

Interdisciplinary assessment, analysis and diagnosis of a historic timber roof structure from the 20th century

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ABSTRACT

Historic roof structures are complex systems which can not be assessed individually but need a more holistic approach, in order to understand them as a whole. The high variety of contexts in which the building and its roof were placed, of architectural styles which ultimately influence the shape of the roof but also the diversity of technical solutions used by the craftsman to respond to these needs and its state of conservation, make a multidisciplinary approach necessary.

While 18th and 19th century roof structures from Timisoara, a city from the western part of Romania, proved out to be complex structures which a high value from urban planning, architectural, symbolical and structural point of view, the 20th century is a period of transition with a wide array of influences, mix of styles and technological improvement of the structures.

Therefore, based on the roof structure of The Löffler Palace, built between 1912-1913, placed in the historic centre of the city, the paper tries to highlight that roof structures from this period are also far more than structural systems. Based on a thorough historical analysis and visual inspection of the structure, by using a multidisciplinary assessment procedure [1], the paper shows that 20th century roof structures are closely related to the building they belong, to their context and have a significant philosophical/symbolic and aesthetical value. In the same time, the procedure also addresses the role of assessment, diagnosis and monitoring for sustainable repair, conservation and maintenance, the structural integrity of the roof, its influence on the seismic behaviour of the historic building, highlighting the connection between the roof, the building and its environment.

REFERENCES

- [1] M. Mosoarca and A.I. Keller, "A complex assessment methodology and procedure for historic roof structures", *Int J Archit Herit*, Vol. 12(4), pp. 578-598, (2018).