

# CLIMA 2022 conference papers on the theme Digitization

Twenty CLIMA 2022 papers have been acknowledged as high ranking on the theme Digitization.

The following 7 are included in this issue:

**Integrating BIM, BMS and IoT data on the Web:**

Lasitha Chamari, Ekaterina Petrova, Pieter Pauwels

**Reinforcement learning for the occupant-centric operation of residential energy system:** Amirreza Heidari, François Maréchal, Dolaana Khovalyg

**A novel machine learning approach to predict short-term energy load for future low-temperature district heating:** Thomas Ohlson Timoudas, Yiyu Ding, Qian Wang

**From BIM databases to Modelica - Automated simulations of heating systems:** Esben Visby Fjerbæk, Mikki Seidenschnur, Ali Küçükavci, Kevin Michael Smith, Christian Anker Hviid

**Assessment of fouling in plate heat exchangers using classification machine learning algorithms:**

Seyit Ahmet Kuzucanli, Ceren Vatansever, Alp Emre Yasar, Ziya Haktan Karadeniz

**Remote refrigerant leakage detection system for chillers and VRFs:** Shunsuke Kimura, Michio Moriwaki, Manabu Yoshimi, Shohei Yamada, Takeshi Hikawa, Shinichi Kasahara

**Control device for pumping one-pipe hydronic systems:** Jiří Dostál, Tomáš Bäumelt, Jiří Cvrček

The other 13 papers can be accessed online::

**[An early prototype for fault detection and diagnosis of Air-Handling Units:](#)** Shobhit Chitkara, Alet van den Brink, Shalika Walker, Wim Zeiler

**[An ontology-based approach for building automation data analysis:](#)** Eunju Park, Sumeer Park, Sebastian Stratbucker

**[Applying MTP-concept for the standardization of building automation and control systems:](#)** Michael Krüttgen (M. Eng.), Jochen Müller (Prof. Dr. rer. nat)

**[Automated energy performance diagnosis of HVAC systems by the 4S3F method:](#)** Arie Taal, Laure Itard

**[Deep learning for CFD analysis in built environment:](#)** Giovanni Calzolari, Wei Liu

**[domOS an "Operating System" for Smart Buildings:](#)** Junior Dongo, Dominique Gabiou, Amir Laadhara, Martin Meyer, Brian Nielsen, Frédéric Revaz, Christian Thomsen

**[Fault detection in district heating substations - a cluster-based and an instance-based approach:](#)** Jad Al Koussa, Sara Månsson

**[FDD method for a variable-speed heat pump with natural refrigerants:](#)** Ivan Bellanco, Francisco Belío, Manel Valls, Raphael Gerber, Jaume Salom

**[Improving the Calibration on Building Stock Level method by Comparing objective functions and optimization algorithms:](#)** Paula van den Brom, Samuel Smets, Laure Itard

**[Interoperability as a driver or barrier of smart building technologies?:](#)** Stijn Verbeke, Karine Laffont, David Rua

**[Interoperable interactions of HVAC components based on a capability ontology:](#)** Nicolai Maisch, Maximilian Both, Ralf Ulmer, Prof. Dr. Jochen Müller

**[Predict the remaining useful life in HVAC filters using a hybrid strategy:](#)** Hossein Alimohammadi, kristina Vassiljeva, Eduard Petlenkov, Tuule Mall Kull, Martin Thalfeldt

**[Transient analysis of individual return temperatures in hydronic floor heating systems:](#)** Simon Thorsteinsson, Henrik Lund Stærmoose, Jan Dimon Bendtsen