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Konferenzbeiträge / Atti / Proceedings

Building Simulation Applications BSA 2024

6th IBPSA-Italy Conference
Bozen-Bolzano, 26th–28th June 2024

Edited by
Giovanni Pernigotto, Ilaria Ballarini, Francesco Patuzzi, Alessandro Prada, Vincenzo Corrado, Andrea Gasparella

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Preface

The sixth edition of the Building Simulation Applications conference, BSA 2024, took place from 26th to 28th June and was hosted by the Free University of Bozen-Bolzano. The conference is a biannual appointment of IBPSA-Italy, the Italian regional affiliate of IBPSA (International Building Performance Simulation Association).

BSA 2024 featured more than 100 participants and around 275 different authors, with a significant presence of delegates from 18 different countries, in particular from South Korea, Denmark, the United States of America, and India. The conference programme was organised in 13 sessions in three parallel tracks, providing 77 presentations overall, and covering the following topics: characterization of the building stock and special buildings, performance simulation of educational buildings, acoustic studies and simulations, energy efficiency measures and energy flexibility for the existing building stock, IEQ and occupants' behaviour, use of BIM and Machine Learning techniques to support advanced building design and optimization, simulation of the building envelope and hygrothermal analyses, modelling and simulation of HVAC and renewable energy systems, simulation of the building stock and urban-scale analyses, modelling and simulation of case-studies, modelling and simulation of façades and fenestration systems, and new tools and methods for BPS.

The initiatives for students offered in the previous editions of the conference were renewed. The "Student School on Building Performance Simulation Applications", at its fourth edition, dealt with the "Study of the Urban Heat Island effect: from weather data to UBEM simulations with building archetypes". The competition for the "Student best paper award" was organised as well.

An interesting overview on the topic of smart buildings and communities was provided by Panagiota Karava (Purdue University) with the keynote entitled "Smart technology to enable autonomous buildings and connected communities". Ardeshir Mahdavi (Technische Universität Graz) gave a special lecture on the topic of building performance simulation entitled "Building Performance Simulation: Doing things right, or doing the right things?". The third keynote focused on the Zero Emission Building concept, in accordance with the latest recast of the Energy Performance of Building Directive (EPBD): The lecture of Livio Mazzarella (Politecnico di Milano) was entitled "ZEB and CSHPSS: a way to comply with the EPBD requirements using MINSUN 6".

The renewed success of the BSA conference has been demonstrated also by the diversity and by the increase of its participants, which confirms the liveliness of the IBPSA-Italy research community and its international relationships.

Andrea Gasparella
Free University of Bozen-Bolzano