Xianbo Wang 汪顯博

Postdoctoral Scholar

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Education

- PhD of Electromechanical Engineering

  Macau University, Macau   2014.08 – 2018.09

- Master of Power Electronics and Power Drives

- Henan University of Science and Technology, Luoyang 2008.09 – 2011.07

- Bachelor of Automation

- Henan University of Science and Technology, Luoyang 2004.09 – 2008.07

Publications

- Miao, P., Chen, G., Wang, X., Yao, Y., & Chambers, J. (2020). Adaptive Nonlinear Equalization Combining Sparse Bayesian Learning and Kalman Filtering for Visible Light Communications. Journal of Lightwave Technology, 8724(c), 1–1. https://doi.org/10.1109/JLT.2020.3017724

- Wu, J., Guo, P., Cheng, Y., Zhu, H., Wang, X.-B., & Shao, X. (2020). Ensemble Generalized Multiclass Support Vector Machine-based Health Evaluation of Complex Degradation Systems. IEEE/ASME Transactions on Mechatronics, 4435(c), 1–1. https://doi.org/10.1109/TMECH.2020.3009449

- Yan, X., Liu, Y., Zhang, W., Jia, M., & Wang, X. (2020). Research on a Novel Improved Adaptive Variational Mode Decomposition Method in Rotor Fault Diagnosis. Applied Sciences, 10(5), 1696. https://doi.org/10.3390/app10051696

- Wang, X.-B., Zhang, X., Li, Z., & Wu, J. (2020). Ensemble extreme learning machines for compound-fault diagnosis of rotating machinery. Knowledge-Based Systems, 188, 105012. https://doi.org/10.1016/j.knosys.2019.105012

- Wang, J., Huang, Q., Hu, W., Li, J., Zhang, Z., Cai, D., Zhang, X., Wang, X., & Li, C. (2019). Shapley Value based Customers Voluntary Demand Response Program: A Stackelberg Game Approach. 2019 IEEE Innovative Smart Grid Technologies - Asia (ISGT Asia), 1(c), 3051–3056. https://doi.org/10.1109/ISGT-Asia.2019.8881250

- Wang, X. B., Miao, P., Zhang, K., Zhang, X., & Wang, J. (2019). Study on novel signal processing and simultaneous-fault diagnostic method for wind turbine. Transactions of the Institute of Measurement and Control, 41(14), 4100–4113. https://doi.org/10.1177/0142331219849261

- Yang, Z.-X., Wang, X., & Wong, P. K. (2018). Single and Simultaneous Fault Diagnosis With Application to a Multistage Gearbox: A Versatile Dual-ELM Network Approach. IEEE Transactions on Industrial Informatics, 14(12), 5245–5255. https://doi.org/10.1109/TII.2018.2817201

- Wang, X.-B., Yang, Z.-X., Wong, P. K., & Deng, C. (2018). Novel paralleled extreme learning machine networks for fault diagnosis of wind turbine drivetrain. Memetic Computing, 11(2), 127–142. https://doi.org/10.1007/s12293-018-0277-2

- Wang, X. B., Yang, Z. X., & Yan, X. A. (2018). Novel particle swarm optimization-based variational mode decomposition method for the fault diagnosis of complex rotating machinery. IEEE/ASME Transactions on Mechatronics, 23(1), 68–79. https://doi.org/10.1109/TMECH.2017.2787686

- Fan, B., Yang, Z., Wang, X., Song, L., & Song, S.-Z. (2017). Model reference adaptive vector control for induction motor without speed sensor. Advances in Mechanical Engineering, 9(1), 168781401668308. https://doi.org/10.1177/1687814016683086

- Fan, B., Wang, X. B., Yang, Z. X., Song, L., & Song, S. Z. (2017). Direct power control in pulse-width modulation rectifier based on virtual flux estimation. Advances in Mechanical Engineering, 9(5), 168781401769914. https://doi.org/10.1177/1687814017699142

- Yang, Z., Wang, X., Wong, P. K., & Zhong, J. (2016). ELM Based Representational Learning for Fault Diagnosis of Wind Turbine Equipment. In Mathematical Problems in Engineering (Vol. 2015, pp. 169–178). https://doi.org/10.1007/978-3-319-28373-9_14

- Zhong, J. H., Liang, J., Yang, Z. X., Wong, P. K., & Wang, X. B. (2016). An Effective Fault Feature Extraction Method for Gas Turbine Generator System Diagnosis. Shock and Vibration, 2016, 1–9. https://doi.org/10.1155/2016/9359426

- Miao, P., Wu, L., Chen, P., & Wang, X. (2016). RCLED Optimization and Nonlinearity Compensation in a Polymer Optical Fiber DMT System. Applied Sciences, 6(9), 260. https://doi.org/10.3390/app6090260

- Wang, X.-B., Yang, Z.-X., & Wang, J.-X. (2016). A ripple-based maximum power point tracking method for three-phase grid-connected photovoltaic inverter. Transactions of the Institute of Measurement and Control, 40(2), 615–629. https://doi.org/10.1177/0142331216667544

- Yang, Z. X., Wang, X. B., & Zhong, J. H. (2016). Representational learning for fault diagnosis of wind turbine equipment: A multi-layered extreme learning machines approach. Energies, 9(6), 379. https://doi.org/10.3390/en9060379

- Xu, W., Yang, Z., & Wang, X. (2015). A technical and business perspective on wireless sensor network for manufacturing execution system. Mathematical Problems in Engineering, 2015, 1–15. https://doi.org/10.1155/2015/267195

- Wang, X., Yang, Z., Fan, B., & Xu, W. (2015). Control strategy of three-phase photovoltaic inverter under low-voltage ride-through condition. Mathematical Problems in Engineering, 2015, 1–23. https://doi.org/10.1155/2015/790584

- Fan, B., Yang, Z., Xu, W., & Wang, X. (2014). Rotor resistance online identification of vector controlled induction motor based on neural network. Mathematical Problems in Engineering, 2014, 1–10. https://doi.org/10.1155/2014/831839

Research Interests

- Engineering applications of machine learning.

- Data mining and forecasting (e.g., wind power, and power consumption prediction).

- Condition monitoring, fault detection, diagnostics, and prognostics.

- Renewable energy systems (e.g., wind energy, solar energy, etc.).

- Computational intelligence for electric power and energy systems.

- Intelligent transmission mechanism development.

Projects

- Intelligent Diagnostic and Evaluation Technology for Service Performance of High Voltage Cable of EMU in Urban Rail Transit, FDCT-GSTD Joint Funded Project, 01/2020-01/2022.

Selected Awards & Honors

- N/A

Academic Services

- N/A