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Building Simulation Applications BSA 2024 - Proceedings of 6th IBPSA-Italy conference / Pernigotto, Giovanni; Ballarini, Ilaria; Patuzzi, Francesco; Prada, Alessandro; Corrado, Vincenzo; Gasparella, Andrea. - ELETTRONICO. - (2025), pp. 1-616. [10.13124/9788860462022]

Availability:

This version is available at: 11583/3000396 since: 2025-05-25T15:44:26Z

Publisher:

Bozen-Bolzano University Press

Published

DOI:10.13124/9788860462022

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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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Bozen-Bolzano University Press, 2025

Free University of Bozen-Bolzano

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Cover design: DOC.bz / bu,press

ISSN 2531-6702

ISBN 978-88-6046-202-2

DOI 10.13124/9788860462022



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Table of Contents

Preface	ix
Analytical Model (SAM 2.0): A New Frontier in Open-Source Building Energy Simulation <i>Michal Dengusiak, Jakub Ziolkowski, Michalina Dengusiak</i>	1
Synthetic Indices for Comfort Assessment: An Application to a Historical Building in Catania / Andrea Longhitano, Gianpiero Evola, Vincenzo Costanzo, Francesco Nocera.....	9
Data-Driven Digital Twinning of Ventilation Systems for Performance Optimization: A University Building Case Study <i>Andres Sebastian Cespedes Cubides, Jakob Bjørnskov, Muhyiddine Jradi</i>	17
Computational Cost Reduction of a Simulation-Based Optimization Process Through Machine Learning Methods: Neural Networks vs. Random Forest <i>Iuri Praça Verginio, Rafael de Paula Garcia, Mario Alves da Silva, Joyce Correna Carlo</i>	25
Normalization Method of Building's Actual Energy Consumption for Normalized Building Energy Benchmarking <i>Deuk-Woo Kim, Dong-Hyuk Yi, Cheol-Soo Park</i>	31
Simulator for Predicting Vertical Illuminance of Window With External Venetian Blind <i>Seon-Young Heo, Young-sub Kim, Seon-Jung Ra, Cheol-Soo Park</i>	39
Modelling Solar Disability Glare Reflected off Modern Building Facades <i>Matthew J. Glanville, Pallava R. Kodali, Mohammed Alsailani, Roberto P.M. Neto</i>	49
Energy Modelling and Calibration of a Controlled Environment Agriculture Space in a Cold Climate Using Building Performance Simulation Tools <i>Gilbert Larochelle Martin, Danielle Monfet</i>	57
Microclimate Conditions in the SS. Salvatore Church of Bologna <i>Haruna Saito, Massimiliano Manfren, Kristian Fabbri, Maria Cristina Tommasino, Lamberto Tronchin</i>	65
The Impact of Thermal Zone Resolution on the Energy Simulation Results of Complex Buildings <i>Christiane Berger, Ardeshir Mahdavi</i>	71
Development and Calibration of an Urban Building Energy Model for the City of Padua <i>Jacopo Vivian, Enrico Prataciera, Gianmarco Bano, Angelo Zarrella</i>	77
ClustEnergy OpTool: An Open Tool for Assessing the Energy Flexibility Provided by Clusters of Buildings <i>Patricia Ercoli, Alice Mugnini, Fabio Polonara, Alessia Arteconi</i>	85
The Role of Dynamic Primary Energy Factors (PEFs) in Building Performance Assessment: A Case Study <i>Matteo Bilardo, Riccardo Oldini, Enrico Fabrizio</i>	95
Modeling a Dew Point Indirect Evaporative Cooling System for TRNSYS Building Simulations: Proposal and Validation <i>Alessandra Urso, Gianpiero Evola, Francesco Nocera, Vincenzo Costanzo, Ana Tejero-Gonzales, Eloy Velasco-Gomez</i>	105
Acoustic Correction of the Regional Theatre of Bejaia (Algeria) <i>Feriel Saidane, Gino Iannace</i>	113
From Theatre to Cinema to Theatre Again: The Acoustic History of the Vittorio Emanuele II Theatre of Benevento Through Simulations <i>Gino Iannace, Antonella Bevilacqua, Umberto Berardi</i>	119
Economic and Environmental Optimization of Retrofitting Options for a Community Building. A Case Study from Förslöv-Grevie Parish, Sweden <i>Azadeh Hana Hassanzadeh, Sepideh Rabie, Marko Ljubas, Henrik Davidsson, Dennis Johansson</i>	125
Installation of Reflecting Panels in the Main Church of Aversa <i>Silvana Sukaj, Amelia Trematerra, Ilaria Lombardi, Giovanni Amadasi, Luigi Guerriero</i>	133

Building Information Modeling (BIM) and Building Energy Modeling (BEM): Interoperability and Interactive Data Representation for the Energy Management of the Existing Buildings <i>Ilaria Giannetti, Cristian Tolù, Giulia Scimia, Gianluigi Bovesecchi, Pier Paolo Valentini, Cristina Cornaro</i> .	141
Modelling of Aquifer Thermal Energy Storage Connected to Hospital Buildings: A Case Study in Denmark <i>Mohammed Burhanuddin Rabani, Alessandro Maccarini, Michael Wetter, Alireza Afshari</i>	149
Analysis of Energy Consumption Scenarios of the Italian Residential Building Stock <i>Enrico Prativiera, Jacopo Vivian, Francesca Gaudino, Angelo Zarrella</i>	157
Automating Solar Shading Control in Residential Buildings Located in a Temperate Climate: A Household-Specific Decision <i>Lotte Van Thillo, Stijn Verbeke, Amaryllis Audenaert</i>	165
Simulating the Microclimate of a Pilot Greenhouse for the EU Project REGACE on Innovative Agri-Voltaic Technology <i>Cristina Cornaro, Marcello Petitta, Gianluigi Bovesecchi, Paolo Miraglia Fagiano, Catalin Voinea, Walter Fornari, Catherine Baxevanou, Dimitrios Fidaros, Chryssoula Papaioannou, Nikolaos Katsoulas</i>	175
Building Archetypes Supporting the National Building Renovation Plan <i>Matteo Piro, Ilaria Ballarini, Vincenzo Corrado</i>	183
Integration of Machine Learning-Based CIE Standard Skies Model With Daylight Simulation for Building Energy Performance Analysis <i>Emmanuel Imuetinyan Aghimien, Ernest Kin-wai Tsang, Danny Hin-wa Li, Zhenyu Wan</i>	191
A Design Assistant Tool for Optimised Building Energy Retrofit <i>Ilaria Di Blasio, Julius Emig, Dietmar Siegele, Dominik T. Matt</i>	199
A Simulation Study on the Performance of Machine Learning Daylight-Linked Lighting Control Under Urban Topography <i>Ernest Kin-wai Tsang, Emmanuel Imuetinyan Aghimien, Danny Hin-wa Li, Zhenyu Wang</i>	207
BIM2FEM: From Building Information Modelling to Finite Element Analysis – An Automated Open Source-Based Workflow <i>Julius Emig, Dietmar Siegele, Dominik T. Matt</i>	215
Hygrothermal Analysis of Most Common Historical Slabs in Hungary <i>Fanni Petresevics, Balázs Nagy</i>	223
Energy Flexibility Study of a Hotel Using TRNSYS <i>Michele Libralato, Giovanni Cortella, Paola D’Agaro</i>	233
The Impact of Classroom Acoustics on Student Well-Being and Noise Disturbance at the University of Pescara, Italy <i>Samantha Di Loreto, Alessandro Ricciutelli, Leonardo Guglielmi, Sergio Montelpare</i>	241
Environmental Quality Analysis in School Environment by Measurements and Numerical Methods <i>Leonardo Guglielmi, Samantha Di Loreto, Matteo Falone, Mariano Pierantozzi</i>	249
A Comparative Analysis of Simplified Calculation Procedures for Assessing the Energy Losses of Heating Emission Systems <i>Franz Bianco Mauthe Degerfeld, Ilaria Ballarini, Vincenzo Corrado</i>	257
Simplified and Fully Detailed Dynamic Building Energy Simulation Tools Compared to Monitored Data for a Single-Family NZEB House <i>Ana Paola Rocca Vera, Giovanni Cortella, Paola D’Agaro</i>	265
A Building Renovation Concept Based on a Low-Temperature Geothermal Loop With Decentralized Plug-And-Play Heat Pumps <i>Sara Bordignon, Jacopo Vivian, Agnese Tagliaferri, Davide Quaggiotto, Michele De Carli</i>	273
The Urban-Scaled EnergyPlus Simulation Using Korean GIS to Aid Development of Energy Normalization for Shading Effect <i>Dong-Hyuk Yi, Deuk-Woo Kim</i>	281
Thermal Comfort and Environmental Impact in the Heating System Refurbishment of a Victorian Hall With Infrared Ceiling Panels <i>Roberto Rugani, Marco Picco, Fabio Fantozzi</i>	289
Personal Comfort Systems (PCSs) in Offices: Efficient Utilization Threshold Based on Energy Consumption <i>Roberto Rugani, Marco Picco, Giacomo Salvadori, Fabio Fantozzi</i>	297

Integration of Rooftop Photovoltaics and Roof Retrofitting Strategies for Enhanced Energy Efficiency in Warm Climates <i>Krithika Panicker, Prashant Anand, Abraham George, Ardeshir Mahdavi</i>	305
Effects of an Indoor Living Wall on Room Lighting Conditions: Comparison Between Measured and Simulated Data <i>Matteo Ghellere, Alice Bellazzi, Anna Devitofrancesco, Benedetta Barozzi</i>	317
Mold Growth Affecting the Achievement of NZEB in the Long Term in Tropical Climates <i>Cristina Carpino, Miguel Chen Austin, Cihan Turhan, Dafni Mora, Natale Arcuri</i>	325
Mitigating Summer Overheating of a Primary School Building Based on Dynamic Simulations <i>Agnes Marosi, Balázs Nagy</i>	333
Analysis of Energy Consumption of a Building Placed in Milan by Adopting Common Building Insulation Materials and Recycled Surgical Masks <i>Vincenzo Ballerini, Paolo Valdiserri, Manuela Neri, Jan Kašpar, Mariagrazia Pilotelli, Edoardo Piana, Eugenia Rossi di Schio</i>	343
Recommendations to Make Reinforcement Learning Practical in Building Control Applications <i>Sourav Dey, Gregor Henze</i>	353
Simulation-based optimization for Energy- and Cost-Efficient Refurbishment of an Educational Building <i>Levente Szatmári, Balázs Nagy</i>	361
Achieving a Deeper Understanding of User-Related Influences on Artificial Lighting Energy Demand Using High-Performance Computing <i>Sascha Hammes, Johannes Weninger, Philipp Gschwandtner, Philipp Zech</i>	371
Strategic Synergy: Enhancing Building Performance Through Advanced Simulation and Shading Integration <i>Shahryar Habibi, Giovanni Pernigotto, Andrea Gasparella</i>	379
Is Solar Hydrogen a Viable Solution for Energetically Self-Sustainable Off-Grid Buildings? <i>Stefania Perrella, Roberto Bruno, Piero Bevilacqua, Daniela Cirone</i>	389
Assessment of the Simultaneity Factor Between PV Production and Electric Demand in a Real Scholar Canteen Belonging to a REC Through TRNSYS Simulations <i>Daniela Cirone, Roberto Bruno, Piero Bevilacqua, Stefania Perrella, Natale Arcuri</i>	397
Exploitation of Energy Performance Certificate Database in Urban Energy Modelling <i>Sebastiano Anselmo, Maria Ferrara, Piero Boccardo, Stefano Paolo Corgnati</i>	407
TRNSYS Dynamic Simulation Model of a Typical Air-Handling Unit: Experimental Calibration and Validation Based on Field Operation Data in the South of Italy <i>Antonio Rosato, Rita Mercuri, Mohammad El Youssef, Francesco Romanucci, Mohamed G. Ghorab</i>	415
Examining the Influence of Climatological Parameters on Building Cluster Geometry and Design Features in a Rural Indian Context: The Case of Sugganahalli Village (India) <i>Jeswin Varghese, Andrea Magdalene Pais, Suchi Priyadarshani, Monto Mani</i>	425
Estimating Indoor TVOCs in Response to Varying Humidity Regimes in Vernacular and Conventional Dwellings <i>Shreyata Khurana, Monto Mani</i>	435
Examining Indoor Humidity Ratio in Response to Varying Window-To-Wall Ratio and Ventilation in Indian Climate Zones for Earth-Plaster Based Dwellings <i>Suchi Priyadarshani, Monto Mani</i>	445
Calibrated BEMs and LSTM Neural Networks for Indoor Temperature Prediction: A Comparative Analysis in Pre- and Post-Retrofit Scenarios <i>Gianluca Maracchini, Nicola Callegaro, Rossano Albatì</i>	453
Impact of Different Radiation Decomposition Models and ERA5 Dataset on Building Energy Simulation Results: A Case Study in Brazil <i>Matheus K. Bracht, Matheus S. Geraldi, Ana Paula Melo, Roberto Lamberts</i>	461
Effects of Different Wind Speed Databases on the Performance of a Vertical Axis Micro Wind Turbine Integrated With a Typical Residential House: A Comparative Simulation Analysis for Five Italian Cities / <i>Antonio Rosato, Achille Perrotta, Luigi Maffei</i>	469
The Challenge of Archetypes Representativity for Wide Scale Building Investigation in Italy <i>Laura Carnieletto, Lorenzo Teso, Wilmer Pasut, Angelo Zarrella</i>	479

Comparison between Real Energy Consumption, Italian APE and Dynamic Energy Simulation <i>Vincenzo Pennisi, Davide Varesano</i>	487
Simulation Tests for the Determination of the U-Value of Walls by Using Response Factors Theory with Noisy Boundary Conditions <i>Maja Danovska, Davide Cassol, Ivan Giongo, Alessandro Prada</i>	495
Calibrating a Clothing Insulation Model for Thermal Comfort Assessment in Educational Buildings <i>Ilaria Pittana, Federica Morandi, Andrea Gasparella, Athanasios Tzempelikos, Francesca Cappelletti</i>	503
Alternative Affordable Solutions in Reducing the Number of Hours with Heat Strain Inside Buildings <i>Atlas Ramezani, Marco Manzan</i>	511
An Attempt to Model Ventilation Rate in Classrooms Based on the Measurement of Relative Humidity <i>Federica Morandi, Alessandro Prada, Ilaria Pittana, Francesca Cappelletti, Andrea Gasparella</i>	519
Assessment and Mapping of the Urban Heat Island Effect: A Preliminary Analysis on the Impact on Urban Morphology for the City of Turin, Italy <i>Gregorio Borelli, Ilaria Ballarini, Vincenzo Corrado, Andrea Gasparella, Giovanni Pernigotto</i>	525
Analysis of Control Strategies for Energy Performance Optimization for Educational Buildings: Comparison of Two Kindergartens in the Municipality of Bolzano, Italy <i>Angelica El Hokayem, Giovanni Pernigotto, Andrea Gasparella</i>	533
Optimization of a Solar Assisted Heat Pump System to Increase Thermal Efficiency Working on the Cold Source <i>Piero Bevilacqua, Stefania Perrella, Roberto Bruno, Daniela Cirone, Dimitrios Kaliakatos</i>	541
Simulative Applications of Novel Indicators for the Characterization and Performance Evaluation of Transparent Facades <i>Riccardo Gazzin, Giuseppe De Michele, Stefano Avesani, Giovanni Pernigotto, Andrea Gasparella</i>	549
Predicting Daylight Preferences Using HDRI and Deep Learning <i>Dongjun Mah, Athanasios Tzempelikos</i>	557
An Investigation Into Thermal Bridging Effects in an Envelope Integrated With End-Of-Life Photovoltaic Panels <i>Roshan R. Rao, Monto Mani</i>	565
Modelling Actions at the Building Stock Level for Decision-Making Towards Carbon-Neutral Cities <i>Erminia Consiglio, Luca Ferraris, Mirella Iacono, Gaetano Noé, Maria Ferrara</i>	573
A New Evaluation Framework to Assess the Prosumer Efficiency in Thermal Source District Heating Networks <i>Alireza Etemad, James O'Donnell, Alessandro Maccarini, Alireza Afshari</i>	583
The Influence of Acoustic Stressors in Educational Environments for Autistic Individuals: Preliminary Investigations <i>Marco Caniato, Federica Bettarello, Arianna Marzi, Andrea Gasparella</i>	593
Machine Learning and Data Augmentation Techniques to Cope With Solar Data Scarcity to Simulate PV Generation in Mountain Environments <i>Aleksandr Gevorgian, Giovanni Pernigotto, Andrea Gasparella</i>	601
Building Performance Simulation From Research to Professional Practice <i>Lori McElroy, Andrea Gasparella</i>	609

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 Mazzeola (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
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