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**6th INTERNATIONAL
ACADEMIC CONFERENCE ON
PLACES AND TECHNOLOGIES**

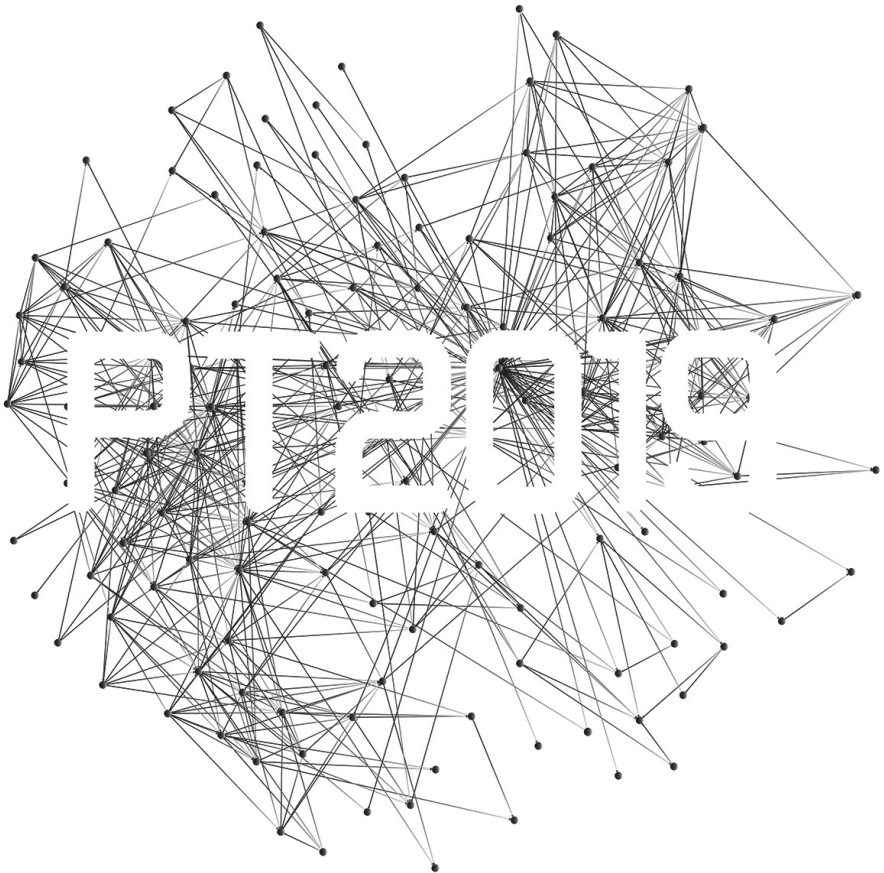
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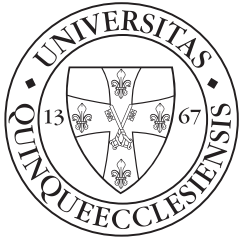
PLACES AND TECHNOLOGIES 2019

THE 6th INTERNATIONAL ACADEMIC CONFERENCE ON
PLACES AND TECHNOLOGIES

EDITORS: Dr Tamás Molnár, Dr Aleksandra Krstić-Furundžić, Dr Eva Vaništa Lazarević, Dr Aleksandra Djukić, Dr Gabriella Medvegy, Dr Bálint Bachmann, Dr Milena Vukmirović
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PLACES AND TECHNOLOGIES 2019

**KEEPING UP WITH TECHNOLOGIES TO TURN BUILT HERITAGE INTO
THE PLACES OF FUTURE GENERATIONS**

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WORD OF THE CONFERENCE DIRECTORS

On behalf of the Organizing Committee of the International Academic Conference on Places and Technologies 2019, consisting of the PT Conference founding members, Dr Eva Vaništa Lazarević, Dr Aleksandra Krstić-Furundžić, Dr Aleksandra Djukić, and Dr Milena Vukmirović, and the host members, Dr Medvegy Gabriella, Dr Molnár Tamás and Dr Bachmann Bálint, we are very pleased and honored to realize the sixth season of PT Conference, done in collaboration with the University of Pécs – Faculty of Engineering and Information Technology, the University of Belgrade – Faculty of Architecture and the Urban Laboratory Belgrade.

The Places and Technologies Conference has a tradition. The first conference was held in 2014 in Belgrade at the University of Belgrade – Faculty of Architecture with the aim of finding ways to improve places, the second was held in 2015 in Slovenia in collaboration with the University of Ljubljana, with the main topic concerning healthy cities, the third was held in 2016 in Belgrade at the University of Belgrade – Faculty of Architecture and was dedicated to the technologies for the creation of a cognitive city, the fourth was held in 2017 in Bosnia and Herzegovina at the University of Sarajevo – Faculty of Architecture and was devoted to urban and rural synergy, and the fifth was held in 2018 in Belgrade at the University of Belgrade – Faculty of Architecture, whose focus was the presentation and identification of new knowledge in the field of high technologies, which can be applied in the creation of adaptable cities.

Each conference resulted in very reputable scientific conference proceedings, and all five proceedings are available on the conference website. In addition to these, it is important to point out some other valuable results. Two notable results of the 2014 Conference include valuable publications *Keeping up with technologies to improve places published by Cambridge Scholar Publishing and Elsevier's Energy and Buildings Special Issue on Places and Technologies*. Regarding the results of the Conference in 2016, we point out to the publication of papers by *Elsevier's Energy and Buildings International Journal and Facta Universitatis, Series Architecture and Civil Engineering Special Issue*, as well as the book *Keeping up with technologies to create cognitive city* published by Cambridge Scholar Publishing in 2018. Regarding the results of the Conference in 2017 the book *Urban-Rural Synergy Development through Housing, Landscape, and Tourism* is in the process of publication by IGI Global. As for the PT conference held in 2018, in addition to the published proceedings, the planning of other publications is in progress. All these publications were based upon the evaluation of the most outstanding submitted papers from our conferences. This has proven to be a strong incentive and motivation for all professors from the Organising Committee of "Places and Technologies", as well as for the members of the International Scientific Committee and all participants.

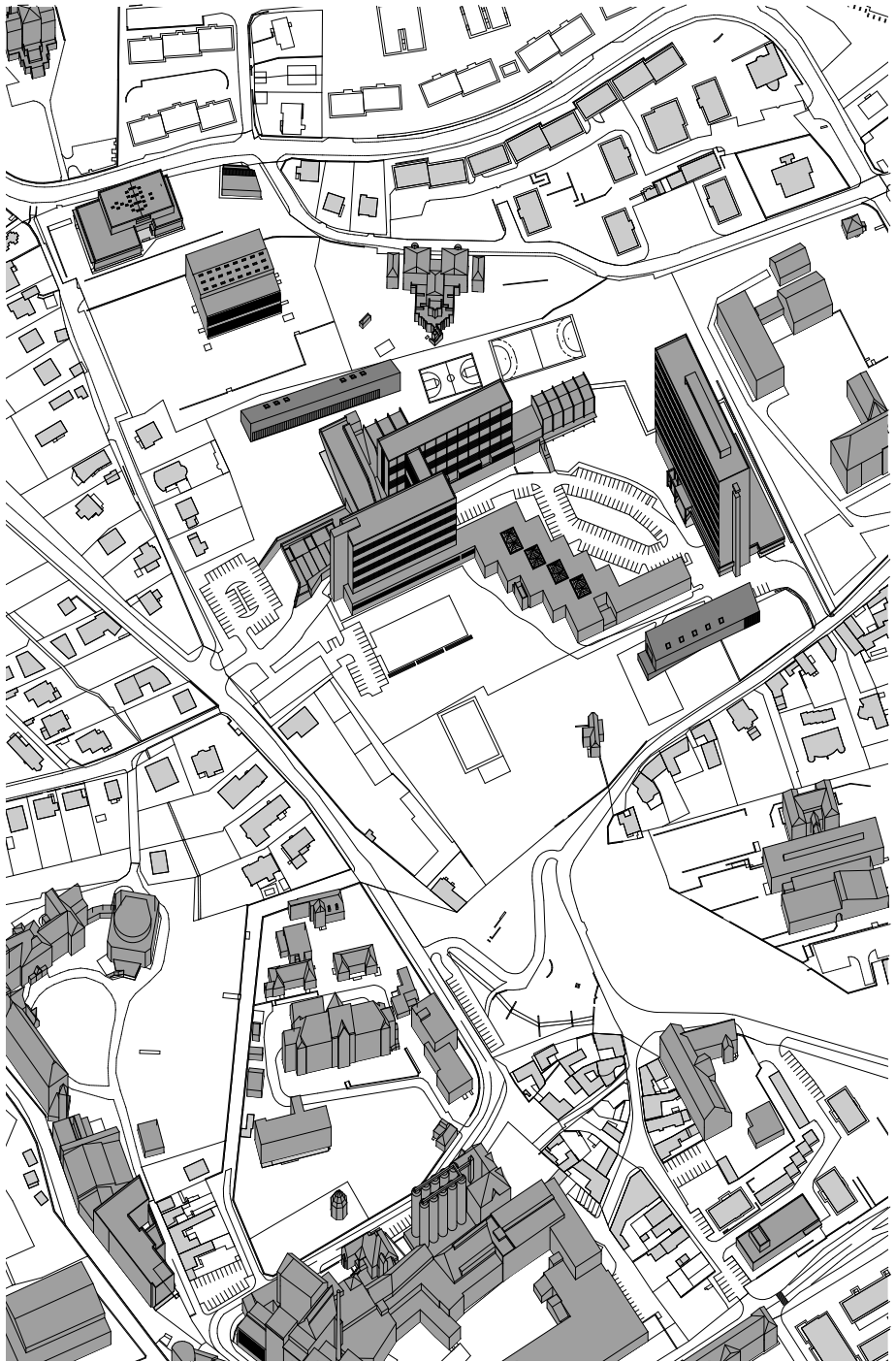
The Sixth International Academic Conference on Places and Technologies will be hosted on May 09 and 10, 2019 by the Faculty of Engineering and Information Technology of the University of Pécs, the oldest university of Hungary that was founded in 1367. *Keeping up with technologies to turn built heritage into the places of future generations* is the leading idea-motive of the conference. Built heritage is characterizing cities and towns and at the same time it can represent the identity of a certain place. The future of an old building is ensured for a long time if it is continuously used. In order to design a long-term solution for the built heritage the requirements and needs of future generations should be understood. The aim of the Places and Technologies 2019 Conference is to discuss methodologies, urban, architectural or structural design ideas that can help to form the future of the built environment. By using appropriate technologies

and with a multidisciplinary approach it can be ensured that the preservation of built heritage will be a long-term solution for current and future social needs. This way the buildings and remains of previous decades or centuries can be an integrated part of future cities and towns. Consequently, the conference program and research are based on the knowledge of several academic disciplines: architecture, engineering and further technical sciences, art, humanities and social sciences.

The Faculty of Engineering and Information Technology has a special anniversary in the 2018/2019 academic year. The 10 semesters university master's degree program of architecture started 20 years ago, and the Breuer Marcell Doctoral School of Architecture was founded 15 years ago. It is honorable to host in this special academic year the Places and Technologies 2019 Conference that was organized in cooperation with the University of Belgrade – Faculty of Architecture and the Urban Laboratory Belgrade. There were more than 100 abstracts submitted to this important academic and scientific event from authors coming from more than 20 countries. Besides the conference the inauguration of the new architecture building on the campus of the Faculty, an alumni exhibition and a scientific symposium about 100 years of architecture in Pécs is extending the program of the celebration.

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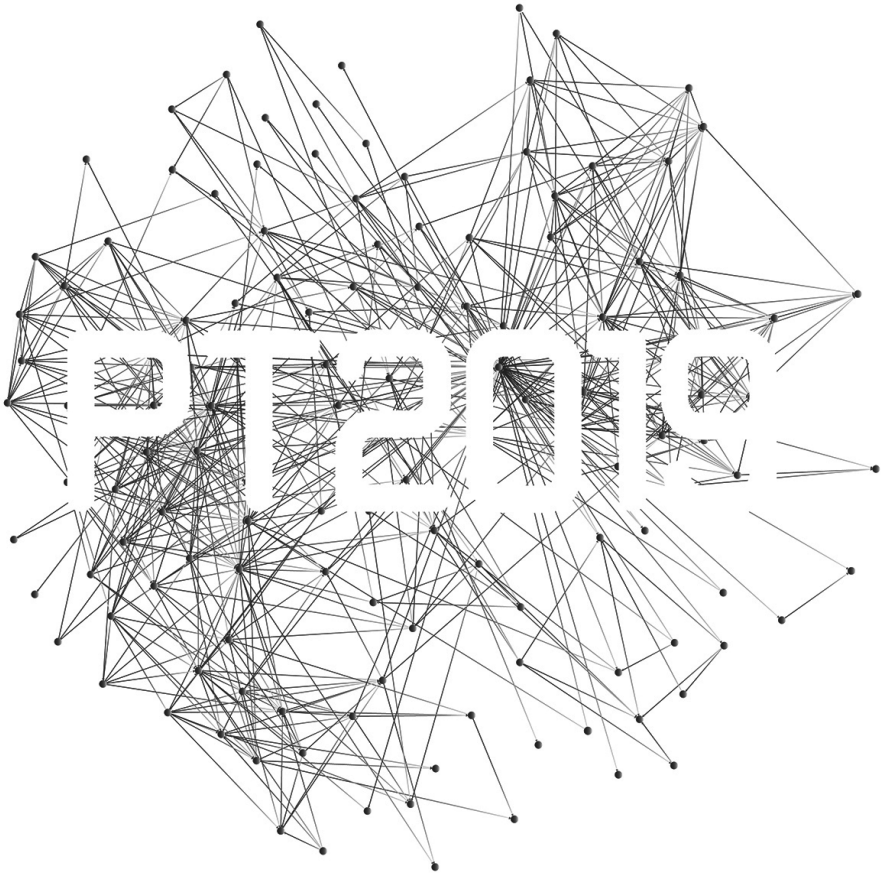
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FLUIDITY OF CONTEMPORARY CONTEXT AND THE POST-INDUSTRIAL PHASE OF THE FIRST INDUSTRIAL ZONE IN BELGRADE

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ABSTRACT

The main idea of this paper is to present the architectural design potentials of The First industrial zone in Belgrade regarding the dynamics of the contemporary urban context and the specific position of cultural and industrial heritage. Fluidity is positioned as the main conceptual and contextual phenomenon referring to the dynamic context of globalization, networking and consumerism, characterized by constant processes of flows and changes of material basis of everydayness. In addition, such socio-spatial context problematizes the static position of heritage and its correspondence to the increasing mobility, travel and touristic flows as well as dynamic everydayness.

This paper is based on the research of the contemporary design methodologies in architecture affirming the cultural heritage as an integral element in the contemporary urban and touristic context of Belgrade. In addition, the aim of this paper is to research potentials and methods of preservation and improvements of The first industrial zone on the Danube coast in Belgrade. Therefore, the research is based on the analysis of the Master graduate projects from University of Belgrade – Faculty of Architecture mentored by assistant professor Nebojša Fotirić and teaching assistant Bojana Jerković-Babović. Historical development of The First industrial zone in Belgrade is characterized by constant transformations of cultural and spatial conditions, creating fluid character of the transit, stratified place with lots of material and nonmaterial traces of colourful and turbulent history. The position of heritage in contemporary architectural design in the unique historical context of Belgrade's Danube coast is presented with the idea of researching the relation between contemporary cultural values, touristic identities, aesthetic experiences and the new criteria of architectural creation.

Keywords: fluidity, tourism, architecture, design methodologies, Danube coast in Belgrade

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INTRODUCTION

The main idea of this paper is to present the design research developed at the Master graduate class mentored by associate professor Nebojša Fotirić and teaching assistant Bojana Jerković-Babović at the University of Belgrade – Faculty of Architecture, during the 2016/2017th and 2017/2018th school years. The topic of the research is the problematic position of The first industrial zone in Belgrade, its heritage and Danube coast, in the contemporary context of architecture. Contemporary, dynamic context of global networks and consumerism, characterized by constant processes of exchange and changes of material basis of everydayness, problematizes the static position of local and cultural heritage. Additionally, fluidity of contemporary context in this paper is positioned as the main conceptual phenomenon referring to the dynamic context of globalization, networking and consumerism, characterized by constant processes of flows and changes. In addition, such socio-spatial context reflects on Belgrade and its development. Therefore, the post-industrial phase of the First industrial zone refers to its correspondence to increasing mobility, travel and touristic flows and more dynamic everydayness. Accordingly, the aim of this paper is to research design potentials and methods of preservation and improvements of the First industrial zone on the Danube coast in Belgrade where cultural, industrial heritage is an integral element in the contemporary urban and touristic context of Belgrade.

FLUIDITY OF CONTEMPORARY CONTEXT

The contemporary networked context is characterized by increasing effects of globalization such as transnational, transcultural exchanges and constant flows of money, goods, people, tourists, migrants, information, ideas etc. Technological and cultural changes are simultaneously affected by issues of an increased transportation of population. Transfer and transport networks become the communicative devices of modern life (Castells, 2009). Furthermore, cities are consisted of places and flows relations that shape the contemporary everyday experience, increasingly articulated globally and manifested in simultaneous assimilation and transgression of local heritage identities. Relations in the networked context are constructed with both technical and social connections, especially manifested in touristic and transcultural flows. Postmodern socio-spatial context transformed notions of mobility into the new fluidity aspects, manifested in dynamic, flowing, variable and constantly changing experiences of everydayness. Theory of the capitalistic consumer society considers ideas of consumption as a mode of meaning exchange and the act of identity expression (Baudrillard, 1996). Therefore, postmodernism invoked the new attention to the tourism and cultural exchange as a mode of perceiving the aesthetical experiences in the state of being in constant travel flow. Needs for an increased flow of people, money and information transform architectural aesthetic values into relational, intersubjective and communicational experiences.

Architecture in tourism has both the power of attraction itself and contextual experience emphasize. Accordingly, the potentials of architectural design unfold in the creation of experience diversity, with methods of perceptual and contextual assimilation, stratification and assemblage in the process of shaping the unique spatial connections between modern vividness and heritage static position.

THE FIRST INDUSTRIAL ZONE IN BELGRADE

The First industrial zone in Belgrade is the place with the longest continuity of industrial function in Belgrade. Historical development of The First industrial zone in Belgrade is characterized by constant transformations of cultural and spatial conditions, creating transit, stratified place with lots of material and nonmaterial traces of colourful and turbulent history. Occupation shifts, diverse influences, wars and many cultural migrations in Belgrade created continuity of discontinuous cultural layers and developed specific mixtures of formal and functional principles. Additionally, this area has been settled since prehistoric times. Old roman ceramics and middle age tools indicate early forms of habitation which existed until the Turkish conquests in 16th century (Škalamera and Popović, 1978). After Turkish conquest in 16th century this area has been called Dorćol, meaning crossroad, as the main transit and commercial zone in Belgrade. Accordingly, in 16th century started increasing development of commercial activities, craftsmanship of the entire city, fish market Balik Bazaar and the oldest customs duty (Ibid). Furthermore, after Austro-Hungarian and Turkish wars from 1688 to 1717 the reconstruction of this zone had begun, from its spontaneous, oriental, organic form into western, baroque urban system. Ship traffic had been the most significant factor in this area development (Mihajlov, 2011). Belgrade industrialization begun in 19th century with food, textile, wood and chemical factories simultaneously developing with 6km long railway. After First world war Belgrade has changed its border position into the new administrative, cultural, commercial and industrial center. Accordingly, transit, fluid character of this area continued with new meaning and significance. The First industrial zone in Belgrade became the main river traffic zone and railway crossroad. In 1932 the first and biggest power plant Snaga i svetlost was built, today in the status of cultural good. During Second world war Belgrade and its industrial zone was destroyed in a large degree. Therefore, after German occupation most of the industrial and cultural heritage had to be renewed and adapted for new socialist regime Yugoslavia had transformed into. New socialism brought the values and belief in progress and industrial growth. Therefore, new facilities, depositary and factory complexes were built as well as Port of Belgrade in 1961 (Ibid).

THE POST-INDUSTRIAL PHASE OF THE FIRST INDUSTRIAL ZONE IN BELGRADE

Today, the First industrial zone has the status of the previous protection according to the Institute for the Protection of Cultural Monuments in Belgrade. In addition, the Master Plan of Belgrade to 2021 prepared by the Urban Planning Institute of Belgrade was adopted by the Assembly of the City of Belgrade on September 27th, 2003. According to this Plan complete relocation of the industrial and economic activities from this area is planned, with the aim of its complete transformation into commercial activities, housing, public services, public facilities, sports facilities and green areas. Such a situation opens up very complex questions regarding the position of the First industrial zone in contemporary context, which is the topic of the Diploma Master studio mentored by professor Nebojša Fotirić since 2013th. This paper is focused on the design research projects from 2016/2017th and 2017/18 th school years.

The topic defined as post-industrial faze of the First industrial zone in Belgrade refers to research of the potentials and possibilities in morphological and programmatic shaping of Belgrade riverside questioning the position of industrial heritage. Students were supposed to define individual specific research topics in accordance to contemporary contextual situation. Diploma Master studio is conceived in two parts – theoretical research in Master thesis and architectural-urbanistic design research project.

CULTURE OF TOURISM: RECREATION AND LEISURE

The contemporary context of consumerism and spectacle society brought the notions of new dynamic sensualities and spatial experiences. The first category of design research projects is based on the ideas of new modes of creating the touristic experiences and architectural meanings of spatial and sensory attractions. The development of tourism appears as a logical consequence of modern world subject for rest, leisure and recreation by which the consumer culture shapes the modern system of values (Urry, 2002). Architecture in tourism becomes a catalyst of cultural constructions of a different world than work and everydayness, in which aesthetic experience are projected through amusement, leisure and hedonism (Michaud, 2004). Tourism fulfils aesthetical interest, hedonistic above all, so the tourist is a contemporary individual with an accelerated life, who is in a need to encounter new identities, artistic and cultural elements of exchange (Ibid).

From multi-sensuality to sensory isolation: Designing the experience of urban landscape

This thesis and project deal with the principles of dynamics, multi-sensuality and diversity in designing the hybrid of hotel, hedonistic program, bathing place etc. next to the Pančevo bridge and city traffic infrastructure. The main idea of the project is to manipulate the user's senses in the experience of space opposite to chaotic, dynamic context of the area surrounding the bridge. Additionally, research is based on emphasising the visual qualities of the context and reducing the noise and pollution in the usage of hedonistic, leisure programs of this architectural hybrid.



Figure 1: From multi-sensuality to sensory isolation: designing the experience of urban landscape, student Dušan Munčan

Attraction as a method of designing the experience in architecture

This research is focused on the phenomenon of attraction in architecture, as a place of gathering large amount of people, with diverse interests but unified in the experience of pleasure and ambient values. Therefore, this project affirms programs of recreation, pleasure, tourism and hedonism. The architecture includes the new spatial marker in a form of vertical hotel connected to the public beach and spa programs located in the port of Belgrade (Luka Beograd).

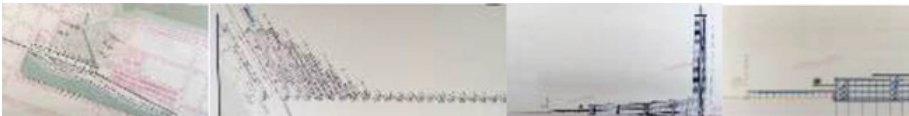


Figure 2: Attraction as a method of designing the experience in architecture, student Anastasija Simović

From production to consumption: Vine and hedonism

Researching the historical development of the First industrial zone resulted in the idea that contemporary production is based on the power of consumption. Therefore, the aim of this project is to position consumption and hedonism in spatial perspective in architectural design

of oenologist centre. The project is located on the Dorćol marina with the idea of providing continuous movement from Danube promenade through object itself. Additionally, vine tasting is supported with hedonistic programs such as bathing place and restaurants.



Figure 3: From production to consumption: Vine and hedonism, student Dragana Dobrisavljević

Refunction and flexibility of architectural structure: Sport manifestations

This theses and project deal with the issues of contemporary speed of changes and functional variability in architecture. The research is conceived on the analyses of the programmatic shifts occurring on the location through history. The main idea of this research is to respond to the speed of functional changes in architectural structures with the flexible architecture initially made for recreation and sport manifestations and to be reused the moment manifestation is finished. Regarding the specific sport events and their typologies, research is based on possibilities of designing the hybrid structure including stadium, hotel, traffic infrastructure, restaurants, recreational facilities etc.



Figure 4: Refunction and flexibility of architectural structure: Sport manifestations, student Milan Ostojić

Genius loci and the reuse of former industrial elements: Water sports

The main idea of this research is to reuse remaining specific elements of former industry in the Belgrade port with the aim of preserving the genius loci of the place in the new usage of space. Therefore, industrial crane becomes the symbol of former industry and the formal inspiration for the new architecture made for water sports programs, recreation and events that could be the catalysts of the Danube coast revival.



Figure 5: Genius loci and the reuse of former industrial elements: Water sports, student Jovana Vidaković

Danube coast generator: Aquarium as a touristic attraction

This project and thesis are focused the research of architecture as generator of urban development and coast activations by touristic attractions. Based on the case studies of the several cities dealing with the same issues of former industrial zones, this project is conceived as a both formal and functional attraction supposed to increase touristic flows and usage of this zone.



Figure 6: Danube coast generator: Aquarium as a touristic attraction, student Tina Urošević

Objects of culture: Museum of technology

According to the recent tendencies of former Snaga and Svetlost power plant building reconstruction into the museum of science, this project brings the idea of making the museum complex and culture programs on the location. The aim of the project is to design the museum of technology with attractive futuristic form, creating the zone of cultural programs, museum complex for the promotion of science and technology as a contemporary continuation of former industry.



Figure 7: Objects of culture: Museum of technology, student Stevan Simović

NETWORKS AND FLOWS: HYBRID INFRASTRUCTURES

The contemporary networked context is characterized by increasing effects of globalization such as transnational, transcultural exchanges and constant flows of money, goods, people, tourists, migrants, information, ideas etc. Technological and cultural changes are simultaneously affected by issues of an increased transportation of population. Transfer and transport networks become the communicative devices of modern life (Castells 2009) Furthermore, cities are consisted of places and flows relations that shape the contemporary everyday experience, increasingly articulated globally and manifested in simultaneous assimilation and transgression of local heritage identities.

Transport centre: Terminal hybrid

This research is based on the infrastructure flows and networking the location with the rest of the city. The aim of the project is to intersect multiple infrastructure flows into one new transport centre in the Belgrade port objects left. Using the formal qualities of the remaining architecture this architectural hybrid includes the city traffic such as cars, trams, buses, trains, ships, bicycles with the necessary terminals, shopping centre, restaurants, hotel and casino.



Figure 8: Transport centre: Terminal hybrid, student Sofija Stjelja

Drone centre: Amazon for south-eastern Europe

This thesis and project research the effect of globalization and consumerism in the context of high dynamics of interactions and transfers occurring on a daily basis. Accordingly, the idea of technological power is formalized in architecture of the new high-tech drone centre for distribution of material goods of Amazon. This idea includes creating the hybrid structure of both physical and digital distribution and exhibition, with public spaces, selling spaces, galleries, offices, education centre, storages and drone terminal.

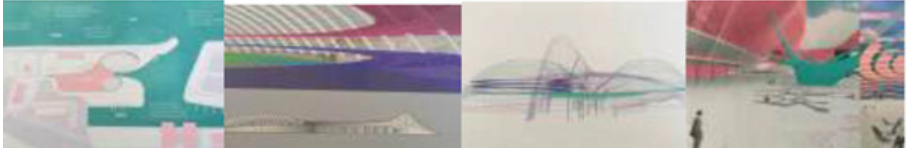


Figure 9: Drone centre: Amazon for south-eastern Europe, student Irena Nikolić

Architecture of consumption: Shopping Terminal

Based on the mass consumption phenomenon present in contemporary socio-spatial context, this research is focused on architecture of non-places and mass shopping. Project presents hybrid infrastructural system of terminals and shopping centre. Therefore, form of the object refers to a complex networked system of units and flows, shops and traffic.



Figure 10: Architecture of consumption: Shopping Terminal, student Mirko Milovanović

To and through: Architectural principles of directions-nodes system design in creating experiences based on the speed of movement

This research is based on notions of movement, speed, intensity, connections. Researching the diverse speed of movements during the spatial usage, this project is based on the continuity of horizontal movements on the location, integrating the traffic flows from the ground and water with vertically positioned hotel and catering facilities. Therefore, this architecture presents the unique hybrid dynamic system of directions-nodes positioned on the place with the possibility of the highest movement intensity.



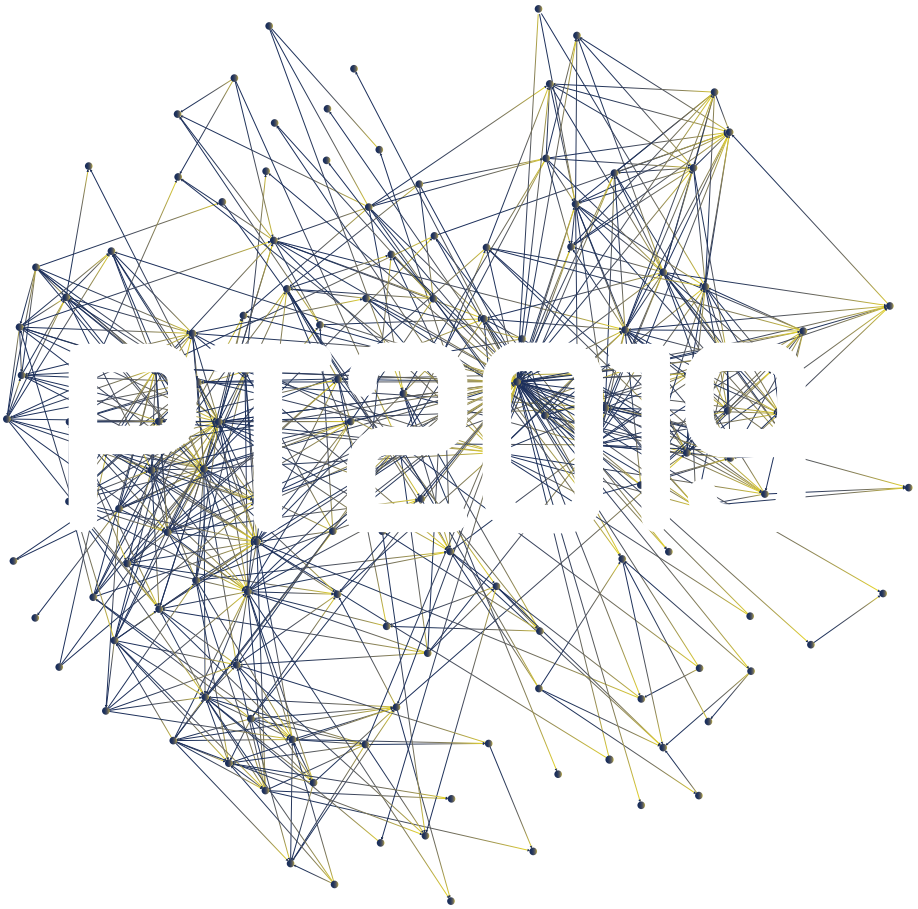
Figure 11: To and through: Architectural principles of directions-nodes system design in creating experiences based on the speed of movement, student Jovana Mihajlović

CONCLUSIONS

The aim of this paper was to present the potentials and creative possibilities of the First industrial zone activation in the contemporary architectural design methodologies. Specific location physical and ambient characteristics, turbulent history and contemporary disconnection to the rest of the Belgrade are the most important elements in research of the topic. Presented design research projects, from the Diploma Master studio mentored by associate professor Nebojša Fotirić and teaching assistant Bojana Jerković-Babović, from the 2016/2017th and 2017/2018th school years, are divided into the two groups: 1. Culture of tourism: recreation and leisure and 2. Networks and flows: hybrid infrastructures. In addition, this spatial context of the industrial heritage located on the coast of the Danube river opens up the possibilities for diverse architectural reactions in terms of heritage preservation, assimilation, appropriation or transformation in contemporary architectural visions. Presented design research projects present the diversity of architectural methods and principles dealing with the topics of tourism development, the Danube coast activation and industrial heritage usage in contemporary context.

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