light+building

REHVA EXPERT TALK

DATA DRIVEN SMART BUILDINGS

08.03.2024 | 9:30-13:00

The building sector accounts for about 40% of total final energy use and has enormous potential to save energy and reduce CO2-emissions in a cost-effective way. Many of these cost-effective opportunities do not require significant capital outlay, relying instead on sound decision making and proficient implementation of building maintenance and operational control strategies. The extent of the opportunity is highlighted that "poorly maintained, degraded, and improperly controlled equipment wastes an estimated 15% to 30% of energy used in commercial buildings".

The recent revolution in digital technology and cyber-physical systems has the potential to further reduce costs and guarantee the set indoor climate conditions, by automating building operation with embedded intelligence, and with access to more diverse information. These emerging technologies will enable much more sophisticated energy efficient controls and building management strategies, and at the same time have high quality indoor conditions and users' convenience. With increased connectivity and automation, buildings can also be empowered to become "distributed energy resources". Distributed energy resources act as flexible loads that can be controlled to assist with balancing of electricity supply and demand.

REHVA invites the experts from its network to discuss the following topics:

9:30	**Welcome and introduction** Lada Hensen Centnerova, REHVA Vice-President
9:40	**Demand site flexibility in buildings** Risto Kosonen, Prof. D.Sc. Tech., Aalto University, REHVA Vice-President
10:15	**Machine learning in smart building operation** Heikki Ihasalo, Prof. D.Sc.Tech., Innovation Director, Granlund Oy & Aalto University
10:50	**Lighting networks providing new data insights for smart buildings** Henri Juslen, D.Sc.Tech., Chief future Illuminator, Helvar Oy Ab
11:25	**From Connected to Automated Buildings** Pieter Pauwels, Professor at TU Eindhoven
12:00	**Advancing buildings assessment: The SmartLivingEPC project** Paris Fokaides, Senior Researcher, Frederick Research Center
12:35	**Q&A and discussion moderated by Lada Hensen Centnerova**