Tao JING

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EDUCATION

Ph.D. Student in Mechanical Engineering *September 2023 – September 2026*

- Department of Mechanical Engineering, The Hong Kong Polytechnic University, Hong Kong
- Supervisor: Dr. Mengying LI

M.Sc. Mechanical Engineering *September 2018 – March 2021*

- School of Mechanical Engineering, Northwestern Polytechnical University, China
- Supervisor: Prof. Xitian TIAN

B.E. Mechanical Manufacture and Automation *September 2014 – June 2018*

- College of Mechanical Manufacture and Automation, Chang'an University, China
- Supervisor: Prof. Kai DING

APPOINTMENT

Research Associate *June 2022 – January 2023*

Department of Industrial and Systems Engineering, Northwestern Polytechnical University, Hong Kong

Research Associate *March 2021 – March 2022*

School of Mechanical Engineering, Northwestern Polytechnical University, China

Intern *July 2020 – September 2020*

HUAWEI TECHNOLOGIES CO.LTD. - Hardware Engineering and Product Development Department

RESEARCH INTERESTS

- Solar Resourcing and Forecasting (From deterministic to probabilistic forecasting)
- Deep Learning Enabled Time Series Forecasting
- Big Data-Driven Predictive Maintenance and Decision-Making

PUBLICATIONS

Accepted Journal Papers

- **T. Jing**, S. Chen, D. Navarro-Alarcon, Y. Chu, and M. Li, "SolarFusionNet: Enhanced Solar Irradiance Forecasting via Automated Multi-Modal Feature Selection and Cross-Modal Fusion," ***IEEE Transactions on Sustainable Energy***, vol. 16, no. 2, pp. 761-773, 2025. DOI (Q1, IF: 8.6)
- **T. Jing**, P. Zheng, L. Xia, and T. Liu, "Transformer-based hierarchical latent space VAE for interpretable remaining useful life prediction," ***Advanced Engineering Informatics***, vol. 54, p. 101781, 2022. DOI (Q1, IF: 8)
- **T. Jing**, X. Tian, H. Hu, and L. Ma, "Deep learning-based cloud–edge collaboration framework for remaining useful life prediction of machinery," ***IEEE Transactions on Industrial Informatics***, vol. 18, no. 10, pp. 7208–7218, 2021. DOI (Q1, IF: 11.7)
- **T. Jing**, X. Tian, X. Liu, H. Hu, M. Zhang, and B. Li, "A multiple alternative processes-based cost-tolerance optimal model for aircraft assembly," ***International Journal of Advanced Manufacturing Technology***, vol. 107, pp. 667-677, 2020. DOI (Q2, IF: 2.9)
- **T. Jing**, X. Tian, "Monte Carlo-Adaptive differential evolution algorithm-based multi-objective optimization method for aircraft tolerance allocation," ***Hangkong Xuebao/Acta Aeronautica et Astronautica Sinica*** vol. 43(3), p. 425278, 2022. DOI
- L. Xia, P. Zheng, K. L. Keung, C. Xiao, **T. Jing**, and L. Liu, "From fault tree to fault graph: Bayesian

network embedding-based fault isolation for complex equipment," ***Manufacturing Letters***, vol. 35, pp. 983-990, 2023. DOI

PROJECTS

Industrial Big Data-enabled Smart Maintenance Technology for Complex Equipment - *Supported by Mainland Hong Kong Joint Funding Scheme & Innovation and Technology Commission of mainland Hong Kong (June 2022 - January 2023)*

- Role: Principal member
- Development of interpretable deep learning algorithms for remaining useful life prediction of complex equipment

Real-time Maintenance Strategies for Complex Machinery Based on Cloud Manufacturing - *Supported by Ministry of Industry and Information Technology project, China (March 2021 - March 2022)*

- Role: Principal member
- Development of a cloud-edge collaboration algorithm to empower proactive prediction maintenance of equipment in cloud manufacturing scenarios

Digital Assembly System Planning and Process Designing of a Large Passenger Aircraft - *Supported by Ministry of Industry and Information Technology project, China (Spetember 2018 - March 2021)*

- Role: Principal member
- Development of a heuristic-based algorithm for intelligent allocation of large aircraft assembly tolerances
- Assembly simulation verification based on tolerance allocation results and assembly process planning

SPECIAL SKILLS

Languages: Python, C#, SQL

Technologies: AutoCAD, Solidworks, Teamcenter Vis Mockup, Tecnomatix Process Simulate.

ACADEMIC SERVICES

Peer Reviewer in Journals:

- IEEE Transactions on Sustainable Energy
- IEEE Transactions on Industrial Informatics
- Measurement
- Advanced Engineering Informatics
- Journal of Intelligent Manufacturing
- Journal of Renewable and Sustainable Energy