PhD Open Position in Fault Detection and Prediction

The following Ph.D. position is available:

The Computing Infrastructure Research Centre (CIRC) at McMaster University is bringing transformative changes in the way data centres (DCs) and other forms of computing infrastructure are designed, built, and operated. CIRC is the first data centre research facility in Canada and among very few others worldwide, and boasts a pioneering model of university-industry collaboration. Its research is market-focused and needs-driven, ensuring that its resources are fully leveraged in solving problems that create value to industry and society. CIRC is looking for a PhD Student in Fault Detection and Prediction in Data Centres

The candidate will do research in the area of fault detection and prediction in a DC. The proposed research can be grouped into three main activities. First, s/he will develop algorithms that can utilize data obtained from a wireless sensor network distributed in the DC and other sources, e.g., voltage and current waveforms, in real time to detect anomalies. An anomaly will be detected when the measurement data deviates from the expected behaviour. Second, the candidate will develop algorithms to analyze the root causes of detected anomalies. Third, IT equipment failure prediction models will be developed through data collected through longitudinal studies at DC facilities on campus and accessible through our industrial partner.

We are looking for a candidate who holds a Masters degree with an excellent academic record in Computer Science, Electrical and Computer Engineering, or related fields from internationally recognized universities. A strong interest in experimental work is required and exposure to statistical techniques and machine learning is an advantage. For further information about the position, please contact Dr. Douglas Down (downd@mcmaster.ca) and/or visit our website circ.mcmaster.ca