

Yuanyuan Yao

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EDUCATION

Katholieke Universiteit Leuven (KUL)

PhD candidate

Leuven, Belgium

Sept. 2022 – Present

Technische Universiteit Delft (TUD)

MSc in Electrical Engineering, GPA: 9.03/10

Delft, the Netherlands

Sept. 2020 – Jul. 2022

Zhejiang University (ZJU)

BSc in Ocean Engineering and Technology, GPA: 3.90/4.0 (88.78/100)

Hangzhou, China

Sept. 2016 – Jun. 2020

HONORS AND AWARDS

Microelectronics Scholarship (2020, TUD)

Holland Scholarship (2020)

First-Class (Top 3%) Academic Scholarship (2019, ZJU)

Second-Class (Top 8%) Academic Scholarship (2018, ZJU)

RESEARCH EXPERIENCE

Image-Based Query Search Engine via Deep Learning

Supervisor: Associate Professor Justin Dauwels, TUD Oct. 2021 – Jun. 2022

- Proposed a pipeline for real-time image-based query search
- Explored approximate nearest neighbour search methods to improve retrieval efficiency
- Implemented the proposed search engine (with two colleagues) that outperforms existing benchmarks

Joint Waveform and Compression Matrix Design for Hardware-limited Multi-static Radar

Supervisor: Associate Professor Jiang Zhu, ZJU Oct. 2019 – Jun. 2020

- Formulated a mathematical model for optimizing the detection performance of the hardware-limited multi-static radar system
- Proposed a joint optimization algorithm to determine the optimal waveform and compression matrix
- Verified the performance gain of the proposed algorithm by numerical simulation

WORK EXPERIENCE

Teaching Assistant

EE4685 Machine Learning, a Bayesian Perspective, TUD Jan. 2022 – Apr. 2022

- Helped with preparing slides and course materials
- Took questions about the assignments and course projects

Machine Learning Internship

Mindsigns Health Pte Ltd Jul. 2021 – Jan. 2022

- Implemented a Bayesian method for proper calibration of the output of the seizure detector
- Incorporated a transformer into the neural network to achieve better overall detection performance
- Applied the same framework to frequency features

Teaching Assistant

EE4C03 Statistical Digital Signal Processing, TUD Sept. 2021 – Nov. 2021

- Conducted computer sessions
- Took questions about the assignments and course projects
- Helped with running the course website

Teaching Assistant

74120040 *Theory of Underwater Acoustics, ZJU* Feb. 2019 – Apr. 2019

- Reviewed students' assignments and lab reports
- Conducted computer sessions and exercise sessions

PEER-REVIEWED ACCEPTED MANUSCRIPTS

W. Y. Peh, Y. Yao, J. Dauwels. "Transformer Convolutional Neural Networks for Automated Artifact Detection in Scalp EEG," *2022 44th Annual International Conference of the IEEE Engineering in Medicine & Biology Society (EMBC)*

COMPUTER SKILLS

Experienced in Python, Matlab, C/C++

Experienced in deep learning frameworks Pytorch and TensorFlow

REFERENCES

Dr.ir. Justin Dauwels

Associate Professor, Delft University of Technology

- Tel: +31 15 27 8
- Email: J.H.G.Dauwels@tudelft.nl
- Room: VMB 1.W.560
- Website: <http://microelectronics.tudelft.nl/People/bio.php?id=744>

Dr. Jiang Zhu

Associate Professor, Zhejiang University

- Tel: 0580-2092412
- Email: jiangzhu16@zju.edu.cn
- Room: 412, MIT Building
- Website: <https://person.zju.edu.cn/en/zhujiang>