



energies



an Open Access Journal by MDPI

Fault Identification and Fault Impact Analysis of Ventilation System in Buildings

Guest Editors:

Prof. Dr. Alireza Afshari

Department of the Built Environment, Aalborg University, 9100 Copenhagen, Denmark

Dr. Jan Bendtsen

Department of Electronic Systems, Aalborg University, Aalborg, Denmark

Dr. Samira Rahnama

Department of the Built Environment, Aalborg University, Copenhagen, Denmark

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



energies



an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Enrico Sciubba

Department of Mechanical and
Industrial Engineering, University
Nicolò Cusano, 00166 Roma,
Italy

Message from the Editor-in-Chief

Energies is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

Author Benefits

Open Access: free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility: indexed within Scopus, SCIE (Web of Science), Ei Compendex, RePEc, Inspec, CAPlus / SciFinder, and other databases.

Journal Rank: CiteScore - Q1 (Control and Optimization)

Contact Us

Energies Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/energies
energies@mdpi.com
[X@energies_mdpi](https://twitter.com/energies_mdpi)