

Yu Chen

Personal website: hustyuchen.github.io
Github: github.com/cy1034429432

Email: yu_chen2000@hust.edu.cn
Mobile: +86-180-8405-5115

EDUCATION

- Huazhong University of Science and Technology (without exams)** Wuhan, China
• *Master of electrical engineering; GPA: 3.85/4.00 (Top 30%)* Sep. 2022 - Jun. 2025
Courses: Advanced Engineering Electromagnetic Fields (96), Accelerator Physics (94), Applying Superconducting Technology (95), etc.
- Southwest University** Chongqing, China
• *Bachelor of electrical engineering; GPA: 4.30/5.00 (2/144)* Sep. 2018 - Jun. 2022
Courses: Complex Function (100), Linear Algebra (100), Advanced Math (98), Mathematical Statistics (98), High Voltage Technology (95), High Voltage Technology (95), Steady State Analysis of Power System (94), Electrical Machinery (95), etc.

SKILLS SUMMARY

- Languages:** Python, Matlab, LabVIEW, C++, C
- Frameworks:** Torch, Keras, Ax-platforms, SciPy, Optimization algorithm, Avalanche, Torchcam
- Tools:** Simulink, Docker, Multisim, Latex, PSpice, BDSIM, Altium designer, Linux, Windows
- Interests:** Fault diagnosis, System identification and modeling, System optimization, Optimal control, Data mining
- Technologies:** Data augmentation, Anomaly detection, Lifelong learning, Reinforcement learning, Active learning

EXPERIENCE

- Hunan Huishiwei Intelligent Technology Co., Ltd** Hunan, China
• *Algorithm engineer (Full-time)* Jun. 2022 - Aug 2022
 - Developing License Plate Recognition Models:** Responsible for object detection modeling and image transformation techniques.
 - Developing an automated car counting model.:** Responsible for object detection modeling.

PUBLICATIONS

- Yueqiang Yu, **Yu Chen**, Zhongyong Zhao*, *et al.*, Detection Method of Stator Winding Short Circuit Fault of Synchronous Machine Based on CWT and CNN-BiLSTM (in Chinese), *High Voltage (Chinese EI Journal)*, 2023
- Yu Chen**, Zhongyong Zhao*, *et al.*, Improved Interpretation of Impulse Frequency Response Analysis for Synchronous Machine Using Life Long Learning Based on iCaRL, *IEEE Trans. Instrum. Meas.*, 2023
- Yu Chen**, Zhongyong Zhao*, *et al.*, Understanding IFRA for Detecting Synchronous Machine Winding Short Circuit Faults Based on Image Classification and Smooth Grad-CAM++, *IEEE Sens. J.*, 2023
- Zhongyong Zhao*, **Yu Chen (student first)**, *et al.*, Evaluation of Operating State for Smart Electricity Meters Based on Transformer-Encoder-BiLSTM, *IEEE Trans. Industr. Inform.*, 2022
- Yueqiang Yu, Zhongyong Zhao*, **Yu Chen**, *et al.*, Evaluation of the Applicability of IFRA for Short Circuit Fault Detection of Stator Windings in Synchronous Machines, *IEEE Trans. Instrum. Meas.*, 2022
- Yu Chen**, Zhongyong Zhao*, *et al.*, Fault anomaly detection of synchronous machine winding based on isolation forest and impulse frequency response analysis, *Measurement*, 2022
- Zhongyong Zhao*, **Yu Chen (student first)**, *et al.*, Equivalent Broadband Electrical Circuit of Synchronous Machine Winding for Frequency Response Analysis based on Gray Box Model, *IEEE Trans. Energy Convers.*, 2021
- Yu Chen**, Xiaoqing Ji, Zhongyong Zhao*, *et al.*, Synchronous Machine Winding Modeling Method Based on Broadband Characteristics, *Appl. Sci.*, 2021
- Zhongyong Zhao*, **Yu Chen (student first)**, *et al.*, Analysis of Influencing Factors of 10 kV Dry Type Iron Core Series Reactor Fault Based on Equivalent Circuit and Temperature Field Model (in Chinese), *Science Technology and Engineering*, 2021
- Zhongyong Zhao*, Chao Tang, **Yu Chen**, *et al.*, Analysis of Interpretation of Transformer Winding Deformation Fault by the Spectral Clustering of FRA Signature, *Int. J. Electr. Power Energy Syst.*, 2021
- Jianqiang Ni, Zhongyong Zhao*, Shan Tan, **Yu Chen**, *et al.*, The Actual Measurement and Analysis of Transformer Winding Deformation Fault Degrees by FRA Using Mathematical Indicators, *Electr. Power Syst. Res.*, 2021

WORKING MANUSCRIPT

- Yu Chen**, Bin Qin*, *et al.*, Seamless modeling and transmission efficiency optimization for a proton therapy beamline, submitted to *Nucl. Sci. Tech.*, 2023
- Yu Chen**, Zhongyong Zhao*, *et al.*, Intelligent FRA-guided Synchronous Machine Winding Short Circuit Faults Diagnosis Based on Active Learning, submitted to *IEEE Trans. Energy Convers.*, 2023
- Yu Chen**, Zhongyong Zhao*, *et al.*, Diagnosing Transformer Winding Deformation Fault Types from FRA Based on Conditional-WGAN-GP Data Augmentation, submitted to *Eng. Fail. Anal.*, 2023

CONFERENCES

- **Yu Chen**, Bin Qin*, *et al.*, High-fidelity Modeling and Transmission Optimization for the Beamline of HUST-PTF, The Symposium on Accelerator Physics, SAP, 2023
- Shubai Chen, Wu Song*, **Yu Chen**, *et al.*, Deep Similarity Preserving and Attention-based Hashing for Cross-Modal Retrieval, Proceedings of the International Conference on Software Engineering and Knowledge Engineering, SEKE, 2021

COMPETITIONS

- **National Undergraduate Electronics Design Contest (2022 National Second Prize)**: Signal distortion measurement device (in Chinese), **Yu Chen**, Xi Chen, Ziqi Liao, Advisor: Prof. Zhongyong Zhao.
- **National Plasma Science and Technology Innovation Competition of College Students (2022 National Second Prize)**: Plasma-based wastewater treatment plant (in Chinese), Haodong Dai, Hao Gui, **Yu Chen**, Advisor: Prof. Zhongyong Zhao.
- **Challenge Cup Extracurricular Academic Works of Science and Technology (2021 Excellence Award)**: Nanosecond Fault Detector - The Doctor of Large Synchronous Machine (in Chinese), Yueqiang Yu, Mengyuan Han, **Yu Chen**, *et al.*, Advisor: Prof. Zhongyong Zhao.
- **Challenge Cup Extracurricular Academic Works of Science and Technology (2021 First Prize in Chongqing)**: Study on the Promoting Effect of “Two Mountains” Theory on Rural Revitalization –Survey on the sense of access of 127 villagers in Anji Yu Village (in Chinese), Xinru Li, Xintong Wang, **Yu Chen**, *et al.*
- **Mathematical Contest in Modeling (2021 Meritorious Winner)**: A Model for Evaluating and Optimizing High Education (in Chinese), **Yu Chen**, Shubai Chen, Zehua Cao, Advisor: Prof. Zhongyong Zhao.
- **National Undergraduate Mathematical Contest in Modeling (2020 First Prize in Chongqing)**: Credit Decision Optimization Model Based on TOPSIS and KMV Model (in Chinese), **Yu Chen**, Shubai Chen, Zehua Cao, Advisor: Prof. Zichuan Fan.
- **National Undergraduate Mathematics Competition (2020 First Prize in Chongqing)**: **Yu Chen**.

HONORS

- Chongqing Outstanding Graduates - May, 2022
- Outstanding Graduates from Southwest University - May, 2022
- Excellent Undergraduate Graduation Thesis in Chongqing - May, 2022
- First Prize of Undergrad Thesis of Southwest University - May, 2022

SCHOLARSHIPS

- Second Prize Zhixing Scholarship (CNY 2000) - Sep., 2023
- First Prize Master Academic Scholarship of HUST (CNY 10000) - Sep., 2023
- First Prize Master Academic Scholarship of HUST (CNY 10000) - Sep., 2022
- Scholarship for Gratitude to Modern Scientists(CNY 20000) - May, 2022
- Tang Lixin Excellent Learning Pioneer(CNY 12000) - Oct., 2021
- Chinese National Scholarship (CNY 8000) - Sep., 2021
- First Prize Scholarship of Southwest University (CNY 5000) - Sep., 2020
- Chinese National Scholarship (CNY 8000) - Sep., 2019

SERVICES

- **Cadres of the Attendance Department, Southwest University Center Library Management Committee**
Sep., 2019 - Sep., 2020, Chongqing, China
- **Worker of the Attendance Department, Southwest University Center Library Management Committee**
Sep., 2018 - Sep., 2019, Chongqing, China
- **Monitor of 2018 Electrical Engineering Class 1 at Southwest University**
Sep., 2018 - Sep., 2019, Chongqing, China