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Data-Driven Method for HVAC and Heat Pump System: From Monitoring to Fault Detection and Diagnosis

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Message from the Guest Editors

Dear Colleagues,

Currently, the spread of affordable monitoring systems, sensing technologies, and advanced fault-detecting devices allows us to gather hundreds of empirical data for the purpose of fault detection and diagnosis, further aided by data-driven methods such as clustering methods, artificial intelligence (AI), big data, and the Internet of Things (IoT).

- HVAC systems monitoring (efficiency assessment, fault detection, diagnosis, etc.);
- Predictive maintenance and real-time condition monitoring systems;
- Data-driven computing for HVAC systems;
- Machine learning, AI, ANN, and big data for HVAC systems;
- Measurements or simulations for assessing and enhancing HVAC system efficiency;
- Changes in users' awareness, attitudes, or habits after HVAC monitoring;
- Computational methods of modelling faults;
- Innovative sensing technology and devices for HVAC (including non-invasive techniques);
- Advanced fault detection and diagnosis methods based on artificial intelligence (e.g., supervised/unsupervised machine learning).



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