

Summary of approved PhD theses

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ARCHITECTURE OF RIVER HARBOUR AREAS ON THE SLOVAK SECTION OF THE DANUBE

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The harbour infrastructure belongs to the strategic parts of the national economy. Compared to abroad, in Slovakia, harbours are a closed zone, not commonly visited by citizens or tourists. There are three major river harbours on the Slovak section of the Danube in – Bratislava, Komárno and Štúrovo. During the 20th century, they underwent manifold changes, which affected their territorial distribution and the composition of the building stock within the harbours' inner area and the city. In our territory, harbour infrastructure flourished at the turn of the 19th and 20th centuries. Its development was halted by the adversity of World War I. The "golden age" returned with the interwar period and lasted until the beginning of World War II. After World War II, a period of massive damage repairs followed. Afterwards, it had to come to terms with the establishment of the socialist regime and, after 1989, with a period of privatization. At the turn of the "millennium", harbour infrastructure was modernized and in the last decade, a discussion was initiated whether it is possible to list it under industrial heritage while finding new functions for these areas. Research under the dissertation focused on a particular type of industrial heritage, namely the architecture of harbour infrastructure. The identification of the values of this specific type of architecture provides an overview of its potential for further development of harbour areas. The comparison of the contemporary industrial architecture of selected harbours and, at the same time its confrontation with historical, cultural, and social influences, underline the complexity of the research. It transpires that professional discussion in the field of industrial heritage needs to be conducted at the interdisciplinary level not only at national and international conferences, but also in practice. The dissertation brings a set of knowledge about harbour infrastructure issues in Slovakia, which represents a contribution to extend the knowledge, which has not been comprehensively compiled so far. It describes the basic elements of harbour infrastructure from the architectural and urban points of view. The synergic interconnection of urbanism and architecture involving transport, aquatic and industrial infrastructure of the harbour and the city offers a high potential for further utilization.

PhD thesis approved at the Faculty of Architecture and Design STU in Bratislava, Slovakia, in the study programme Architecture

STRATEGIES FOR ADAPTABLE ARCHITECTURE

MArch Marek Lüley, PhD.

When dealing with the daily demands of a sustainable approach in architecture and the rapid development of society, we must accept change and time as an integral part of the building system. The dissertation deals with adaptability in architecture as a strategy for achieving long life of buildings and resistance to change. The main argument for adaptability is its sustainable approach, incorporation of embodied

energy, its resilience, and the elimination of impacts on the environment and climate change. Architecture that is unable to adapt to the constantly changing demands of society is doomed. An adaptable approach understands architecture as a process which enables a dynamic response to changing environmental and social conditions with the aim to extend the life of a building. The application of adaptability is as ambivalent as the concept itself. Therefore, the dissertation opens a discussion on the different perceptions of adaptability in architecture. Adaptability cannot be only understood as movable partitions or a vast open space. There are several different principles leading to adaptability that can demonstrate their versatility of use – from the basic understanding of flexibility to intricate polyvalence. The application of adaptability to the design process is elaborated on from several aspects, whether it is the beginnings of the architect's journey using an educational method, evaluating decisions using a life cycle analysis, or forming a strategy using scenarios, feedback, and interpretation.

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“VIRTUAL ARCHITECTURAL HERITAGE” AND ITS USE IN PRESENTING CULTURAL AND HISTORICAL VALUES OF THE MONUMENTS FUND

Mgr. art. Martin Varga, PhD.

This dissertation addresses virtual architectural heritage and its use in presenting cultural and historical values of the monuments fund. The main objective was to define a legislative framework that is a prerequisite for creating digital databases in the context of the monuments fund of the Slovak Republic. The findings were evaluated using the research by design method in selected castles during the long-term periods of their ongoing reconstructions. The results of the study defined the legislative framework allowing the acquisition of digital material for the development of existing databases as well as the means and forms of digital presentation methods in the castles and their environment. The conclusions can be used in long-term castle reconstructions and their presentations. They can also help improve the collection and dissemination of digital information through the Monuments Board of Slovak Republic to the professional public.

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INTERACTIONS OF HUMANS AND WOOD: CONCEPT OF MATERIALS, EXPERIMENTAL PRODUCTS AND SPACE

Mgr. art. Wanda Borysko, ArtD.

The presented dissertation thesis explores, in its theoretical and practical parts, the possibilities for the utilisation of wood in experimental products of info-educational infrastructure and small architecture used for observing nature. The thesis focuses on the broad issue of the interaction between humans and wood, as a natural material with unique properties that is both renewable and environmentally friendly. Furthermore, the text highlights the possibilities of shaping sensory experience through wood, using the example of the wooden experimental bird watching platform Duna and the complementary educational infrastructure located by the Danube River. The dissertation includes an analysis of the design of small-scale architecture and educational facilities in nature. These not only respect the unique specifics of the territory in which they are located, but are also able to adapt to the given natural conditions and stand as self-sufficient, pro-ecological creations with minimal impact on the environment.

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DESIGN AS A UNIQUE FORM OF THE REPRESENTATION OF THE COUNTRY. USE OF A STORY AND MULTISENSORY EXPERIENCE IN THE PRESENTATION OF THE DESIGN

Mgr. art. Vanda Gábrišová, ArtD.

Design is a unique tool that can comprehensively represent and express the creative potential of a country. Slovakia has constantly been searching for its place in the world and trying to shape its unique identity. Design, as a multidisciplinary cultural commodity, is capable of presenting the rich culture of a country and its potential abroad. This paper focuses on the use of storytelling and multisensory design to present Slovak design, and their significance in product design. A multisensory approach in design can substantially improve the user experience and create stronger and more lasting impressions. The proper use of multisensory elements can establish a better connection between users and products and can be applied in various design fields. The methodology for evaluating multisensory product properties is a valuable benefit for designers in improving product quality and the design process itself. Multisensory design represents an important approach to product design and considering multisensory experiences in the design process has a positive impact not only on product appearance, but also on the functionality of products and overall experience of using them.

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