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HEALTH in BUILDINGS
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ASHRAE Hellenic Chapter TEE

May 27-29, 2026 - Island of KOS, Greece

#	**Sanja Dubljević** PhD, Architect, LEED Green Associate, Associate Member of ASHRAE	
Title:	Science associate at the Department of Energy and Process Engineering, Faculty of Technical Sciences, University of Novi Sad, Serbia	
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Presentation title:	**Exploring AI Opportunities in BIM Environments for Strengthening Green Building Certification Practices**	

The Architecture, Engineering, Construction, and Operations (AECO) sector is facing increasing challenges and pressures to respond to stringent environmental requirements and rapid technological changes. These challenges are particularly pronounced in the healthcare sector, where buildings must comply with strict environmental, operational, and clinical standards. Although Building Information Modeling (BIM) plays an important role in the digital transformation of the built environment, the effective integration of green building certification systems (GBCS), such as LEED and BREEAM, into BIM-based workflows for healthcare facilities remains limited. Designers and engineers still lack accessible and intelligent tools to support sustainability certification processes within the already complex design processes of healthcare buildings.

This paper explores the potential of artificial intelligence (AI) to improve existing sustainability certification workflows in BIM-based healthcare building design. Through a critical review of current research and practices, the study examines how AI technologies can enhance data management, compliance verification, and decision-making in certification and design processes. Based on these insights, a conceptual AI-enabled BIM framework is proposed to support sustainability certification in healthcare projects. The framework outlines how machine learning and natural language processing can be integrated into BIM environments to automate certification-related processes and facilitate the implementation of sustainable design principles in the healthcare sector.

Short CV:

Dr Sanja Dubljević is an architect and Science Associate at the Department of Energy and Process Engineering, Faculty of Technical Sciences, University of Novi Sad, Serbia. She is a LEED Green Associate credential holder. Her research focuses on sustainable building and BIM technologies, including the assessment of energy and environmental performance of buildings and the development of automated tools for sustainability evaluation.

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CV:	

Dr Sanja Dubljević is an architect and Science Associate at the Department of Energy and Process Engineering, Faculty of Technical Sciences, University of Novi Sad, Serbia.

She completed her undergraduate studies in Architecture and Urbanism in 2014 and her Master's degree in Architecture in 2015 at the Faculty of Technical Sciences. In 2025, she obtained her PhD with a dissertation titled "Algorithm for Automated Assessment of Green Building Certification Requirements in a BIM Environment."

She has been employed at the Faculty of Technical Sciences since 2018, initially as a Junior Researcher. She was promoted to Research Associate in 2022 and to Science Associate in 2026.

Her research focuses on sustainable building and BIM technologies, particularly on the assessment of energy and environmental performance of buildings and the development of automated tools for sustainability evaluation. She also works on integrating green building certification systems, such as LEED and BREEAM, into digital design processes.

As part of her professional development, she has focused on green building certification systems, and in 2026 she obtained the LEED Green Associate credential.

As a first author, she has published two papers in top-tier international journals (M21a category) and has contributed to several international conferences and scientific publications.

She has been actively involved in teaching at undergraduate and master levels, supporting courses related to BIM, energy flows, energy efficiency, and HVAC systems in buildings. Her teaching performance has been highly rated by students.

Through interdisciplinary collaboration with mechanical engineers, she has expanded her expertise in energy systems and building performance. She is a member of ASHRAE and the Serbian HVAC&R Society.

In addition to her academic work, she has gained professional experience in the private sector, participating in design projects, expert witness activities, and projects focused on energy savings, energy efficiency improvement, and sustainable resource management.