

# FAULT DETECTION AND DIAGNOSTICS FOR HVAC SYSTEM

Lab details V1.0



SEPTEMBER 1, 2015

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## *Fault Detection and Diagnostic Lab*

Building Heating Ventilation and Air-conditioning (HVAC) systems faults, including design problems, equipment and control system malfunction, result in energy wastage and occupant discomfort. Fault detection and diagnostics (FDD) is an area of investigation concerned with automating the processes of detecting faults with physical systems and diagnosing their causes. This method improves comfort, and reduces the operation, maintenance and utility costs, thus reducing the environmental impact.

The objective of this research lab is to identify and analyze faults related to HVAC systems and develop effective FDD techniques for the common faults in the HVAC systems that are prevalent in India.



Figure 1: Chiller Unit & Dedicated Generator



Figure 3: Building Management System (BMS)



Figure 2: Air Handling Unit (AHU)