

An IoT Framework for Indoor Conditions Assessment and Tuning of Occupancy Rates Models: Results from a Real Case Study

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Summary of changes

This paper is the extended of the paper “*On the use of IoT Sensors for Indoor Conditions Assessment and Tuning of Occupancy Rates Models*” by Stefano Rinaldi, Alessandra Flammini, Lavinia C. Tagliabue, Angelo L. C. Ciribini, presented at “2018 IEEE International Workshop on Metrology for Industry 4.0 and IoT”.

The entire paper has been revised and significantly extended with respect to the “2018 IEEE International Workshop on Metrology for Industry 4.0 and IoT” version. In particular, the main changes regard the following parts:

- The introduction has been deeply revised and integrated;
- The IoT framework section has been revised and enriched with more architectural and implementation details.
- An entire new section, Section 3, regarding the detailed description of the considered case study has been added to the extended version.
 - The Section includes a description of the test case (i.e. the building considered in the analysis), a description of its HVAC plant, the installed IoT sensors and a description of the virtualization process
- Additional experimental results and analysis
 - The analysis introduced in the proceedings has been extended on all the rooms of the buildings and considering a longer observation interval (6 months), allowing to validate the proposed approach under different climate conditions (winter and spring). In particular, the new analysis focuses on the concentration of CO₂, the main parameter which can be used to tune occupancy rate models for HVAC using real-time data.

Thank you very much for your attention,

Yours faithfully,

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