Shun Wang

wangshun@mail.nwpu.edu.cn
https://shunwang98.github.io/ Google Scholar Profile ResearchGate Profile

Education

Aug. 2020 – Apr. 2023 **Master of Engineering in Aeronautics and Astronautics Safety Engineering**
Northwestern Polytechnical University, Xi'an, China
Thesis title: *Research on nonlinear characteristic analysis and fault diagnosis of rotating machinery based on entropy theory* (Advisor: Prof. Yongbo Li)

Aug. 2016 – Jul. 2020 **Bachelor of Engineering in Aircraft Control and Information Engineering.**
Northwestern Polytechnical University, Xi'an, China
Thesis title: *Research on intelligent diagnosis method of rotating machinery based on Lempel-Ziv complexity* (Advisor: Prof. Yongbo Li)

Research Publications

Journal Articles

1. **S. Wang**, Y. Li, S. Si, and K. Noman, "Enhanced hierarchical symbolic sample entropy: Efficient tool for fault diagnosis of rotating machinery," *Structural Health Monitoring*, vol. 22, no. 3, pp. 1927–1940, 2023.
2. **S. Wang**, Y. Li, J. Zhang, Z. Liu, and Z. Deng, "A novel feature extraction method based on symbol-scale diversity entropy and its application for fault diagnosis of rotary machines," *Structural Health Monitoring*, p. 14 759 217 231 186 357, 2023.
3. Y. Li, **S. Wang**, Y. Yang, and Z. Deng, "Multiscale symbolic fuzzy entropy: An entropy denoising method for weak feature extraction of rotating machinery," *Mechanical Systems and Signal Processing*, vol. 162, p. 108 052, 2022.
4. K. Noman, Y. Li, and **S. Wang**, "Continuous health monitoring of rolling element bearing based on nonlinear oscillatory sample entropy," *IEEE Transactions on Instrumentation and Measurement*, 2022.
5. Y. Li, **S. Wang**, and Z. Deng, "Intelligent fault identification of rotary machinery using refined composite multi-scale lempel–ziv complexity," *Journal of Manufacturing Systems*, vol. 61, pp. 725–735, 2021.
6. Y. Li, **S. Wang**, N. Li, and Z. 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*, vol. 18, no. 2, pp. 1121–1131, 2021.
7. Y. Li, F. Liu, **S. Wang**, and J. Yin, "Multiscale symbolic lempel–ziv: An effective feature extraction approach for fault diagnosis of railway vehicle systems," *IEEE Transactions on Industrial Informatics*, vol. 17, no. 1, pp. 199–208, 2020.

Conference Proceedings

1. **S. Wang** and Y. Li, "Refined time-shift multiscale diversity entropy: A novel feature extraction algorithm for fault diagnosis of planetary gearbox," in *Journal of Physics: Conference Series*, IOP Publishing, vol. 2184, 2022, p. 012 010.
2. **S. Wang** and Y. Li, "A novel nonlinear analysis tool: Multi-scale symbolic sample entropy and its application in condition monitoring of rotary machinery," in *2020 Asia-Pacific International Symposium on Advanced Reliability and Maintenance Modeling (APARM)*, IEEE, 2020, pp. 1–5.

Skills

Languages Strong reading, writing and speaking competencies for English, Mandarin Chinese.
Coding Python, Matlab & Simulink, C/C++, R, LaTeX, …

Skills (continued)

Misc. Academic research, teaching, training, consultation, LaTeX typesetting and publishing.

Awards and Achievements

2023 **Outstanding Master's Graduate**, Northwestern Polytechnical University

2021-2022 **National Scholarship**, Ministry of Education of P.R.China

2020-2022 **Outstanding Post-Graduate**, Northwestern Polytechnical University

2018-2022 **First Prize Scholarship**, Northwestern Polytechnical University

2018 **Outstanding Student**, Northwestern Polytechnical University
Outstanding Master's Graduate in NPU, 2023

References

Prof Yongbo Li
Associate Professor
School of Aeronautics, Northwestern Polytechnical University, China
yongbo@nwpu.edu.cn

Prof Khandaker Noman
Associate Professor
School of Civil Aviation, Northwestern Polytechnical University, China
khandakernoman93@nwpu.edu.cn

Prof Xianzhi Wang
Associate Professor
School of Automation, Xi'an University of Posts and Telecommunications, China
cagallilan@xupt.edu.cn