall GPA: 92.7/100

Core Modules: Linear Algebra, Calculus, Probability and Mathematical Statistics, Advanced Programming, Control Theory, Information Theory, Software Engineering, Signals and Systems, Analog and Digital Electronics

BEng, Electronic and Communications Engineering – Politecnico di Torino   2018 – 2019

Overall GPA: 110 cum laude/110

Core Modules: Signals and Systems, Applied Electronics, Digital Transmission and Communication Networks, Electronic Measurements, Electromagnetic Waves and Antennas

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WORK EXPERIENCE

Graduate Teaching Assistant – Imperial College London   10.2022 – 04.2024

Responsible for developing course materials and giving tutorial lectures for postgraduate modules *Mathematics for Signals and Systems* and *Wavelets, Representation Learning and Their Applications*.

Part-time Research Intern – INRiM, Italy   11.2018 – 06.2019

Responsible for post-processing raw navigation data and developing multipath detection and mitigation algorithms for the comparison of UTC(IT) with the time scales generated by other NMI laboratories.

Software Developer Intern – UNISOC, China   07.2018 – 09.2018

Responsible for software development for Internet Protocol (IP) multimedia subsystem.

SKILLS

Programming languages
MATLAB: high proficiency, *Python:* high proficiency

Spoken languages
Chinese: native, *English:* high proficiency, *Italian:* elementary proficiency

Analytical skills
Digital Signal Processing, Fourier Analysis, Machine Learning, Image Processing, Bioimage Processing, Optimization

PUBLICATIONS

Conference

ICASSP22' *Perfect Reconstruction of Classes of Non-Bandlimited Signals from Projections with Unknown Angles*, **Renke Wang**, Roxana Alexandru, Pier Luigi Dragotti, Singapore, 2022.

EUSIPCO22' *FRISPEE: FRI-Based Single Image Super-Resolution with Deep Recursive Residual Network,* **Renke Wang**, Junjie Huang, Pier Luigi Dragotti, Belgrade, Serbia, 2022.

EUSIPCO23' *Reconstruction of Images with Finite Rate of Innovation from Noisy Tomographic Projections*, **Renke Wang**, Thierry Blu, Pier Luigi Dragotti, Helsinki, Finland, 2023.

EUSIPCO23' *Perfect Reconstruction of Classes of 3D Non-Bandlimited Signals from Projections with Unknown Angles*, **Renke Wang**, Pier Luigi Dragotti, Helsinki, Finland, 2023.

EUSIPCO24' *Fast and Direct Angle Inference Using Masked Projection Modelling in 2D Tomography with Unknown views*, Jiakang Chen, **Renke Wang**, Vincent Leung, Pier Luigi Dragotti, 2024, accepted.

ISGT EUROPE24' *Improved Identification of Natural Frequencies of Fault-Originated Travelling Waves*, Zhaoyang Wang, **Renke Wang**, Pier Luigi Dragotti, 2024, submitted.

Journal

TSP, IEEE *Reconstructing Classes of 3D FRI Signals from Sampled Tomographic Projections at Unknow Angles*, **Renke Wang**, Francien Bossema, Thierry Blu, Pier Luigi Dragotti, 2024, submitted.

AWARDS

Jury Prize winner (1st place) – Three Minute PhD Thesis Competition, European Signal Processing Conference (EUSIPCO), 2024.

Audience's Choice prize – Three Minute PhD Thesis Competition, European Signal Processing Conference (EUSIPCO), 2024.

Prize winner, International Quant Championship 2024 – Third place in the university round.

Stylianos Kalaitzis award – shortlisted after a formal assessment of students' PhD progress for the most promising PhD thesis, EEE department, Imperial College London, 2023.

EEE PhD full scholarship winner – scholarship given by the department to excellent students to support their PhD studies, EEE department, Imperial College London, 2021-2024.

CSC scholarship winner **–** award given by China Scholarship Council to award exchange students who have excellent academic performance, China Scholarship Council, 2018-2019.

TongJi scholarship for excellence winner **–** awarded for three consecutive years for outstanding marks and participations in various school activities, TongJi university, 2016-2018.

Excellent Member for Students Union of TongJi **–** I was awarded for successfully organizing various international students activities, Tongji Univeristy, 2017.