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Fault Identification and Fault Impact Analysis of Ventilation System in Buildings

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Deadline for manuscript submissions:

closed (20 July 2022)

Message from the Guest Editors

This Special Issue is dedicated to fault modeling, fault detection and diagnostics (FDD), and fault impact analysis (FIA) with focus on heating, ventilation and air conditioning (HVAC) systems. Buildings use 40% of total global energy and are responsible for more than 35% of CO₂ emissions. In most buildings, the heating, ventilation and air conditioning (HVAC) systems consume 50% of the building energy. Access to information on the actual energy performance of buildings and its systems is essential in order to improve energy efficiency, leading to considerable reduction in GHG emissions and end-user costs. Today's energy performance calculation of buildings is at the design stage, which does not account for the dynamic variation of the energy performance over time. The inefficient use of energy in buildings, for instance, the inefficient energy use of common faulty systems, is a question that spans the whole process of building planning, design, construction, operation and maintenance.

The HVAC systems are a priority since they are the largest end-use energy consumption in buildings. Furthermore, these systems are well known to be...



mdpi.com/si/79477

Special Issue



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Message from the Editor-in-Chief

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