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Presentation title:	**Earth-Sheltered Buildings: Analysis of Design Parameters for Sustainability. Application to an Earth-Sheltered Residence in Kavala, Greece.**	

This research examines earth-sheltered architecture as a sustainable design strategy, focusing on the case of an earth-sheltered residence in Kavala. In an era where the climate crisis redefines the priorities of the built environment, earth-sheltered buildings are dynamically re-emerging, combining traditional wisdom with the requirements of energy autonomy. The analysis begins with the historical and cultural dimension, showing how integration into the ground has consistently served as a solution of adaptation and protection. Subsequently, the technical and energy characteristics are being examined: the thermal inertia of the earth, the reduction of heat losses, natural lighting and ventilation, as well as the low ecological footprint that render earth-sheltered constructions particularly efficient.

In the second part, the research is applied to the example of an earth-sheltered residence in Kavala, where energy performance is evaluated based on the orientation of the single facade and the climatic zone, using software. The results demonstrate that southern orientation ensures the best energy balance, reducing both heating needs and CO_2 emissions, in contrast to the less efficient eastern, western, and northern orientations of the facade.

Overall, the work demonstrates that earth-sheltered buildings do not constitute an alternative or marginal choice, but a mature habitation model that can offer (tangible) realistic solutions to contemporary environmental and social issues.

Short CV:

Born in Kavala, I hold degrees in Civil Engineering and Architecture from the Democritus University of Thrace. I work in the private sector, engaging in both design and construction projects of various scales. Currently completing a Master's in "Sustainable Design of the Built Environment,"

CV:	

I was born and raised in Kavala. I obtained a bachelor's degree in civil engineering and subsequently worked in the private sector, mainly in architectural firms. My interest in architecture led me to continue my studies, and alongside my professional work I completed my degree in Architecture at the Democritus University of Thrace.

During my studies, as well as after their completion, I have had the opportunity to design and participate in the design of a wide variety of projects — including residences, commercial spaces, industrial buildings, hotels, a nursing home, a public square, a theme park, a museum, and more — several of which have been constructed and some even awarded.

I am professionally active in the private sector, involved both in architectural design and in the construction of building projects. I enjoy evolving and expanding my knowledge; in the current academic semester, I am completing my postgraduate studies at the Hellenic Open University in the Master's Program *"Sustainable Design of the Built Environment"*.

Whenever possible, I also participate in parallel professional and cultural activities in the wider area where I work, and I currently serve as the President of the Association of Architects of Kavala Prefecture.