

Summary of approved PhD theses

Radka Kubaliaková

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HOTELS IN THE CONTEXT OF THE URBAN ENVIRONMENT

Ing. arch. Radka Kubaliaková, PhD.

The research on hotels in the context of the urban environment focuses on the interaction of a hotel's location with its function and form, with regard to the optimization of the aspects supporting the hotel's urbanity in the central urban zone. It seeks to capture and understand the diversity of the boundaries of hotel intimacy and public permeability, which is crucial to the life of a city. The main question the research explores is how hotel facilities can affect the sustainability of a space and its "life" and, in retrospect, how the potential of a place and a functional public space influences the city's openness. The aim of the dissertation thesis is to interpret the relationship of urban hotels and the urban environment and to define the main implications of the relationship between a hotel and the city. Passportization of hotels in the context of the urban environment has been conducted in two forms, in which the architectural and social aspects of individual city hotels were assessed in relation to the relevant public space. The final analyses showed the existence of significant links between the type of urban structure (location), and the measurement of active boundary lines (function and form) in relation to the urban context of the urban environment, and indicated a possible methodology for evaluating urban integration of urban hotels in the urban environment. The work provides a theoretical basis, a passportization of Slovak and foreign case studies of city hotels, as well as research results, which are presented with respect to the overall evaluation, developmental opportunities and formulation of determinants that influence urban formation within various city structures.

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

VIRTUAL REALITY AS A TOOL OF PERFORMANCE-BASED MODEL

Ing. arch. Viliam Zajíček, PhD.

Nowadays, latest technologies affect and change the way of thinking about architecture and space and they have gradually become a common practice. They have been used more extensively in simulations, generative processes or fabrication where they help to enhance properties of designed space. The concept of Performance-based modelling has been introduced in the field of computational design. This approach allows for a more accurate grasp of complex problems and their solutions via simulations and generative processes in early stages of the design process. Recent development in Virtual Reality technology enables the users to "teleport" into non-existing spaces or worlds and to explore the newly designed space or previous state of space. The research examines the use of this instrument within the Performance-based modelling and studies the influence of the perception of the space by its users as a form of spatial performance. The thesis explores the means of data gathering, processing and prediction of spatial cognition as a part of feedback loop in Performance-based modelling process. It thereby verifies the capabilities of machine learning in relation to the processing of the complex data of user's spatial cognition. These

methods as a form of prediction are studied as a tool for evaluation of designed space.

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PROCESSIONAL MOVEMENT IN ARCHITECTURE

Ing. arch. Mgr. art. Ondrej Kurek, PhD.

Movement in architecture has always been a frequent and popular concept within architectural theory and practice. At the same time, immobility has been encoded in architecture since the times of Vitruvius. In this thesis, firstly, I try to explain this paradox between the basic postulates of architecture and the tendencies that have led to the current understanding of architecture as a system of flows of information and people. Furthermore, with this thesis I attempt to contribute to better understanding of this topic within Slovak context. Therefore, in its first part, this dissertation focuses on the explanation of the context of thinking about movement within a stable architectural form. The development of the topic through the history of art and architecture until the present day is described. Determinants, tools used for integration of motion into the architecture are then established from obtained data. I have delineated these determinants and their a mutual connection and put them in a historical context. At the end of this part of the thesis, I define the individual types of movement I have identified and sort them in a summary table. The main topic of the second part of the thesis is a more detailed analysis of processional motion, one of the types of motion in architecture that works with motion not in terms of the dynamics of form, but in terms of the dynamics of the viewers themselves within a stable architecture. I consider this kind of movement to be the most complex due to the involvement of the viewers and all their senses. The processional motion in a historical and theoretical context is described and examples of realized designs are included. I hope that the content of this thesis will prove that processional architecture still has a place in contemporary architecture and it can be a way of responding to the challenges architecture faces these days.

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