Shun Wang

PhD Student · Pre-doctoral Researcher

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Education

Universitat Politècnica de Catalunya *Barcelona, Spain*

PhD *November, 2023 - present*

- Advisor: Prof. Francesc Pozo and Prof. Yolanda Vidal
- Research interest: Condition Monitoring for Wind Turbine

Northwestern Polytechnical University *Xi'an, China*

Master of Engineering *August 2016 - April 2023*

- Major: Aeronautics and Astronautics Safety Engineering
- Advisor: Prof. Yongbo Li

Northwestern Polytechnical University *Xi'an, China*

Bachelor of Engineering *August 2016 - July 2020*

- Major: Aircraft Control and Information Engineering
- Thesis advisor: Prof. Yongbo Li

Professional Experience

2023-2026   **Pre-doctoral Fellow**, Universitat Politècnica de Cataluya

Publications

Journal Articles

Shun Wang, Yongbo Li*, Khandaker Noman, Zhixiong Li, Ke Feng, Zheng Liu, Zichen Deng. Multivariate multiscale dispersion Lempel-Ziv complexity for fault diagnosis of machinery with multiple channels. *Information Fusion*, 2023.

Shun Wang, Yongbo Li*, Khandaker Noman, Dong Wang, Ke Feng, Zheng Liu, Zichen Deng. Cumulative spectrum distribution entropy for rotating machinery fault diagnosis. *Mechanical Systems and Signal Processing*, 2024, 206: 110905.

Shun Wang, Yongbo Li*, Shubin Si, Khandaker Noman. Enhanced hierarchical symbolic sample entropy: Efficient tool for fault diagnosis of rotating machinery. *Structural Health Monitoring*. 2023, 22(3):1927-1940.

Shun Wang, Yongbo Li*, Jiacong Zhang, Zheng Liu, Zichen Deng. A novel feature extraction method based on symbol-scale diversity entropy and its application for fault diagnosis of rotary machines. *Structural Health Monitoring*, 2023.

Yongbo Li*, **Shun Wang**, Yang Yang, Zichen Deng. Multiscale symbolic fuzzy entropy: An entropy denoising method for weak feature extraction of rotating machinery. *Mechanical Systems and Signal Processing*, 2022, 162: 108052.

Yongbo Li*, **Shun Wang**, Ni Li, Zichen Deng. Multiscale symbolic diversity entropy: a novel measurement approach for time-series analysis and its application in fault diagnosis of planetary gearboxes. *IEEE Transactions on Industrial Informatics*, 2021, 18(2): 1121-1131.

Yongbo Li*, **Shun Wang**, Zichen Deng. Intelligent fault identification of rotary machinery using refined composite multiscale Lempel–Ziv complexity. *Journal of Manufacturing Systems*, 2021, 61: 725-735.

Yongbo Li, Zehang Jiao, **Shun Wang**, Ke Feng, Zheng Liu. Cross Diversity Entropy-Based Feature Extraction for Fault Diagnosis of Rotor System. *IEEE/ASME Transactions on Mechatronics*, 2023.

Khandaker Noman, Yongbo Li*, **Shun Wang**. Continuous Health Monitoring of Rolling Element Bearing Based on Nonlinear Oscillatory Sample Entropy. *IEEE Transactions on Instrumentation and Measurement*. 2022, 71: 1-14.

Yongbo Li*, Fulong Liu, **Shun Wang**, Jiancheng Yin. Multiscale Symbolic Lempel–Ziv: An Effective Feature Extraction Approach for Fault Diagnosis of Railway Vehicle Systems. *IEEE Transactions on Industrial Informatics*, 2020, 17(1): 199-208.

Shun Wang, Yongbo Li*. A Novel Nonlinear Analysis Tool: Multi-scale Symbolic Sample Entropy and Its Application in Condition Monitoring of Rotary Machinery. *2020 Asia-Pacific International Symposium on Advanced Reliability and Maintenance Modeling (APARM 2020)*. IEEE, 2020: 1-5.

Shun Wang, Yongbo Li*. Refined time-shift multiscale diversity entropy: a novel feature extraction algorithm for fault diagnosis of planetary gearbox. *14th International Conference on Damage Assessment of Structures (DAMAS 2021)*. Journal of Physics: Conference Series. IOP Publishing, 2022, 2184(1): 012010.

Honors & Awards

2023	**Outstanding Master's Graduate / Thesis**, Northwestern Polytechnical University
2022	**National Scholarship**, Ministry of Education of P.R.China
2021	**National Scholarship**, Ministry of Education of P.R.China

Teaching Experience

Fall 2021	**Pattern Recognition and Analysis**, Teaching Assistant
Fall 2020	**Machine Learning**, Teaching Assistant
Fall 2020	**Pattern Recognition and Analysis**, Teaching Assistant

References

Prof. Yongbo Li
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Prof. Yolanda Vidal
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