Qiyu Wei

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Education

Shanghai University Shanghai, China

Master of Microelectronics and solid-state electronics *September 2021 - Expected March 2024*

- Research Direction: Semiconductor with Artificial Intelligence Supervisor: Prof. Zeng Zeng
- WAM: 87.5/100 (Ranking: Top 5%)
- Award: National Scholarship, First-class Scholarship, Distinguished Graduate of Shanghai

Nanjing University of Posts and Telecommunications Nanjing, China

Bachelor of Communication engineering (Bell Honor school Elite Class) *September 2017 - June 2021*

- WAM: 87.5/100 (Ranking: Top 5%)
- Award: Outstanding students award, Outstanding student leaders, Second-class Scholarship

Publications

- **Qiyu, W.**, Weihua Z., Yuxin, L., Zeng, Z, Yang, X.. (2023, October). Controlling Facial Attribute Synthesis by Disentangling Attribute Feature Axes in Latent Space. In 2023 IEEE International Conference on Image Processing (ICIP). IEEE.
- **Qiyu, W.**, Wei Z., Zeng, Z.(2023, June). Wafer Map Defect Patterns Semi-Supervised Classification Using Latent Vector Representation. In 2023 IEEE International Conference on Cybernetics and Intelligent Systems(CIS).IEEE.
- **Qiyu, W.**, Yang, X., Sang, T., Wang, H., Xiaofeng, Z., Zhongyao, C., ... & Zeng, Z. (2022, October). Latent Vector Prototypes Guided Conditional Face Synthesis. In 2022 IEEE International Conference on Image Processing (ICIP) (pp. 3898-3902). IEEE.
- **Qiyu, W.**, Ma, R., Wang, Y., Chen, M., Sun, Y., Liu, M., & Lin, X. (2020, July). Glad: A method of microgrid anomaly detection based on esd in smart power grid. In 2020 IEEE International Conference on Power, Intelligent Computing and Systems (ICPICS) (pp. 103-107). IEEE.
- Ziyuan Z., **Qiyu, W.** (contribute equally), Jie, W., Richard, C., Xulei, Y., Chongser, C., & Ramanpreet, P. (2024, February). Novel Approach for 3D Defect Detection and Metrology of HBMs Using Minimum Labeled Data. In 2024 74th IEEE Electronic Components and Technology Conference (ECTC). IEEE.
- Wei Z., **Qiyu, W.** (contribute equally), Zeng Z.(2023, September). A Deeply Supervised Semantic Segmentation Method Based on GAN. In 2023 IEEE International Conference on Intelligent Transportation System (ITSC).
- Guo Y., **Qiyu, W.** (contribute equally), Zhu Y., Wang Q., Liu Y.(2024, January). Building's Energy Consumption Prediction with Limited Historical Data Using AR-RNN. In 2024 IEEE International Conference on Industrial Technology (ICIT).
- Peng liu, Haowei Wang, **Qiyu, W.**(2023, October). Bayesian Optimization with Switching Cost: Regret Analysis and Lookahead Variants. In 2023 International Joint Conferences on Artificial Intelligence (IJCAI).
- Tang, X., Liu, Y., Deng, T., Zeng, Z., Huang, H., **Qiyu, W.**, ... & Yang, L. (2023). A job scheduling algorithm based on parallel workload prediction on computational grid. Journal of Parallel and Distributed Computing(JPDC), 171, 88-97.
- (Major revision) Sang, T., **Wei, Q.** (contribute equally), Xiaofeng, Z.,Zeng, Z., Yang, X..Towards Efficient Point Cloud Classification via Dynamic Graph Neural Networks. IEEE Transactions on Intelligent Transportation Systems(T-ITS)
- (Submitted) **Wei, Q.**, Zhao, W.,Zeng, Z.,Xun X., Yang, X..Utilizing the Mean Teacher with Supcontrast loss for Wafer Pattern Recognition. IEEE Signal Processing Letters(SPL)

Research Experience

Agency for Science, Technology and Research(A*STAR) Singapore, Singapore
Research assistant, supervised by Dr. Yang Xulei *June 2023 - Jan 2024*

- Supported by the SIPGA Scholarship
- My research includes:
  - Semi-supervised algorithms
  - 3D machine learning

National University of Singapore Remote
Remote intern, supervised by Dr. Wang Haowei *Jan 2022 - now*

- My research includes:
  - Bayesian optimization
  - Statistical Machine learning

Selected awards and honors

The Ace Land Cup 2022 | *Winning Prize(Ranked 5/465)* May 2022
National Post-Graduate Mathematical Contest in Modeling | *The second prize* October 2021
Mathematical Contest In Modeling (MCM/ICM) | *Outstanding Winner (Top 0.12 %)* February 2020
National College Students Mathematical Contest in Modeling | *The second prize* October 2019
NJUPT Students Mathematical Contest in Modeling | *The first prize* May 2019

Patents

Granted | *CN 202010882457.5* | First author August 2020
- Vehicle-mounted video distributed scheduling and vehicle-connected communication system

submitted | *CN 202311088688.9* | First author April 2023
- A invention relates to a wafer defect detection method with high precision and adapted to different density variations

submitted | *CN 202211069040.2* | Second author August 2022
- A wafer defect detection method with high accuracy and adapted to different density variations

Projects

Chip packaging fault detection with CV | *Shanghai Micro Electronics Equipment* April 2022 – April 2023

Time series data analysis and fault tracing | *Shanghai Micro Electronics Equipment* April 2022 – August 2022

AI in EDA | *Shanghai Industrial μ Technology Research Institute* September 2021 – May 2022

CD measure | *Shanghai, Huahong fab5* March 2023 – Now

Experience

Visiting student January 2019 – February 2019
University of California, Berkeley *California, USA*

- Overall Assessment : A

Minister of CS Department of Science Association September 2018 – October 2019
Nanjing University of Posts and Telecommunications *Nanjing, China*

Skill Sets

Languages: IELTS: 6.5
Programming languages: Python, C
ML/AI: Pytorch, Tensorflow, Paddle, Numpy, Pandas, Matplotlib