

# Dongdong Wei

PhD candidate in Engineering Management  
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## EDUCATION

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- **University of Alberta** Edmonton, Canada  
*PhD candidate - Engineering Management; 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

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- **AI-based machinery fault diagnosis:** Study deep neural networks for remote surveillance of machine's health conditions, such as gear cracks and bearing defects 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

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- **Publications:**
  1. Wei, Dongdong and Han, Te and Chu, Fulei and Zuo, Ming Jian. 2020. Adversarial domain adaptation for gear crack level classification under variable load. In 2020 Asia-Pacific International Symposium on Advanced Reliability and Maintenance Modeling (APARM) (pp. 1-6). IEEE. doi: 10.1109/APARM49247.2020.9209356
  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). Applied Condition Monitoring, vol 15. Springer, Cham. Santander, Spain, June 20-22, 2018. doi: 10.1007/978-3-030-11220-2\_8
  3. 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
- **Working papers:**
  1. Wei, Dongdong and Han, Te and Chu, Fulei and Zuo, Ming Jian. 2020. Weighted domain adversarial network for machinery fault diagnosis. First revision for Mechanical Systems and Signal Processing (updated on November 16).

## AWARDS & HONORS

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- **PHM Society's Doctoral Symposium:** Best presentation award 2020
- **Canada Future Energy Systems:** Graduate Research Assistantship Funds 2019,2020
- **PHM Society's Data Challenge :** 3rd place 2019
- **Chinese Scholarship Council:** PhD scholarship 2018
- **Outstanding bachelor dissertation:** 10% 2015

## SKILLS

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- **Programming Languages:** Python (NumPy, Pandas, etc.), Matlab
- **ML frameworks:** PyTorch, scikit-learn, TensorFlow
- **Software:** L<sup>A</sup>T<sub>E</sub>X, Microsoft Office, Git, Docker

## ACTIVITIES

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- **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)