

## Summary of approved PhD theses

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### **EMERGENT FABRICATION TOOLS IN ARCHITECTURE DESIGN: FABRICATION TOOL WITH EMBEDDED LOGIC AS AGENT OF EMERGENT DESIGN**

**Ing. arch. Tomáš Tholt, PhD.**

Contemporary discourse of digital architecture and research of computational design are granulated. Nevertheless, we can follow several prevailing topics and tendencies—parametric design, complexity, digital fabrication, emergent design, artificial intelligence, simulations, optimization. The topic of the dissertation “Emergent fabrication tools in architecture design: Fabrication tools with embedded logic as agent of emergent design” by Tomáš Tholt is situated in between these fields of expertise and concepts. It defines the capacity of computational tools considering especially the formal and contextual novelty—emergence. Author focuses particularly on research of computational design and fabrication methods. The dissertation is composed as a summary of his research, publications, and applied design projects carried out at the Faculty of Architecture and Design STU, as well as on the research independent platform (focusing on research and theory of architecture) and in Subdigital studio (applying principles of computational design to the practice). The author tries to reflect on the implemented and published projects vis-à-vis the contemporary theoretical context of computational discourse.

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

### **MANIFESTATIONS OF SPONTANEITY IN THE PUBLIC SPACES OF RESIDENTIAL AREAS**

**MArch Daniela Majzlanová, PhD.**

Manifestations of spontaneity in public space are the result of a transformation process of housing estates in post-socialist countries. The elements of small social architecture that appear in different countries have a common goal: to humanize the living environment. During our research trips to the countries of the former Soviet Union, we encountered lively public spaces and various forms of “architecture without architects”. In the countries east of Slovakia, several phenomena of spontaneous additions have appeared due to non-regulation. The best known of these typologies is a “kamikaze loggia”. This emergency solution provided a way out of the housing crisis and thus a temporary solution became permanent. What is the process of dealing with prefabricated housing estates in Slovakia? Is the spontaneity a mere way out of the crisis or can it offer something more to residents and even to architects? In our research, we try to explore the to-date unexplored phenomenon of spontaneous architecture.

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**THEORY OF COLOUR HARMONIES:  
THEIR APPLICABILITY IN THE ENTRANCE AND COMMUNICATION SPACES  
OF MEDICAL FACILITIES**

**Ing. arch. Silvia Cejpková, PhD.**

The topic of this dissertation thesis was inspired primarily by significant changes in healthcare over the past few decades—the construction of new and reconstruction of existing hospitals—combined with a new approach that considers the needs of patients more holistically. The need to explore this area was based on the absence of professional literature addressing architectural colour design of healthcare facilities in Slovakia. The aim of the work was to identify the colour preferences of patients and visitors in their first contact with a healthcare institution and which colour characteristics and colour relations are the most suitable to be applied in the first contact spaces. Colours are perceived positively when in harmony: hence the assumption was that harmonised colour combinations may reduce stress that people naturally experience at a hospital. For this purpose, the Colour Affects theory was selected. According to Angela Wright, the author of the theory, colours are divided into four groups. Colours within each single group are expected to be harmonious in combinations and at the same time they convey a particular psychological message subconsciously understandable to people worldwide. Wright suggests certain groups of colours as more suitable for healthcare institutions, because they create an atmosphere which helps patients mitigate or overcome stress. Our specific aim was to verify to what extent, if taken as a hypothesis, this statement is valid for healthcare environments in Central Europe. The outcome of research are colour groups recommended as preferred for the entrance and communication premises of healthcare facilities. In line with the theory of colour psychology, the selected colours indicate the need for calm and emotional support. The results have pointed out a range of factors which influence the impact of healthcare waiting and corridor spaces on the feelings and moods of patients, as well as the specific role colours play. The results are presented in the form of recommendations for architects, interior designers, and management of healthcare facilities.

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**DESIGN AS AN INTEGRATING ELEMENT OF THE CREATIVE CENTRE  
OF THE SLOVAK UNIVERSITY OF TECHNOLOGY IN BRATISLAVA**

**Mgr. art. Martin Mjartan, ArtD.**

The dissertation titled “Design as an integrating element of the creative centre of the Slovak Technical University in Bratislava” covers the topic of STU students’ preparation for a career in the creative industry. In its first part, the thesis defines cultural and creative industries, and notions connected to these labour market fields. It further focuses on the design education and development of the Creative Centre of STU, which fulfils the role of the University’s multidisciplinary platform offering room for cooperation between various disciplines and fields of creative practice. The thesis continues with an analysis of educational activities provided by the mentioned Centre as well as of discussions and workshops which were carried out as a part of research. The concluding part of the thesis is dedicated to the context of multidisciplinary cooperation within the University. This topic is discussed with several academic personalities active at the STU. The dissertation demonstrates the relevance of analysed methods that prepare students for creative practice and it also justifies multidisciplinary cooperation for further development of University activities.

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