


Event:
Date:
Place:

ENERGY in BUILDINGS 2025
Saturday, November 15, 2025
Athens, Greece



#	Stavroula Thravalou Architect Engineer, Ph.D.	
Title:	Adjunct Lecturer at University of West Attica, Athens, Greece Coordinator of Europa Nostra Heritage Hub in Greece, at Elliniki Etairia	
email:	sthaval@gmail.com	•
Presentation title:	Integrating Green Building Principles in Architectural Design Education: A Case Study from Thessaloniki	
<p>Integrating environmental parameters into architectural and urban design is essential for promoting the sustainable use of natural resources, reducing energy poverty, enhancing urban biodiversity, and improving microclimatic conditions; this integration calls for a fundamental redefinition of design priorities and tools.</p> <p>This paper outlines the methodology for incorporating environmental parameters into architectural design, as applied in the environmental design curriculum of the 5-year Integrated Masters Course of Studies offered at the School of Architecture, Aristotle University of Thessaloniki. The theoretical component of the curriculum introduces students to the fundamentals of passive design through international case studies and practical exercises involving solar protection, climate analysis, and thermal performance of building materials. The practical component challenges students to apply environmental principles in designing a mixed-use building in the dense urban fabric of Thessaloniki's city center. Throughout the design process, students are encouraged to explore elements such as building orientation, site-specific adaptation, solar control strategies, use of renewable energy sources, natural lighting and ventilation, material selection, water management, and the configuration of outdoor spaces—not merely as technical requirements, but as integral design components.</p> <p>The outcomes of this teaching approach demonstrate how environmental considerations can enrich the architectural synthesis, particularly within the context of Mediterranean climates and densely built historical centers. The paper highlights student projects and design strategies that reflect a holistic and context-sensitive understanding of environmental design, offering valuable insights for sustainable architectural education and practice.</p>		
Short CV:	<p>Dr. Stavroula Thravalou is an architect-engineer and a senior expert in the conservation and environmental performance of vernacular heritage. Her previous research focused on the sustainable reuse and digitization of built heritage, using energy simulation and BIM tools, at the University of Cyprus and The Cyprus Institute. She is teaching Environmental Design, Urban Ecology and Energy Upgrade of Existing Buildings since 2018 at the University of Cyprus, University of West Attica and Aristotle University of Thessaloniki. She has coordinated hands-on workshops in earth building techniques and coordinates the regional hub of Europa Nostra in Athens since 2023.</p>	

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CV:

Dr. Stavroula Thravalou is an Architect Engineer (National Technical University of Athens, 2007) with postgraduate studies in Bioclimatic Architecture and the Environment (Polytechnic University of Madrid, 2010) and a PhD in the environmental aspects of vernacular heritage (University of Cyprus, 2021). She teaches environmental design and urban ecology as part of the adjunct teaching staff at the University of West Attica (2024–2026) and coordinates Europa Nostra's Heritage Hub in Athens, managed by ELLINIKI ETAIRIA – Society for the Environment and Cultural Heritage (2023–2027).

Since 2012, she has been involved as a principal investigator in research projects focusing on the assessment of the thermal comfort of earthen architecture and the energy efficiency of heritage buildings using BIM tools and dynamic energy simulation, in collaboration with the University of Cyprus (VernArch Lab) and the Cyprus Institute (Energy, Environment and Water Research Centre – EEWRC). From 2018 to 2023, she taught in the Interdepartmental Postgraduate Programme Energy Technologies and Sustainable Design (IMP-SETAS) of the University of Cyprus, focusing on the environmental and energy performance of existing buildings and smart systems for efficient building envelopes. She also taught Architectural Design – Synthesis at the Department of Architecture, Aristotle University of Thessaloniki (AUTH, 2024–2025).

Her PhD thesis investigates natural ventilation as a passive cooling strategy in vernacular buildings and historic urban centres, using field measurements at multiple spatial scales—neighborhood, street, and building. She has also participated in research projects promoting innovative teaching and awareness-raising practices on heritage sustainability. She is a member of the Technical Chamber of Greece and Cyprus, ICOMOS, and serves as Vice President of GEODOMO Cyprus, which focuses on building techniques using natural materials. She is a reviewer for several scientific journals, and her work has been published in various international conferences and academic journals.