Event: **ENERGY in BUILDINGS – Northern Hellas 2025** 



**Hellenic** Chapter

Date: Saturday February 22, 2025
Place: Thessaloniki, Macedonia - Hellas

#	Georgios Alexandrou Architect Engineer AUTH
Title:	Architect Engineer at Vassiliades-Architects, Limassol, Cyprus
email:	Gioalex97@outlook.com.gr
Presentation title:	Existing Building Stock. An Obstacle or an Opportunity for Achieving Sustainability?

The concepts of energy efficiency and energy upgrading have become pivotal in addressing the environmental and energy challenges of our time. The reliance on mechanical systems in 20th-century architectural design, which allowed buildings to function independently of climatic conditions, marked a significant misstep in sustainable development. Today, buildings' energy consumption and environmental impact throughout their life cycle are critical concerns. Existing buildings account for the highest energy consumption, relying heavily on finite fossil fuels whose depletion is inevitable. This dependence has driven environmental crises such as climate change, the greenhouse effect, and air pollution, jeopardizing the planet's future.

The energy-intensive nature of aging buildings highlights their significant role in environmental degradation, yet it also presents an opportunity for improvement. Retrofitting and upgrading existing structures to enhance energy efficiency can significantly reduce dependence on fossil fuels and alleviate environmental damage. Governments and organizations, including the European Union, have prioritized this sector, aligning their goals with the 2030 Agenda for Sustainable Development, which emphasizes energy efficiency and resource management.

Environmental certification systems and upgrade methodologies have emerged, addressing not only energy efficiency but also the broader environmental performance of buildings. Exemplary projects worldwide demonstrate the potential for transforming existing structures into sustainable assets through thoughtful design and resource management. These efforts span diverse building types and locations, showcasing the versatility and impact of sustainable upgrades.

By embracing coordinated strategies and sustainable practices, the restoration and enhancement of existing buildings can mitigate environmental risks and promote a more sustainable future. Energy-efficient upgrades, coupled with responsible natural resource management, can pave the way for a planet that is livable and sustainable for generations to come. The path to reversing ominous forecasts lies in leveraging the immense potential of existing buildings to achieve environmental resilience and energy independence.

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#### Short CV GREEK:

Είμαι Αρχιτέκτονας Μηχανικός, απόφοιτος του ΑΠΘ, με ειδίκευση στον σχεδιασμό, την ενεργειακή αναβάθμιση και τη βιώσιμη ανάπτυξη κτηρίων. Ενδιαφέρομαι για τη σύνδεση αρχιτεκτονικής και περιβαλλοντικής απόδοσης, αξιοποιώντας Ανανεώσιμες Πηγές Ενέργειας (ΑΠΕ) και σύγχρονες τεχνολογίες.

Διαθέτω άριστη γνώση σχεδιαστικών προγραμμάτων όπως AutoCAD, Revit, Rhino, SketchUp και Photoshop, καθώς και επαγγελματική επάρκεια στην αγγλική γλώσσα.

Στόχος μου είναι η δημιουργία αρχιτεκτονικών λύσεων υψηλής αισθητικής και λειτουργικότητας, που σέβονται το περιβάλλον και ανταποκρίνονται στις προκλήσεις του μέλλοντος.

#### Short CV EN:

I am an Architect Engineer, graduate of Aristotle University of Thessaloniki (AUTH), specializing in building design, energy renovation, and sustainable development. I am particularly interested in the integration of architecture with environmental performance, utilizing Renewable Energy Sources (RES) and modern technologies.

I have proficient knowledge of design software such as AutoCAD, Revit, Rhino, SketchUp, and Photoshop, as well as professional fluency in English.

My goal is to create architectural solutions that combine high aesthetics and functionality, while respecting the environment and addressing future challenges.

CV:

GIORGOS ALEXANDROU, Architect Engineer | Limassol, Cyprus. Phone: +357 96452879 Email: gioalex97@outlook.com.gr

#### **About Me**

I am an Architect Engineer, a graduate of the Aristotle University of Thessaloniki (AUTH), specializing in bioclimatic design, energy renovation, and sustainable development. I am passionate about integrating sustainability and environmental responsibility into architecture, focusing on energy-efficient buildings and innovative urban solutions.

For the past 1.5 years, I have been working at Vassiliades Architects in Limassol, Cyprus, where I participate in all stages of the design process, from concept development to implementation. Additionally, the office emphasizes energy efficiency and bioclimatic design, integrating sustainable architectural practices into projects.

## **Education & Experience**

2023 - Present: Architect Engineer at Vassiliades Architects, Limassol, Cyprus

2017 – 2023: Diploma of Architect Engineer, Aristotle University of Thessaloniki (Grade: 8.75/10, Excellent)

Diploma Design Thesis (2022 – 2023): "Renegotiation of the Urban Palimpsest of Venizelou Street: An Arcade of Culture and Creation" (Grade: 10/10)

Diploma Research Thesis (2021 – 2022): "Existing Building Stock; A Big Obstacle or a Great Opportunity to Achieve the Sustainable Development Goal?" (Grade: 10/10)

2021: Participation in Climathon Thessaloniki 2021, focusing on sustainable urban innovation

2018: Educational Excursion to Prespes, documentation of historical buildings

2018: Attendance at an urban planning and construction conference

2015 – 2017: Completion of military service, attaining the rank of Reserve Second Lieutenant in the Infantry

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#### Skills & Software Proficiency

Event:

Design Software: Rhino, Revit, AutoCAD, SketchUp, Photoshop

Energy Performance Analysis: iSBEM (Energy assessment tool for Cyprus)

<u>Languages</u>: Greek (Native), English (Fluent )

## **Key Interests & Specializations**

Sustainable Architecture & Urban Development Bioclimatic Design & Energy-Efficient Buildings

Building Renovation & Circular Economy in Architecture

Integration of Renewable Energy in Architectural Design

I am committed to creating high-quality architectural solutions that balance aesthetics, functionality, and environmental responsibility. My goal is to apply innovative strategies that contribute to a more sustainable built environment.

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