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Model-based fault diagnosis for wind turbine system

Sarah Odofin
Northumbria University, UK

The concern to develop wind turbines as a low carbon source of renewable energy is paramount to the fast expansion of renewable energy for power production. Proper analytical condition monitoring technique to observe the state of system could minimize damage to the whole turbine. Faults are inevitable in automated system of which failures could be severe depending on the kind of machine and the circumstances of the fault interruption. The main aim is to increase reliability, cost effective for modern dynamic systems could improve industrial automatic system availability as well as achieving a better system performance. The main challenge in model-based fault detection and diagnosis FDD is to diagnose incipient and abrupt faults in complex dynamic systems considering a practical system input and output measurements. Several techniques have been proposed to improve the performance of fault diagnosis is a captivating research challenge to advance of the robustness to fault detection. Model-based FDI has been studied for over 20 years; this can be used to either boost safety or accomplish a more reasonable current level of safety. A genetic algorithm (GA) is an artificial intelligence to increase the FDD performance to optimize an observer. A better analysis have been identified to demonstrate the propose approach.

Biography

Sarah Odofin is a 2nd year research student at Northumbria University Newcastle. Currently studying fault diagnosis of wind turbine, a member of IEEE and presently a group member of control, power and energy research group and Optical wireless communications group. She has attended various conferences, seminars workshop and made some paper presentation.

sarah.odofin@northumbria.ac.uk