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CHANIA, CRETE
MINOA PALACE RESORT
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ENERGY EFFICIENCY AND IEQ IN SMART BUILDINGS AND SMART CITIES

ORGANIZED BY

Marina Bonomolo, University of Palermo

Tancredi Testasecca, University of Palermo

Advanced technologies in systems, such as lighting and HVAC, play a key role in achieving energy efficiency and indoor and outdoor environmental quality (IEQ). The design and implementation of efficient systems encompass both hardware and software components, including control algorithms. The selection and installation of new efficient technologies should be aligned with methods and tools for optimizing the design, installation, and testing of the systems and their control, such as Building Automation and Control (BAC) systems and Information and Communication Technology (ICT). This includes aligning the choice of technology characteristics with methods for evaluating actual performance through measurements and simulation, such as Building Information Modeling (BIM) and Digital Twin implementation and validation of simulation software.

Topics for this Special Session include the following:

- Design and application of Building Automation Control Systems;
- Design and application of Information and Communication Technology;
- Assessment of Environmental Quality conditions;
- Post-occupancy evaluation methods and tools to evaluate energy efficiency and environmental comfort;
- Building Energy Models (BEM) and Building Information Models developments;
- Digital twin models;
- Retrofit actions on lighting, building envelope and HVAC systems;
- Algorithms and tools for controlling automated systems.