Dongdong Wei

PhD student
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Education

- **University of Alberta** — Edmonton, Canada
  PhD student - Mechanical Engineering; Supervisor: Ming Jian Zuo — *Sep. 2018 – now*
- **University of Electronic Science and Technology of China** — Chengdu, China
  Master - Mechanical Engineering; Supervisor: Ke Sheng Wang — *Sep. 2015 – Jun. 2018*
- **University of Electronic Science and Technology of China** — Chengdu, China
  Bachelor - Engineering Internet of Things — *Sep. 2011 – Jun. 2015*

Research

- **AI-based machinery fault diagnosis**: Study deep neural networks for remote surveillance of machine's fault conditions, such as gear cracks and bearing deficits in wind turbines and other rotating machines. Transfer learning methods will be developed to combat the problems of limited data and (or) label and promote generalization of AI.

Lead authorship

- **Publications**:
  1. Wei, Dongdong and Wang, Kesheng and Zhang, Mian and Zuo, Ming Jian. 2018. Sweep excitation with order tracking: A new tactic for beam crack analysis. Journal of Sound and Vibration, vol. 420, pp.129-141. doi: 10.1016/j.jsv.2018.01.021
  2. Wei, Dongdong and Wang, Kesheng and Heyns, Stephan and Zuo, Ming Jian. 2018. Convolutional Neural Networks for Fault Diagnosis Using Rotating Speed Normalized Vibration. In Advances in Condition Monitoring of Machinery in Non-Stationary Operations. CMMNO 2018. Applied Condition Monitoring, vol 15. Springer, Cham. Santander, Spain, June 20-22, 2018. doi: 10.1007/978-3-030-11220-2_8
- **Working papers**:
  1. Wei, Dongdong and Han, Te and Chu, Fulei and Zuo, Ming Jian. 2020. Weighted domain adversarial network for machinery fault diagnosis. In progress.
  2. Wei, Dongdong and Han, Te and Chu, Fulei and Zuo, Ming Jian. 2020. Adversarial domain adaptation for gear crack level classification under variable load. Accepted by APARM 2020 (online), Vancouver, Canada, August 20-23, 2020.

Awards & Honors

- **PHM Society's Doctoral Symposium**: funded attendee — 2020
- **PHM Society's Data Challenge** : 3rd place — 2019
- **Chinese Scholarship Council**: PhD scholarship — 2018
- **Outstanding bachelor dissertation**: 10% — 2015

Skills

- **Languages**: Mandarin (mother tongue) and English
- **Software**: LaTeX, Microsoft Office, Git, Docker
- **Programming**: Python, Matlab

Activities

- **Choir Singer**: UofA Concert Choir: 2018-2019; UESTC Choir: 2012-2016
- **Volunteer**: 2016 UNESCO Asian Youth Dialogue; IEEE PHM-2016 Chengdu; Campus ambassador in the 60th anniversary of UESTC (2016); Inheritor of national intangible cultural heritage of China (2014-2016)