Yiming Wei

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EDUCATION

École Polytechnique - IP Paris Sep 2022

M.Sc. in PhD track - Mechanics / Biomedical Engineering Paris

GPA: 3.8/4.0; 15.77/20 (with high honors)

Related courses: Solid Mechanics, Fluid Mechanics, Design of digital and analogue integrated circuits, Data sciences of biological imaging, Biomedical imaging / Knowledge representation, Machine learning for images and object recognition

Nanjing University of Science and Technology. (Joint Programme with Lorraine University) Sep 2018 - Jun 2022

B.Eng. in Materials Science and Engineering - Sino-French School of Engineers Nanjing

GPA: 3.76/4.00; 90.21/100 (rank 1st)

Related courses: Fundamentals of Materials Science, Electrical Engineering, Analog & Digital Circuits, Analysis Methods in Materials Science, Materials Processing Technology

HONORS & AWARDS

Institut Polytechnique de Paris Scholarship(Full Scholarship for Master) 2022-2024

National Scholarship (Awarded by Ministry of Education of China: top 1%) 2019-2020

Globalink Research Internship (Awarded by Canada Mitacs: 200 people per year nationwide) 2021

Special Scholarships (Awarded by NJUST: top 1%) 2018-2019, 2018-2019 , 2019-2020

First-Class Scholarships (Awarded by NJUST: top 3%) 2018-2019 , 2019-2020

RESEARCH EXPERIENCE

FPGA-based NMR and deconvolution of 1D NMR spectra using deep learning Oct 2023 - Present

École polytechnique Prof. Jean-Charles Vanel

- Will reproduce deeping learning code for deconvolution of 1D NMR spectra in the paper
- VHDL code for the FPGA, focusing on creating a compact NMR spectrometer

Validation and PCB Design of a Novel Inductive Dual-frequency Link for Wireless Powering of Miniature Neural Implants Jul 2023 - Sep 2023

Prof. Sandro Carrara

BCI-EPFL

- HFSS Simulation of coils design
- Validation of coils in kind and realize frequency and impedance matching

Diffusion and Clustering of Passive particles in a bath of Micro-algae Jun 2023 - Jul 2023

LadHyx Prof. Gabriel Amselem

- Grow micro-algae *Chlamydomonas reinhardtii*
- Studying experimentally the motion of passive micrometric beads immersed in a suspension of micro-algae

Segmentation and Statistical Analysis of Cellular Images using Deep-Learning Apr 2023 - Jun 2023

LadHyx Prof. Abdul Barakat

- Pre-process cell photos, label cells, train models using deep learning
- Statistical analysis of the obtained data: diameter change, curve fitting

Development of a Microfluidic chip Activator for a New Tuberculosis Screening Tool Sep 2022 - Jun 2023

Epilab Dr. Manon Giraud

- Improvement of the activator motion algorithm
- Design new PCB and envelope of activator

Research on Two-dimensional WS2 in Ohmic Contact with Metal Electrodes Jan 2022 - Jun 2022

Graduation design - NJUST Prof. Xiang Chen

- Preparing single-crystal WS2 by CVD
- Comparing the contact mode and performance of conventional electrode contact and semi-metallic Bi electrode contact

Optimization of the Hygrothermal Performance of Building Envelope Systems May 2021 - Oct 2021

RA-Université Laval Prof. Alice Wang

- Learning about building envelopes and bio-based insulation materials in Quebec
- Using WUFI and COMSOL to simulate the hygrothermal properties of designed building envelope components

Fast Frequency Measurement Technology of Wideband Channelized Digital Receiver Mar 2020 - Oct 2021

NJUST Prof. Shanhong Guo

- Simulation study and improvement of transient autocorrelation frequency measurement algorithm
- Design of hardware implementation of frequency measurement algorithms

PROJECT EXPERIENCE

IMA205 - Machine Learning for image and object recognition Mar 2023 - May 2023

Automated Cardiac Diagnosis Using Cardiac Magnetic Resonance Imaging (CMRI) and Machine Learning Kaggle - Télécom Paris

- Created a system using machine learning to accurately diagnose heart disease from cardiac MRI images.
- Improved the system's accuracy by addressing data segmentation issues and trained two models, achieving up to 89% accuracy.

MEC658C-Diagnostics and Treatment Feb 2023 - Apr 2023

Innovating for Better Patient Care: Wireless, Waterproof ECG Devices for Long-term Monitoring Hôpital Paris Saint-Joseph

- Clinical immersion for need identification and solution design
- Conceptual design of a wireless, waterproof ECG device for monitoring

PROFESSIONAL EXPERIENCE

thyssenkrupp steering Changzhou Ltd. May 2021 - Sep 2021

EE Lab Departement of Quality Changzhou

- Study of electric power steering systems in vehicles
- Error diagnosis of ECUs in products and design analysis

Skills and Languages

- Computer skills: Cadence, ANSYS, C, Python, R, Arduino, AutoCAD, Solidworks, Comsol
- Microfabrication: CVD, metal evaporation, wet and dry etching, photolithography, SEM
- Languages: English (IELTS 6.5), French (delf-B2) , Mandarin (Mother tongue)