



**UNIVERSITÉ
DE GENÈVE**

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SÉMINAIRE ÉNERGIE – ENVIRONNEMENT
Conférences 2024 - 2025

**Heat pumps in multifamily buildings in Germany:
Efficiency under real operating conditions,
case studies map and solution families.**

Marek Miara

Fraunhofer-Institut für Solare Energiesysteme ISE

Jeudi 5 décembre à 17h15

Université de Genève
66 Boulevard Carl-Vogt, 1205 Genève
Salle 1 (rez-de-chaussée)

Conférence en présentiel suivie d'un apéritif

Diffusion en direct avec Zoom : <https://unige.zoom.us/j/65489922494>

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L'orateur

Marek Miara has a profound experience in the field of renewable energy. The focus of his work lies on the efficiency determination and evaluation of heat pump systems, rational energy use and buildings with low energy consumption. For the past 20 years, he has been working for the Fraunhofer Institute for Solar Energy Systems ISE where he coordinates the heat pump activities.

In addition to national projects, he oversees international EU projects and activities in the framework of the IEA Heat Pumping Technologies; at present as an operating agent of its Annex 50. Mr. Miara is a member of normalization committees of the Association of German Engineers (VDI), board member of the German Society of Refrigeration and Air Conditioning (DKV), board member of the European Heat Pump Association (EHPA) as well as co-founder of the Polish Heat Pump Association (PORT PC). In the field of heat pumps, he published extensive technical papers and made numerous presentations in a vast number of national and international conferences.

Mr. Miara has a doctoral degree in engineering defended at the Wroclaw University of Technology in 2014 with his PhD thesis "Assessing Efficiency of Heat Pumps. Analytic Method Integrating Ecological, Energetic and Economical aspects". He is a graduate of the University of Kassel (2004, Master Post-graduate) in the field of Energy and Environment, Renewable Energy, Energy Efficiency and of the Wroclaw University of Technology (2000, Master) in Civil Engineering.

La conférence

The use of heat pump systems in apartment buildings is possible and already practiced, as showed by many examples from several countries. The variety of multifamily buildings and their characteristics make it possible to apply various technical solutions based on heat pumps. At the same time, this diversity leads to individual solutions which are difficult to apply on a large scale.

There is still no evidence of a wider use of heat pumps in multifamily buildings for heat supply. The challenge to apply heat pump technologies and renewable energy in multi-family buildings is rather complex. Both administrative (e.g. property rights) and technical challenges stand in the way to a broad implementation of the technology.