基本信息

徐元栋，男，山东青岛人，1988 年 10 月生，校聘教授，湖南省“芙蓉计划”海外高层次人才，湖南科技大学海外优秀人才，英国帝国理工学院副研究员，英国哈德斯菲尔德大学博士，TEPEN 国际学术组织成员。现任设备故障诊断与健康维护研究所副所长，主要从事直升机、舰船等高端装备动力系统和传动系统振动测试、早期故障诊断等方面的研究，主持国家自然科学基金项目 1 项，获 CM 国际学术会议最佳论文奖，发表高水平学术论文 50 余篇，其中 ESI 高被引 2 篇。

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研究方向：机械故障诊断、信号处理、系统识别、声振测试

工作经历

● 2023.03-至今	校聘教授	湖南科技大学	机械设备健康维护省重点实验室
● 2020.09-2023.03	副研究员	Imperial College London 英国帝国理工学院（世界排名第 6）	Rolls-Royce Vibration University Technology Centre (VUTC) 罗尔斯-罗伊斯振动技术中心
● 2018.01-2020.08	助理研究员	University of Huddersfield 英国哈德斯菲尔德大学	Centre for Efficiency and Performance Engineering 效率与性能中心（欧洲最大）

教育背景

● 博士	2016.01-2020.08	University of Huddersfield, UK	机械工程	导师：谷丰收教授 Andrew Ball 教授
● 硕士	2012.09-2015.06	太原理工大学	车辆工程	导师：谷丰收教授 王铁教授
● 本科	2008.09-2012.06	山东交通学院	交通运输	

主持/参与的主要科研项目

- 行星轮系早期故障信号的多分量幅-相耦合调制机理及诊断特征提取方法（NSFC 青基 2023-2025，主持）
- 航空发动机结构动力学研究与状态监测（工业项目--罗尔斯·罗伊斯）
- 船舶动力系统智能健康监测系统的开发（工业项目--中船重工）
- 基于扭转振动的发动机状态监测研究（工业项目--AAM Driveline）
- 基于声振信号的柴油机摩擦学特性研究（摩擦学国家重点实验室开放基金）
- 基于声信号的燃气轮机状态监测研究（工业项目--西门子燃气轮机）
- 基于声振信号的新型转子压缩机状态监测研究（工业项目--FeTu Limited）

所获奖励

- 2023.10　湖南省芙蓉学者海外高层次人才
- 2018.09　获得国际会议 CM2018 最佳论文奖；
- 2016.06　获得留学基金委资助奖学金；
- 2016.01　获得 University of Huddersfield 校长 Fee Waiver 奖学金；
- 2014.10　获得研究生国家奖学金；

学术任职

- Journal of Dynamics, Monitoring and Diagnostics 期刊青年编委、优秀青年编委；
- 多个 SCI 期刊审稿人，包括 Mechanical System and Signal Processing, Journal of Sound and Vibration, Mechanism and Machine Theory, Reliability Engineering & System Safety,Journal of Industrial Information Integration, ISA Transactions,Journal of Vibration and Control, Measurement 等顶尖期刊。

学术论文

- **期刊论文**

[1] Z. Wang, D. Shi, **Y. Xu**, D. Zhen, F. Gu, and A. D. Ball, 'Early rolling bearing fault diagnosis in induction motors based on on-rotor sensing vibrations', *Measurement*, vol. 222, p. 113614, Nov. 2023, doi: 10.1016/j.measurement.2023.113614.

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[3] **Yuandong Xu**, Xiaoli Tang, Guojin Feng, Dong Wang, Craig Ashworth, Fengshou Gu, and Andrew Ball, 'Orthogonal On-Rotor Sensing Vibrations for Condition Monitoring of Rotating Machines', *Journal of Dynamics, Monitoring and Diagnostics*, vol. 1, no. 1, pp. 29–36, Mar. 2022, doi: 10.37965/jdmd.v2i2.47.

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- 会议论文

[1] **Y. Xu**, M. Szydlowski, L. Muscutt, A. Rix, S. Patsias, V. Ondra, and C. W. Schwingshackl, 'HERMES: A Novel Test Facility for Investigating Structural Dynamics of Aeroengines', in *ASME Turbo Expo 2023: Turbomachinery Technical Conference and Exposition*, 2023.

[2] C. W. Schwingshackl, **Y. Xu**, M. Szydlowski, L. Muscutt, A. Rix, S. Patsias, and V. Ondra, 'HERMES Out of Balance Excitation System', in *ASME Turbo Expo 2023: Turbomachinery Technical Conference and Exposition*, 2023.

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[19] B. Huang, **Y. Xu**, H. Li, X. Zou, F. Gu, and A. D. Ball, 'Fast Spectral Correlation of Motor Current Signals for Broken Rotor Bar Detection and Diagnosis', in Proceedings of 4th International Conference on Maintenance Engineering, Dubai, United Arab Emirates, 2019.

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an auto-correlated envelope ensemble average', in 2017 23rd International Conference on Automation and Computing (ICAC), 2017, pp. 1–6.

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