Review Results

Contribution Details

Submission Type / Conference Track: Paper for High Performance Buildings Conference

A Novel Hybrid Modeling Method for Predicting Energy Use of Hydronic Radiant Slab Systems   **3470**

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Keywords: Evolving Learning, Growing Gaussian Mixture Regression, Radiant Slab

11 pages

Review Result of the Program Committee

Waiting for new draft of manuscript to address reviewer comments.

Overview of Reviews

Questions		Review 1	Review 2
Overall recommendation	100%	**5**	**5**
Total points (out of 100)		**50**	**50**

Review 1

Evaluation of the Contribution

Overall Recommendation	Total points (out of 100)
5 (100%)	**50**

Reviewer's Comments on the Contribution

Comments for the Authors:
Please fix formatting issues according to the template and correct reference errors in the text.

Review 2

Evaluation of the Contribution

Overall Recommendation	Total points (out of 100)
5 (100%)	**50**

Reviewer's Comments on the Contribution

Contribution of the Submission:
This paper studied a novel hybrid modeling method that integrates a simple RC network model with an evolving learning-based algorithm termed the Growing Gaussian Mixture Regression (GGMR) modeling approach to predict the heating and cooling rates of a radiant slab system for a Living Laboratory office space. The hybrid modeling approach significantly outperformed both the RC and GGMR models.

Comments for the Authors:
This paper developed a hybrid model to simulate the heating and cooling rates of a radiant slab system. The structure and content of the paper are clearly presented. Several comments are required to be addressed as shown below.

1. Format issue: Please follow the paper template for Herrick Conference strictly (e.g., alignment, page limitation, required empty line, etc.).

2. Error bookmarks in equations 7-9.

3. The definitions of Qrad in model 1 and model 2/3 are different.

4. The mean absolute percentage error of the hybrid model is still high and over 19%. How do you explain the accuracy of the model.