

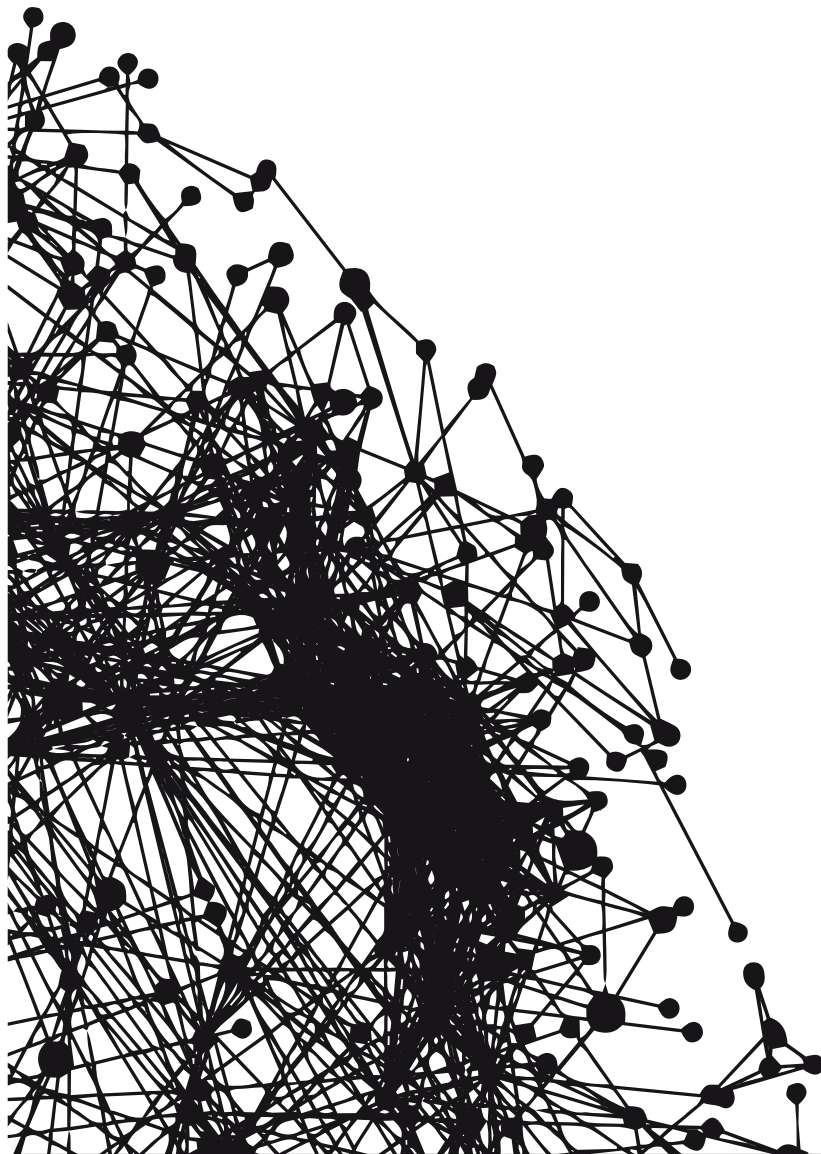
1ST INTERNATIONAL ACADEMIC CONFERENCE
PLACES AND TECHNOLOGIES 2014

BELGRADE, 3-4. APRIL 2014 | KEEPING UP WITH TECHNOLOGIES TO IMPROVE PLACES

editors:

Eva Vaništa Lazarević, Aleksandra Đukić,
Aleksandra Krstić - Furundžić, Milena Vukmirović

conference proceedings



ISBN 978-86-7924-114-6

www.placesandtechnologies.eu

Proceedings of INTERNATIONAL ACADEMIC
CONFERENCE ON PLACES AND
TECHNOLOGIES

APRIL 3-4, 2014, BELGRADE, SERBIA

PLACES AND TECHNOLOGIES 2014

PROCEEDINGS OF FIRST INTERNATIONAL ACADEMIC CONFERENCE ON PLACES AND TECHNOLOGIES

International Academic Conference on Places and Technologies, Places and Technologies 2014, will be the first conference organized by University of Belgrade – Faculty of Architecture, Professional association Urban Laboratory and University of Belgrade – Faculty of Philosophy.

Editors: Dr Eva Vaništa Lazarević, Dr Aleksandra Krstić-Furundžić, Dr Aleksandra Đukić and Dr Milena Vukmirović

For publisher: Dr Vladan Đokić

Publisher: University of Belgrade – Faculty of Architecture

Design: Stanislav Mirković

Place and year: Belgrade 2014

ISBN 978-86-7924-114-6

CIP - Каталогизација у публикацији
Народна библиотека Србије, Београд

711.4.01(082)(0.034.2)
711.4:005.591.6(082)(0.034.2)

INTERNATIONAL Academic Conference on Places
and Technologies (1st ; 2014 ; Belgrade)

Places and Technologies 2014 [Elektronski
izvori] : keeping up with technologies to
improve places : conference proceedings : 1st
international academic conference, Belgrade,
3-4. April 2014 / [organized by University
of Belgrade - Faculty of Architecture,
Professional Association Urban Laboratory and
University of Belgrade - Faculty of
Philosophy] ; editors Eva Vaništa Lazarević
... [et al.]. - Belgrade : Faculty of
Architecture, 2014 (Belgrade : Faculty of
Architecture). - 1 USB fleš memorija ; 1 x 2
x 14 cm

Sistemska zahtevi: Nisu navedeni. - Nasl. sa
naslovnog ekrana. - Tiraž 150. -
Bibliografija uz svaki rad.

ISBN 978-86-7924-114-6

1. Vaništa Lazarević, Eva, 1961- [уредник]
2. Faculty of Architecture (Belgrade)
a) Градови - Мултидисциплинарни приступ -
Зборници b) Урбанистичко планирање -
Технолошки развој - Зборници

COBISS.SR-ID 206380812

ORGANIZERS



University of Belgrade
Faculty of Architecture

URBANLAB
PROFESSIONAL ASSOCIATION URBAN LABORATORY



ФИЛОЗОФСКИ
ФАКУЛТЕТ
1838

GENERAL SPONSOR



SPONSORS



Inženjerska komora Srbije

**INSTITUT
FRANÇAIS**
SERBIE



Gradska opština Savski Venac

Arhi.pro

PHILIPS



Foundation
Dokukino

DONATORS



Република Србија
МИНИСТАРСТВО ПРОСВЕТЕ,
НАУКЕ И ТЕХНОЛОШКОГ РАЗВОЈА



TONDACH
Krov za sva vremena!



SUPPORTERS



ISOCARP
Knowledge for better Cities



CAB
CENTAR ZA ARHITEKTURNU
ISTRAŽIVANJE



SIUP
Državni institut za
gradnju i opštinu



**SUPER
PROSTOR**
Portal za
arhitekturnu
kulturu i prostora

CONTENTS

PART I: URBANISM

Urban planning and technologies

OVERCOMING BARRIERS TO GROWTH

Stephen Platt 16

URBAN CHALLENGES OF ENERGY EFFICIENCY AND CONTEXT-SENSITIVE PLANNING APPROACHES IN BULGARIA

Elena Dimitrova 25

NEW URBAN PROTOCOLS FOR FRAGMENTED TERRITORIES _ THE EXAMPLE OF WESTERN THESSALONIKI

Styliani Rossikopoulou-Pappa, Valia Fragkia 33

A FEASIBILITY STUDY FOR A TECHNOLOGICAL PARK IN FALCONARA MARITTIMA AN, ITALY

Giovanni Sergi 41

SAVING URBAN PLANNING FROM ANOTHER UTOPIAN MODEL

Danijela Milojkić, Marija Maruna 48

THE IMPLICATIONS OF DIGITAL TECHNOLOGY ON THE PERCEPTION OF CENTRALITY

Mihai Alexandru, Cătălina Ioniță 56

TECHNOLOGY AND LANDSCAPE: REDUCE, REUSE AND RECYCLE THE MINING DROSSCAPES

Nicola Martinelli, Francesco Marocco, Alessandro Reina, Maristella Loi, Federica Greco 63

THE ILLEGAL SETTLEMENTS IN BELGRADE VS. TAMING CITY GROWTH: CASE STUDY OF BELGRADE

Biserka Mitrović, Miodrag Ralević, Branislav Antonić 71

IMPACT OF CLIMATE CHANGE IN URBAN PLANNING

Tamara Tošić 78

CONCEPT OF URBAN VILLAGE: THE APPLICATION OF THE CONCEPT AS A FOUNDATION FOR NEW TYPOLOGY OF URBAN VILLAGES

Branislav Antonić 85

RESILIENCE AND VULNERABILITY OF URBAN SYSTEMS. A METHODOLOGICAL PROPOSAL FOR SEISMIC RISK MITIGATION

Rigels Pirgu 94

Urban design and technologies

PUBLIC PLACES AND SPLIT DEVELOPMENT MODEL Višnja Kukoč	103
AGILE LANDSCAPES: REDESIGNING URBAN SPACE Anastasios Tellios, Despoina Zavraka	110
PLANNING AND DESIGNING SAFE AND SECURE OPEN PUBLIC SPACES IN SERBIA Svetlana Stanarević, Aleksandra Djukic	118
SPATIAL AND FUNCTIONAL TRANSFORMATION OF BUSINESS AREAS UNDER THE IMPACT OF INFORMATION TECHNOLOGIES – CASE STUDY OF NIŠ ADMINISTRATIVE DISTRICT Aleksandar Ristić, Petar Mitković	130
THE IMPACT OF NEW TECHNOLOGIES ON CITY ACUPUNCTURE METHODOLOGY AND INTERVENTIONS Kristina Careva, Rene Lisac	138
COMFORT OF OPEN PUBLIC SPACES: CASE STUDY NEW BELGRADE Aleksandra Djukic, Nevena Novakovic	145
005 PUBLIC ART IN BERLIN Biljana Arandjelovic	151
PROTECTION OF PERSON WHIT DISABILITIES: IMPLEMENTATION OF ACCESSIBILITY STANDARDS Dragana Vasiljevic Tomic, Radojko Obradović	160
VERTICAL PUBLIC SPACE Sorana Cornelia Radulescu, Roger Riewe	167
READY-AVAILABLE HYBRID METHODOLOGIES FOR CONTEMPORARY PUBLIC SPACE RESEARCH Milena Ivkovic, Berit Piepgras, Robin van Emden	175
RETAIL – NEW TECHNOLOGIES AND URBAN CENTRALITY Martin Brabant	181
TECHNOLOGY AND NEOLIBERAL URBAN PLACES Marija Cvjetković	191
NEURAL CITIES OR HOW CITIES TEACH US TO DESIGN THEM BETTER Angelica Stan	198
MORPHOLOGICAL AND TYPOLOGICAL CLASSIFICATION OF GREEN STREET FORMS: MLADEN STOJANOVIC STREET IN BANJA LUKA Tanja Trkulja	206

Urban regeneration and technology

PROPERTY ISSUES IN THE TURKISH URBAN REGENERATION PROJECTS

Mehmet Çete, Yunus Konbul 215

URBAN ENERGY AND URBAN REGENERATION STRATEGIES: EVALUATION OF IZMIR-UZUNDERE URBAN REGENERATION PROJECT

Yakup Egercioğlu, Çilem Türkmen 222

THE EMPTY URBAN SPACES AS AN OPPORTUNITY FOR THE CITY TO REINVENT ITSELF: THE CASE OF THE INDUSTRIAL TECHNOLOGICAL OBSOLETENESS

Cătălina Ioniță, Mihai Alexandru 230

ENHANCEMENT OF URBAN LIFE QUALITY IN URBAN REGENERATION PROJECTS: IZMIR-BAYRAKLI URBAN REGENERATION PROJECT

Yakup Egercioğlu, Tuğçe Ertan 238

THE INDUSTRIAL BUILDINGS WHICH USED IN SAUDI ARABIA AND SUSTAINABILITY

Wael Al-Buzz 246

AN OVERVIEW OF URBAN REGENERATION PROJECTS IN TURKEY

Yunus Konbul, Mehmet Çete 257

ART AND CULTURE AS INITIATORS OF ARCHITECTURAL AND URBAN TRANSFORMATION IN SAVAMALA

Ksenija Pantović, Iva Čukić, Jasna Kavran 265

Smart cities/regions and network protocols

SMART CITY GRAZ: FROM THE VISION TO THE ACTION

Carlos Varela Martín, Ernst Rainer, Hans Schnitzer 276

RESIDENTS INTERACTION WITH HOME RESOURCES

Cerasela Dinu, Constantin-Daniel Oancea 285

RENEWABLE AND DISTRIBUTED SOURCES WITHIN SMART ENERGY REGIONS

Jovan Todorovic 293

THE SMART CITY FOR THE FUTURE. HOW A SPATIALLY ENABLED AFFECTED BY THE URBAN POPULATION?

Shahryar Habibi 300

PERFORMANCE EVALUATION OF ROUTING PROTOCOLS FOR AD-HOC NETWORKS

Ledina Karteri, Valma Prifti 306

SMART CITIES AND CHALLENGES OF SUSTAINABILITY	
Rigels Pirgu	315
A FUZZY BASED CALL CONTROL SYSTEM IN MOBILE NETWORKS, CONSIDERING PRIORITY COMMUNICATIONS	
Valma Prifti, Ledina Karteri	323
Historical centers, Building heritage and Technologies	
ICT AND VGI TO PROMOTE MINOR HISTORIC CENTRES AND THEIR LANDSCAPE	
Pierangela Loconte, Francesco Rotondo	331
THE SUSTAINABILITY AND CULTURAL HERITAGE MANAGEMENT	
Christian Kersten Hofbauer, Elham Madadi Kandjani, Jean Marie Corneille Meuwissen	339
CONCEPTS OF FORMING OF URBAN SOLUTIONS IN HOUSING SETTLEMENTS IN BELGRADE BUILT IN PRECAST INDUSTRIALIZED SYSTEMS IN SECOND HALF OF XX CENTURY	
Dragana Mecanov	346
NEW ARCHITECTURE IN HISTORICAL CENTRES	
Alessandro Bruccoleri	355
INFORMATION AND COMMUNICATION TECHNOLOGIES TO IMPROVE THE KNOWLEDGE OF PLACES. THE ROME HISTORICAL CENTRE AS A CASE STUDY	
Francesca Geremia	363
CONTEMPORARY INTERVENTIONS IN HISTORIC PLACES _ THE EXAMPLE OF THESSALONIKI METRO	
Stavros Apotsos	372
Image and Identity of place	
THE IMAGE OF TRIFKOVIĆ SQUARE (NOVI SAD, SERBIA) THEN AND NOW	
Ivana Blagojević, Ksenija Hiel	380
IDENTITY OF NEW MEDIA SPACES	
Jelena Brajković, Lidija Đokić	388
THESSALONIKI: A MULTICULTURAL ARCHITECTURAL DESTINATION	
Niki Manou-Andreadis, Maria Milona	400
ELEMENTS OF IDENTITY AND UNUSED POTENTIALS OF CENTRAL ZONE IN NOVI SAD	
Milena Krklješ, Dijana Apostolović, Aleksandra Milinković	408

BELGRADE SKYLINE: CONTINUITY, PARADOXES & DESIRES Vladimir Milenković, Snežana Vesnić, Tatjana Stratimirović	416
CITY OF THE MIND - INVISIBLE IN THE MAP Jelena Stankovic, Milenko Stankovic	424
WHAT MAKES A PLACE? Saskia I. de Wit, Denise Piccinini	432
SUSTAINABILITY, IDENTITY AND ROLE OF TRADITIONAL MATERIALS Olivera Ilić Martinović, Mirjana Miletić	441
IDENTITY OF URBAN SPACES; ASSESSMENT AND EVALUATION Elham Madadi-Kandjani, Christian Kersten Hofbauer, Jean Marie Corneille Meuwissen	448
IMAGE OF SUSTAINABLE PLACES Vladimir Parežanin, Miloš Mihajlović	456
PRESERVATION OF IDENTITY OF SPACE WITHIN RAPID ECONOMIC AND TECHNOLOGICAL DEVELOPMENT OF TOURIST DESTINATIONS IN THE EXAMPLE OD JIJOCA DE JERICOACOARA IN BRAZIL Maja Momirov	469
 PART II: ARCHITECTURE AND TECHNOLOGIES	
Sustainability, Sustainable buidings and technologies	
SUSTAINABLE RETROFITTING OF EXISTING AND HISTORIC BUILDINGS Marina Traykova, Tanya Chardakova	477
OSMOTIC LANDSCAPES - RECOVERED IDENTITIES Venetia Tsakalidou, Anastasia Papadopoulou	485
DESIGN SCENARIOS FOR AN OFFICE BUILDING – ENERGY AND ENVIRONMENTAL ASPECTS Aleksandra Krstic-Furundzic, Tatjana Kosic	493
TECHNOLOGICAL AND ENVIRONMENTAL ASPECTS OF RAPID HOUSING CONSTRUCTION Nikola Macut, Bojana Stanković, Nataša Ćuković-Ignjatović	507
ENERGY ANALYSIS AND REFURBISHMENT STRATEGY FOR ZAGREB UNIVERSITY BUILDINGS: FORMER FACULTY OF TECHNOLOGY IN ZAGREB BY ALFRED ALBINI Stanka Ostojić, Zoran Veršić, Iva Muraj	515

SUSTAINABLE REUSE OF OLD STRATEGIC INFRASTRUCTURE CANAL DANUBE-TISA-DANUBE Mirjana Jočić, Nataša Kuburović	523
PLACE ATTACHMENT AS POTENTIAL FOR SUSTAINABLE LOCAL DEVELOPMENT IN SERBIA Anđelka Mirkov	533
LOW ENERGY BUILDINGS: CONCEPT OF ENERGY PERFORMANCE OPTIMIZATION OF SINGLE-FAMILY HOUSES Katarina Slavković	540
TECHNOLOGY AND PRODUCTIVE PROCESS: MINING REJECTIONS FROM WASTE TO SUSTAINABLE RESOURCE Vincenzo Paolo Bagnato, Giovanna Mangialardi, Silvana Milella, Michele Mundo	549
ADAPTATION OF AN INDUSTRIAL BUILDING INTO HIGHER EDUCATION INSTITUTION IN ACCORDANCE WITH IMPROVED ENERGY PERFORMANCE Branko Slavković, Komnen Žižić, Danilo Dragović	557
FUNCTION OF A DESOLATE SPACE Aleksandra Pešterac, Daniela Dimitrovska	565
ENVIRONMENT CERTIFICATION OF REHABILITATION DESIGN PROJECTS: PUT AND SHU BUILDINGS AS CASE STUDY Florian Nepravishhta, Gerta Veliu, Ramadan Alushaj	570
Green strategies and technologies	
GREEN URBAN STRATEGIES IN THESSALONIKI IN THE CONTEXT OF CRISIS Evangelia Athanassiou	580
GEOSCIENTIFIC EDUCATIVE CENTRE AS SUSTAINABLE COMMUNITIES BUILDING MODEL – POSITIVE COOPERATION EXAMPLE OF LIKA-SENJ COUNTY (CROATIA) AND UNA-SANA COUNTY (BIH) Ivan Brlić, Anita Bušljeta-Tonković, Katarina Milković	587
THE OCCUPANTS' PERSPECTIVE AS CATALYST FOR LESS ENERGY INTENSIVE BUILDINGS Lucia Martincigh, Marina Di Guida, Giovanni Perrucci	597
THE COLLECTIVE SELF ORGANIZED HOUSING EXPERIENCE IN ITALY Silvia Brunoro, Giacomo Bizzarri	605

APPLICATION OF ROOF GARDENS IN THE DEFINING IMAGE OF THE CITY	
Mirjana Sekulić, Bojana Stanković, Ljiljana Dosenović	613
STRATEGY FOR NATIONAL DEFINITION OF NEARLY ZERO ENERGY BUILDINGS	
Milica Jovanović Popović, Bojana Stanković, Jasna Kavran	621
ENERGY OPTIMIZATION OF THE BUILDING ENVELOPE OF THE REPRESENTATIVE SAMPLE OF THE EXISTING RESIDENTIAL BUILDING IN BANJA LUKA	
Darija Gajić, Aleksandra Krstić – Furundžić	629
BLUE GREEN DREAM AND DAYLIGHT	
Srdjan Stankovic, Cedo Maksimovic, Milenko Stankovic	637
POSSIBILITIES FOR ENERGY REHABILITATION OF TYPICAL SINGLE FAMILY HOUSE IN BELGRADE – CASE STUDY	
Bojana Stanković, Dušan Ignjatović, Nataša Ćuković-Ignjatović	646
BLUE-GREEN INTEGRATED MODELING SOLUTIONS IN URBAN PLANNING AND ARCHITECTURAL DESIGN	
Miloš Mirosavić, Ivana Mirosavić, Srđan Stanković, Čedo Maksimović, Ranko Božović	654
POTENTIALS AND LIMITATIONS FOR ENERGY REFURBISHMENT OF MULTI-FAMILY RESIDENTIAL BUILDINGS BUILT IN BELGRADE BEFORE THE WORLD WAR ONE	
Ljiljana Đukanović, Ana Radivojević, Aleksandar Rajčić	661
FROM BUILDING INFORMATION MODELS TO SIMPLIFIED GEOMETRIES FOR ENERGY PERFORMANCE SIMULATION	
Daniel Ladenhauf, René Berndt, Eva Eggeling, Torsten Ullrich, Kurt Battisti, Markus Gratzl-Michlmair	669
ENERGY CITY GRAZ - REININGHAUS: FIRST RESULTS FROM AN ENERGY SELF-SUFFICIENT QUARTER	
Heimo Staller, Ernst Rainer, Carlos Varela Martín	677
ENERGY EFFICIENCY AS ADVANCED TECHNOLOGY FOR A SOLUTION TO THE PROBLEM OF DEPOPULATION OF RURAL AREAS IN SERBIA	
Jovana Stanišić	684
THE ENERGY EFFICIENT CITY	
Ivan Dochev	692

Innovative materials, systems and technology

INVESTIGATION OF FLY ASH INFLUENCE ON CEMENT MORTARS PROPERTIES

Dragica Jevtić, Aleksandar Savić 701

INFLUENCE OF GLASS COMPONENT JOINTS ON THE STRUCTURAL GLASS FACADE DESIGN

Aleksandra Krstic-Furundzic, Tatjana Kosic, Jefto Terzovic 709

QUANTIFYING THE THERMAL BRIDGING EFFECT WITH REGARD TO THE FAÇADE'S CONFIGURATION

Katerina Tsikaloudaki, Theodore Theodosiou, Dimitris Aravantinos, Karolos Nicolaos Kontoleon, Dimitrios Bikas 720

THE INFLUENCE OF NEW TECHNOLOGIES ON MODERN CITY FACADES

Jasna Čikić Tovarović, Jelena Ivanović Šekularac, Nenad Šekularac 728

DYNAMIC APPEARANCE OF URBAN AND ARCHITECTURAL SURFACES

Tihana Hrastar, Tamara Marić, Bojana Bojanić 736

TOWARDS GENERATIVE CONVERGENCE IN DESIGN OF ARCHITECTURAL STRUCTURES

Jelena Milošević, Zoran Šobić, Miodrag Nestorović 744

APPLICATION OF WOOD AS AN ELEMENT OF FACADE CLADDING IN CONTEMPORARY ARCHITECTURE OF BELGRADE

Jelena Ivanović Šekularac, Jasna Čikić Tovarović, Nenad Šekularac 752

COMPARISON OF INSULATION APPLIED ON SURFACES OF MODEL PLACED IN THE AREA OF SKOPJE

Aleksandar Petrovski, Todorka Samardzioska, Ana Trombeva Gavriloska 758

APPLICATION AND EFFECTS OF PHASE CHANGE MATERIALS IN A MODERN ARCHITECTURAL AESTHETICS

Vladana Stanković, Goran Jovanović, Mirko Stanimirović 766

INTEGRATED DESIGN OF STRUCTURAL SYSTEMS

Aleksandra Nenadović 772

NEW COMPOSITE SLAB SYSTEM – LIGHTWEIGHT CONCRETE, STEEL SHEETING AND REINFORCEMENT

Zoran Šobić, Jelena Milošević, Miodrag Nestorović 780

MODERN METHODS OF STRENGTHENING MASONRY WALLS

Nenad Šekularac, Jasna Čikić Tovarović, Jelena Ivanović Šekularac 788

NEW PERSPECTIVES FOR FERROCEMENT

Ornela Lalaj, Yavuz Yardim, Salih Yilmaz 796

Cultural patterns, Architecture and technologies

SPATIAL AND SOCIAL ASPECTS OF THE ARSENAL TRANSFORMATION, MILITARY PORT IN TIVAT INTO NAUTICAL – TOURISM SETTLEMENT AND PORT „PORTO MONTENEGRO“ Goran Radović	805
DIGITAL FABRICATION IN THE FIELD OF ARCHITECTURE Roberto Vdović, Morana Pap	816
THE IMPACT OF SMART HOME TECHNOLOGIES ON ARCHITECTURAL DESIGN Goran Petrović, Marko Aleksendrić	822
BETWEEN THE PLACE AND NON-PLACE: ARCHITECTURE AND TERRITORY ON THE EXAMPLE OF SKOPJE Saša Tasić, Mitko Hadzi Pulja, Minas Bakalchev	830
INTEGRATED ARCHITECTURAL COMPLEXITY - FROM ABSTRACTION TO TECHNOLOGY AND MATERIALISATION Rada Čahtarević, Dženana Bijedić, Amra Taso	838
EVOLUTION DIGITIZED: ARCHITECTURE OF THE SUBLIME DREAM Mihailo Popović, Vladimir Milenković	846
MONOCHROMATIC IN THE ARCHITECTURAL COMPOSITION: WITH SPECIAL REFERENCE TO THE APPLICATION OF WHITE COLOUR Dragana Vasiljevic Tomic, Rifat Alihodzic, Dragana Mojsilovic	853
(RE)GENERATION & REFLECTIONS OF THE SCHOOL OF ARCHITECTURE – BANJALUKA IN THE CENTURY OF KNOWLEDGE AND SKILLS Milenko Stanković, Una Umićević	864
QUANTUM ARCHITECTURE, NON-PLACE AND ACCULTURATION Dubravko Aleksić	873
PLACES AND PRACTICES OF CONSUMPTION IN THE POST-SOCIALIST CONTEXT Dejana Nedučin, Dušan Ristić, Vladimir Kubet	880
INTERACTIONS BETWEEN LIGHT AND ARCHITECTURE: AN EXPERIMENT USING MODELS AND PHOTOGRAPHS Anita Stoilkov-Koneski	888
THE INTERPLAY OF MUSIC AND ARCHITECTURE: LAYERING OF SOUND AND SPACE Anja Kostanjšak, Morana Pap	895
CULTURAL PATTERNS AND SENSITIVITY TODAY: FROM THE PHILOSOPHY TO THE TECHNOLOGY IN ARCHITECTURAL DESIGN PROCESS	

Małgorzata Kądziela, Anna Sachse-Rynkowska	904
PART III: PLACES, TECHNOLOGIES AND RELATED FIELDS	
Big data, apps, social networks and microblogs in urban planning and design	
PLACE COMPETITIVENESS EXPRESSED THROUGH DIGITAL DATA. MEASURING THE PLACE ATTRACTIVENESS TRACKING THE GEOTAG DATA VISUALS	
Milena Vukmirovic, Eva Vanista Lazarevic	914
ROOM BOOK 2.0 – BRING BACK THE INFORMATION TO ITS PLACE	
Christoph Breser, Stefan Zedlacher	926
THE INTERCONNECTED OBJECT: ARE YOU AT HOME IN A NETWORK?	
Kalina Ntampiza, Polina Zioga	936
THE INTERACTION TIME IN A NETWORKED SOCIETY	
Danijel Baturina	944
GOOGLE EARTH AS A MICROWORLD	
Milena Zindović	962
TRANSPARENCY OF SCALE: GEOGRAPHICAL INFORMATION PROGRAM (GOOGLE EARTH) AND THE VIEW FROM BEYOND	
Pavle Stamenović, Dunja Predić, Davor Ereš	970
Geodesy and modern cartography	
ROBUST ESTIMATION APPLIED TO GEODETIC DATUM TRANSFORMATION USING A METAHEURISTIC ALGORITHM	
Mevlut Yetkin	979
THE STATE OF THE ART SURVEYING BY TECHNOLOGY OF THE TERRESTRIAL LASER SCANNING	
Marko Pejić, Branko Božić, Verica Erić, Jelena Pandžić	987
ROLE OF CARTOGRAPHY IN MAKING A “SMART CITY”: CASE STUDY OF INDIJA	
Dragutin Protić, Ivan Vučetić, Ivan Nestorov	995
MODERN CARTOGRAPHY IN PROJECT OF CENSUS	
Maja Kalinić, Dragoljub Sekulović	1002

Mobility and technologies

PERSONAL RAPID TRANSIT – A SUSTAINABLE URBAN TRANSPORT SYSTEM

Ljupko Šimunović, Luka Novačko, Mario Ćosić 1011

FLIGHTPATH TO AN ENVIRONMENTAL FRIENDLY AIR TRANSPORT

Ivana Čavka, Olja Čokorilo, Slobodan Gvozdenović 1020

PRESERVATION OF PLACE-IDENTITY THROUGH URBAN TRANSFORMATIONS BASED ON SUSTAINABLE FORMS OF TRANSPORT

Miloš Kopic 1029

BELGRADE RIVERSIDE TRAFIC INTERCHANGES

Ksenija Stevanović, Milena Stevanović 1037

SUSTAINABLE URBAN MOBILITY PLANS IN EUROPE

Davor Brčić, Ljupko Šimunović, Marko Slavulj 1045

URBAN DEVELOPMENT IN BELGRADE IN THE CONTEXT OF GLOBAL TRENDS: CHANCES OF ILLEGAL HOUSING INTEGRATION

Biserka Mitrović, Miodrag Ralević, Branislav Antonic 1051

RE-THINKING INFRASTRUCTURE PROJECT FOR THE METROPOLIS: LABORATORY GRANADA

Juan Luis Rivas Navarro, Belén Bravo Rodríguez 1059

Public participation, e-governing and tehcnology

COMMUNITY PARTICIPATION AND GREEN INFRASTRUCTURES: A DELIBERATIVE EVALUATION METHOD

Saverio Miccoli, Fabrizio Finucci, Rocco Murro 1067

RESULTS OF INTRODUCTION OF PARTICIPATORY TOOLS IN URBAN PLANNING IN SERBIA – 7 CASE STUDIES

Ratka Čolić, Harald Mueller 1075

WAYS TOWARDS A CITY OF NEW TECHNOLOGIES

Miodrag Ralevic, Tatjana Mrdjenovic, Natasa Krstic, Djemila Beganovic 1083

PARTICIPATION OF CITIZENS IN TOWN PLANNING PROCEDURES IN NEIGHBOURHOODS WITH FORMER REFUGEE AND DISPLACED POPULATION IN PRIJEDOR, BOSNIA AND HERZEGOVINA

Rada Latinović 1090

THE ROLE OF INFORMATION AND COMMUNICATION TECHNOLOGY IN A VIRTUAL ORGANIZATION

Jelena Lukić 1098

IMAGE OF SUSTAINABLE PLACES

Vladimir Parežanin

PhD student, University of Belgrade, Faculty of Architecture, Serbia,
e-mail: parezaninvladimir@yahoo.com

Miloš Mihajlović

PhD student, University of Belgrade, Faculty of Architecture, Serbia,
e-mail: milos_arh@yahoo.co.uk

ABSTRACT

Contemporary moment requires redefinition and attentive attitude towards the phenomenon of place, his image, duration and especially the topic of his sustainability. The fact that all the architectural and urban design practice topical theme of responsibility and sustainability requires that such ideas are put into research focus and questions the concept, design thinking and design, and the planing critically assessed, analyzed and evaluated in the new framework of a paradigm. Images of contemporary place are reflected in images of modern cities, their parts, urban landscapes so they request to review the viability and make her to give new meaning seen in the idea of duration, the identity of place, scale and form. With this work we try to show some of the potential of the concept of sustainability through its basic building elements such as location, nature, time, duration, experience, form, change, and how these elements participate in the context of a new ideology of sustainability. Integrated and sustainable architectural design, which involves the formulation of ideas, concepts, shapes, materials, details and style, consistent with the properties of space on which to build, natural resources, capacities and needs of life processes will reflect, in many ways, to incorporate new process of thinking architecture, places and of its images, as the main impression (duration) of sustainability.

Keywords: *Place, Sustainable, Image, Identity, Changes*

PHILOSOPHY AND THINKING ABOUT THE PLACE

Place

In order to define the identity of the place, firstly the place has to be clarified, due to the fact that different kinds of entities will have different essences and therefore persistence.

The place represents a complex concept which can be defined from different aspects. Similarly to identity, it appears as the result of human experience and represents

ambiguous term which is used in academia but in the everyday life too. In this section place is defined from the aspects of experience, space, scale, sociality, time and identity.

Heidegger represents philosopher who gives the most suggestive and sustained definition of the place in last century [1]. This definition of place derives from Dasein's (human being) authentic being in the world. Furthermore, Heidegger accomplishes the definition of place although he rarely addresses place itself as a topic [1]. Heidegger's temporality is essential in definition of Dasein, it is said to be the horizon of Being [1]. Heidegger illuminates place through dwelling, nearness, and event of Appropriation [1].

The [place] is not already there before the bridge is. Before the bridge stands, there are of course many spots along the stream that can be occupied by something. One of them proves to be a [place], and does so because of the bridge. Thus the bridge does not come first to a [place] to stand in it; rather the [place] comes into existence only by virtue of the bridge [2].

This definition of place is deriving from Heidegger's phenomenology in which place as well as the world and all the entities are conceived through our experiences. As Heidegger explains the concept of phenomenology: to let that which shows itself be seen from itself in the very way in which it shows itself from itself [3]. This represents the basic notion of phenomenology, as Large [4]. explains: there is not a subject and object separate from one another, which then, through some kind of unknowable process, have to become linked or attached. Rather, they are already intertwined in our direct experience of the world. Considering place as any other thing, Casey explains, place is not something we come across as something we are simply in [1]. Place appears in conjoint action between people and physical reality through intervention [1]. The place therefore, exists only in interaction between people and location. Any location has the potential to become a place as well as, any place has the potential to become mere location.

Place and experience

The reality, the external world, the place are conceived through people's senses. Nevertheless, that process is never a simple perception. Emotions and thoughts are always involved in this process. The phenomenological approach used for understanding place, lies in its relation with human as a conscious being. As Casey explains there is no place without self and no self without place [5]. This process of experiencing is in the same time process of knowing the space in which it becomes place. Tuan [6] is arguing that through experience we are in the process of knowing the place in our own way. It cannot be the same experience as other people have. The processes of sensing and thinking are related processes. The given cannot be known in itself. What can be known is a reality that is a construct of experience, a creation of feeling and thought [6].

Movement represents an important part of the process of knowing the place. Movement enables the experience of space and place. It is also an important factor

in space-place relation. Therefore, experiencing the place takes time and it is highly related to knowledge that each person has about place. As Tuan explains:

... the feel of a place is registered in one's muscles and bones. A sailor has a recognizable style of walking because his posture is adapted to the plunging deck of a boat in high sea. Likewise, though less visibly, a peasant who lives in a mountain village may develop a different set of muscles and perhaps a slightly different manner of walking from a plainsman who has never climbed. Knowing a place, in the above senses, clearly takes time [6].

This illustration explains the complexity of the interaction of place and people. The place and people's experiences are dialectically related. Place comprises elements of personal experiences which derive from who the person is, but in the same time place reflects itself at that same person in its own constitution. Tuan gives the example of how place influences the human's physical condition, but that influence is much broader. Although, the place is created through people's experiences, their own personalities, their own identities are also defined by certain places which they encounter with.

Experiences of places are not only depending on time but also on knowledge that we already have about them. Furthermore, different people based on their knowledge about the place could be positioned between two main categories: outsiders and insiders, defining two extreme cases. More specifically:

From the outside you look upon the place as a traveler might look upon a town from distance; from the inside you experience a place, are surrounded by it and part of it. The inside-outside division thus presents itself as a simple but basic dualism, one that is fundamental in our experiences of lived-space and one that provides the essence of place [7].

The same location then can be defined as place for some people and just as location for others. Furthermore, it could be argued that each location has particular level of placeness which is based on dominant or common experiences of the place.

Place-space-scale

The distinction of place and space is important for the definition of place itself. Most frequently the place is defined as part of the space. However, that relationship is complex and implies different experiences. Yi-Fu Tuan [6]. defines place as linked with security and opposed to that-space with freedom. People need both space and place to fulfil their lives, and they are basic elements of the World (in Heidegger's terms). Enclosed and humanized space is place. Compared to space, place is a calm center of established values [6]. Place is object in which people can dwell and space is connected to the possibility of movement [6]. In that sense the place represents a part of the space, which is adjusted to basic human needs. Therefore, the place is defined with the stability and space is linked with change and instability.

Furthermore, the distinction between place and space is based on the individual experiences. Therefore, a place and space can also change depending on people

experiences. Tuan [6] also emphasizes that when the space becomes familiar then it can be considered to be a place. Place can also be seen as an object, and space is composed of places and things, defining its geometry [1]. In the broadest sense, the place is part of the space. Space comprises in itself numerous places. However, it is not a stable relationship. The place and space change through time.

1.4. Place and social aspects

The fact that place appears in relation of individuals and their physical setting implies the important role of its social aspects, or practices that place embodies. Therefore, the place is not merely built landscape with particular meanings. It implies people and social connections as well. For example, the way activities are related to certain locality defines the process of conceiving places. Doreen Massey emphasizes the definitions of places based on the social interactions.

Place is not an object separated from the people [8]. Furthermore, it is not homogeneous with unique and strongly built character. Rather, place is always in the process, continuously in the movement. Place is intersection of social boundaries in which physical setting becomes less relevant, and can be conceived as stage for social intersections. In that sense, the physical setting may be grounded in virtual reality, as well. Place is not something isolated and local with the ability of lingering through time but something that will connect global and local, in progressive sense of the place [8]. Therefore, the place is not only related to a particular locality and its uniqueness, but represents an intersection of generic and specific [8].

Massey defines place as interaction of social relations. The identity of the place or its specificity is face that it is constructed out of a particular constellation of social relations, meeting and weaving together at a particular locus [8]. Massey defines place as extroverted, with dispersed boundaries based on social aspects rather than physical, which is always in process of change, explaining that:

Instead then, of thinking of places as areas with boundaries around, they can be imagined as articulated moments in networks of social relations and understandings, but where a larger proportion of those relations, experiences and understandings are constructed on a far larger scale than what we happen to define for that moment as the place itself, whether that be a street, or a region or even a continent [8].

In that sense the character of certain place is never defined only through local elements, rather it comprises elements which derive from the global networks. The place is not merely the location and its physical setting. Place intersects different elements in their complexity. It is heterogeneous and multiple, rather than homogeneously defined. It comprises different social interactions as well as the built environment.

Place and time

Place and time are interrelated terms. Even in language there are terms which simultaneously define the time and locality (for example the term Edo defines

concrete locality but in the same time it defines concrete period of time). Time and place are also related through experiences, as Lynch [9] explains they represent the framework of our experiences. There are different times that we can relate to place: our own personal time (as the time that we spend in experiencing the place) and the time that belongs to the place itself (as its long internalized history in which it is developing). Furthermore, Tuan [6]. defines three different relations of time and place: (1) time as motion or flow and place as pause (2) time as necessity of experiencing the place and (3) place as memorial to times past.

The first relation represents the definition of place by time. Tuan explains that a common representation of time is arrow. In that sense arrow is representing a directional time but also a movement from one place to another, through space. In that movement goal is point in time but also point in space, or place [6]. The second relation of time and place defines the meanings of the place. It was already mentioned that in order to conceive some locality as a place, we need to 'know' it or to experience it. Modern people are more mobile than ever in a history. Some of the people do not establish roots in one place. The visual quality or physical setting of the place is easy to grasp and do not take much time, but the 'feel', the sense and the meaning take long time in experiencing the particular locality. Nevertheless, the time spent in place doesn't mean that this place will be full of meanings and that people are necessarily building the identity of the place. It can also leave us without any impressions [6]. In that sense Tuan defines time as necessary for creation of identity of place but not the essential element. The third relation of place and time is based on time past or history of place which has important role in definition of place. The necessity of past in place, Tuan explains in comparison to people's identity. Every person has the need to define personal identity through past. I am more than what the thin present defines...To strengthen our sense of self the past needs to be rescued and made accessible [6]. The present of the place is always influenced by its past and future. As Lynch explains, the desirable image of place is the one that assimilates different temporalities in itself, one that celebrates and enlarges the present while making connections with past and future [9].

Identity of the place

Identity is fundamental element in definition of the place [10].Identity refers to the quality and uniqueness of certain locality. It comprises the characteristics, both tangible and intangible which distinguish its authenticity as well as its relations to other places. The identity defines what the place is and is based on its essence which appears in the relationship between people and locality.

In order to describe the identity of the place, its essence Norberg-Schultz [10].adopts the concept of genius, and develops it into the concept of genius loci. The concept of genius loci derives from Roman belief that all beings (even the gods) have their genius, their guardian spirit, which determines their character, their identity. Norberg-Schultz explains that this spirit gives life to people and places, accompanies them from birth to death, and determines their character or essence. Even the gods had their genius, a fact which illustrates the fundamental nature of

the concept [10]. This definition is based on the transcendental element of the place, its essence, which can linger despite the physical changes in the place. Therefore, the phenomenological aspect of the identity is emphasized in this definition.

In order to understand the processes of creation of identity of a particular place, it is necessary to understand its elements. Relph [11] argues how static physical setting, the activities, and the meanings-constitute three basic elements of the identity of places. Similarly, Norberg-Schultz [10] analyses place using the categories such as space and character, or tangible and intangible elements. Space is related to physical setting of the place and character illuminates atmosphere which appears in relation of people and space. Similarly, Cresswell defines three basic elements of the place: location, locale and sense of place. Location represents an obvious aspect of the place. It determines its relationship with other places. Locale defines the physical setting for the social relations and the sense of place represents emotional and subjective aspects which appear in relation people-place. These categories refer to characteristics of physical setting of certain locality (space defined by Norberg-Schultz or locale defined by Cresswell), and to emotional and subjective aspect which appears in relation of place and its users (e.g. character, atmosphere, sense or meanings). Those two categories are in reality inseparable. In their dialectical relations identity of the place emerges. However, those two categories are not necessarily interdependent. Norberg-Schultz [10] suggests that in spite of the complexity derived from them; those elements should be analyzed as one comprehensive concept- lived space.

HEALTHY CITY FORERUNNER OF SUSTAINABLE CITY

The idea that the built environment can influence public health, for good or ill, is not new. Throughout history, some civilisations have recognised the importance of hygiene, sanitation, pure air and sunlight in preventing disease and promoting health. Others have not. Four thousand years ago, people in the north of India arranged their communities to keep themselves healthy. Sites excavated in the Indus Valley, and at Harappa in the Punjab, suggest ancient Indian cities were laid out for health. The streets were broad and paved, with covered sewers. Bathrooms and drains were common features of the buildings [11]. In the 4th century BC, the Greek doctor Hippocrates wrote about cities and health. He said the quality of the air and the properties of the water in a locality were decisive. Hippocrates also wrote about the orientation of cities with respect to the sun. He noted that cities with an easterly aspect - between the summer and winter risings of the sun - had healthiest residents. They suffered fewer diseases than people in cities facing in other directions; and their illnesses were less severe. The ancient Greeks planned for the sun. A century earlier, they had severe fuel shortages. Firewood was scarce. Archaeological evidence shows they responded to this crisis by planning cities to allow every homeowner access to sunlight to warm their houses [12].

Thinking such as this informed the architecture of ancient China and Imperial Rome. China has a long history of building to the doctrine of "wind and water", or Feng Shui.

This philosophical approach to housing and planning includes specific instructions on how to design for health and well - being. Traditional Chinese courtyard or quadrangle houses embody many of the principles of Feng Shui. Some of the same features could be found in the best Roman villas: high levels of natural ventilation; plenty of light; and a radiant underfloor heat source [13]. Like the Chinese, the Romans adapted their buildings to the local climate. In colder regions they oriented them to benefit from winter sun and to avoid summer overheating.

Often the site for a dwelling, or a public building, or a city, was carefully chosen for its health-giving properties. During the 1st century BC, Marcus Vitruvius Pollio, the Roman military engineer and architect, wrote that the careful siting and design of buildings, such as theaters and temples, prevented illness. Also, proper street planning could help the cure of chronic illness, such as tuberculosis. For Romans like Vitruvius, protecting the ordinary citizen and the army from disease was a priority. The Roman statesman Marcus Tullius Cicero famously wrote that "*Salus publica suprema lex*", or the health of the people is the highest law. Presumably, this is why the Romans invested so heavily in aqueducts, piped water, sewerage, public baths and lavatories. The Romans do not seem to have built many hospitals, other than for their military. And they put public health in the hands of their engineers and architects, not doctors [14].

Architecture of the ancient civilisations who adjusted to the same natural conditions can serve as an important model for the design of today's passive bioclimatic architecture. Enthusiasm for new technological discoveries sometimes makes a man "blind", and therefore irresponsible for everything else already present in human civilization, for all that had been done before, and to our ancestors. Not accepting previous value, believing himself capable, a man searching again from the beginning and it loses valuable time.

PRINCIPLES, POTENTIALS, ROLE MODELS

A constant going back to the definition of sustainable design calls for a redefinition of the way in contemporary design and architectural practice in relation to the design according to the principles of sustainability. Concern for the future, a major environmental risks, fear of the collapse of the energy, technological maturity and multi-disciplinary science and technology, the complexity and variability of customer requirements, but also the specific relationship to location, so that great attention is paid to the modalities morphological adaptability of natural and traditional architecture models.

One of the general goals of sustainability is harmony between culture, tradition and nature, so that sustainable, environmentally friendly design is not the only one that preserves the natural characteristics of the environment, but also injected himself into the characteristics of a specific cultural milieu and its architectural experiences. It is obvious that the concept of sustainability and the same refers to the nature and the culture.

At the beginning of the energy crisis of the 70's, economist EF Schumacher wrote: "Ever bigger machines, entailing ever bigger concentrations of economic power and exerting ever greater violence against the environment, do not represent progress: they are a denial of wisdom. Wisdom demands a new orientation of science and technology towards the organic, the gentle, the non-violent, the elegant and beautiful. "[15] In light of the current ecological crisis, a few decades later, the concepts of modern architecture stemming from the dialogue with nature, its forms, where sustainability is part of a sexual relationship and the symbiosis between nature and the built environment. Modern architectural design is oriented towards organic forms and standards that do not endanger the environment, but also to look to the historical and traditional forms of architectural elements and assemblies.

As the total consumption of energy on the planet, 40% used in construction [16], and contemporary conceptual architectural building preferences have evolved in two directions different starting points and the same outcome [17]:

- *high-tech* design which is a *high-tech solutions*, techniques and materials that will ensure the conservation of energy and environmental standards;
- *low-tech* design which includes formal and material solutions that rely on low-tech solutions, and return to the traditional techniques of construction whose value is confirmed long architectural tradition of the region which is being built.

First, high-tech design, the approach to the energy balance in the construction and preservation postulate sustainability is based on new technologies, new production systems, and additional investment in research and experimentation, and as such already includes investments in uncertain and potentially, while low-tech design includes remodeling and re-use traditional construction techniques that are formed as a spontaneous reaction to the geomorphologic, climatic and natural features of a region.

Possible field new conceptual and aesthetic perception low-tech designing architectural components based on the use of resources: *natural givens sites: climate, terrain morphology, isolation, the compass, ventilation, elevation, natural accumulation*

- *use of materials:* local material properties and physics of materials, technologically simple materials and construction techniques
- *formal concepts and processes:* atriums, porches, blinds, vents, plants on roofs and walls, hardwood floors and the walls are doubled, the accumulation of energy, passive energy systems, adaptable systems

Reasonable reliability of these principles is evident and confirmed during the long architectural history. The unified theme porches, special forms of shadowing, clay walls, atriums and courtyards of water reservoirs, we have pictures of cities and towns fervent climate zone, but the plants on roofs, walls and massive holes in big

house facing south-east settlement characteristics of cold belts. History confirms architecture space objects oriented towards the central atrium courtyard with a water reservoir like the Greek and Roman villas, and many earlier buildings from the 3000th BC., who, according to Bruno Milic "agglomeration permanent houses built and solid construction, with walls made of rammed earth floors and clay reinforced with reeds." [18]

Practical response to the given region and the individual elements of the architectural complex, like mušarabija - shadowing the windows in the architecture of Asia Minor, who is to meet the needs of the transformed domain characteristics of style and constituted the aesthetic category. Favor of the claim may be Greek or Gothic churches, which in time withstand various natural and acquired conditions and confirm the viability of an aesthetic or aesthetics consensus on the need for the duration.

If we consider the question forming in the context of sustainable design, in many cases, in addition to material, size, shape and morphological characteristics can affect sustainability. An example is the city of Timbuktu in Mali in Africa (Figure 1), which is structural soundness, for a thousand years, based on a reinforced earth nepečenoj fiber. Maintenance of these structures is more demanding than standard buildings but savings achieved through the exploitation and construction. Modern examples of realization of buildings and nestabilizovane technique stabilized the country and shows the possibilities of these domains forming pritodnim and traditional materials. [19]



Figure 1. Objects implemented technique is traditionally raw earth: the city of Timbuktu in Mali in Africa

As a matter of material directly related to energy consumption, concepts such as embodied energy or the potential of recycling represent aspects that are important in determining the quality of the material. Aesthetic characteristics and potentials can be viewed from the perspective of the visual quality of a material, but also in

terms of their durability, performance. However, it is impossible to evaluate the good and bad sides of a material without konkrete case studies. In such a case, natural materials do not have to be basically good, just as they should not immediately dismiss artificial materials. Materialization is the scientific, technological, technical and sustainability measures, but is meaningless if it is not observed within a specific cultural, social and natural context. The given context and define the way in which certain material properties exploited in order to determine the perception of them as viable. The principle of the use of materials that includes energy conservation, among other principles of sustainability in one context may not be acceptable in another. [20]



Figure 2. Facilities technique of raw earth and shotcrete: Earth House Estate Lättenstrasse, Dätikon, Switzerland

UNIVERSAL PRINCIPLES OF THE NATIONAL ARCHITECTURE

Searching (redefining) construction of (the goals, the principles) for sustainable development leads to the revival of pre-industrial context embodied the very traditional architecture. National architecture has always evolved as an inevitable and logical answer to the first row in the integrated effects of natural features and peculiarities specific location. High ethics of traditional architecture is expressed through accountability in the management of resources to where to build - and that is keeping the resources and wealth of energy transformation. "For all periods, local climate and culture has been constant generators of original ideas of vitality, and of the continuities of deep human values." [21]

National architecture and folk architecture structures includes those for whose construction using locally available resources and respect the traditions to address local needs and circumstances. It tends to evolve over time, and that comes from the environment, cultural and historical context in which it exists. This approach has often been a sticking point as raw and unrefined, but there are also a growing

number of supporters, who emphasize its importance. As a consequence of climatic conditions in Vojvodina house, for example, distinguishes "Gonk" - a patio, recessed ground floor of the southern orientation, greater wall thickness of the charge, small openings and the longitudinal organization of the building.

Folk architecture is created and developed under the influence of a number of different aspects of human behavior and environmental protection. This leads to many different types of objects. Although at first glance the house looks the same neighboring villages, each of them a different context, and even neighboring villages may have subtly different approaches to the construction and use of their housing units. Despite these variations, each object is formed under the influence of the same laws of physics. The lodges in areas with high rainfall have a very steep roof slope, the cold winters and small windows. Solar energy in different climatic conditions and different climates passive through a variety of ways to use objects of folk architecture. Such specific building are made at once, but are derived from a number of attempts, successes and mistakes during the generation of many builders. What is called the National architecture continues to live and continue to apply parts of the world mind. National architecture makes the most of the facilities built in the world. Often many of the architectural ideas already implemented and there centuries before scientific theory to later discover, explain and perform.

Harmony in relation of the forms of traditional house and shapes (the silhouette) of soil is called an "crystallization landscape" [22]. Despite the fact that this idea was inspired primarily morphological aspect (figural quality), up to the "crystallization" of amorphous forms of the field to the house and the neighborhood there were, as a rule, only in places that are possessed favorable natural concentration - bioclimatic conditions. Landscape is also "crystallized" in places that meet certain requirements of the social context of the period in which they were made - the need to defend against attackers.

The causal connection between the location and type of construction in a special way and testify formation very similar solutions in different places. Depending on the degree of similarity of natural features - analogous to bioclimatic principles - developing for the architectural solutions appropriate similarity. We conclude that the typical natural conditions result (in principle) the typical responses, and the differences in the responses are the result of differences in social conditions (historical circumstances, cultural influences).

Extending the analysis of causality in the direction of discovering the causes of those that are common to the different types of house leads to the perception in the tradition of the separation and the ever-present (unique) origins and principles of construction. The causes of the "unity in diversity" [23] lies in the uniqueness of the content of integrated housing and economic needs of the country, as well as the uniqueness of the architectural philosophy: approaches, methods and concepts of space in the building, which despite the diversity (due to the differences in the natural and social conditions) are much more common in the field of establishment / construction space.

CONCLUSION

Awareness of renewable natural resources, capacities and needs of life processes is reflected in many ways built into contemporary architectural tendencies of action potentials through the use of historical experience and traditional building techniques and the use of natural materials and shapes. New solutions are necessary and responsible use of energy planning and design are inspired by the reality that more and more calls for early validated models. Many of these solutions, such as sustainable settlement planning, building energy-efficient homes, and designing and materializing in accordance with the principles of sustainable, rely on models offered by tradition, regional conditions and natural features.

This paper aims to highlight the importance of traditional architectural models, their conception and design principles, and to remind the necessity of implementing innovative remodeled in the sphere of action of architectural planning through to architectural detail.

An important task of the future of architectural practice is innovative in that it will be available and efficiently to meet the complex criteria of sustainable and climate-conscious architecture. "This approach involves the use of the latest information on energy-efficient construction, flexible structural systems, the rational organization of space, fast and cheap construction, and a high degree of freedom of design and creative expression." [24] The existence of the future architecture will determine the need for responsible energy and climate. Therefore, the architecture changes with futuristic thinking has long crossed the platform of empirical, experimental and enforceable. The principles of adaptability, versatility, mobility, transformability, interactivity are just some of the common modern architectural concepts [25].

Summing up historical experiences, reading and referring to Vitruvius, Palladium, Furtenbah and accompanying younger historical practices with appreciation examples of continuity and justification for use

REFERENCES

- [1] Casey, E. S. (1997), *The Fate of Place-A Philosophical History* (Berkeley/Los Angeles/London: University of California Press) 488.
- [2] Heidegger, M. (1971), *Poetry, Language, Thought*, trans. Albert Hofstadter (New York: Harper and Row).
- [3] Heidegger, M. (1962), *Being and Time*, trans. John Maquarrie and Edward Robinson (Oxford: Basil Blackwell).
- [4] Large, W. (2008), *Heidegger's Being and Time* (Edinburgh: Edinburgh University Press) 146.
- [5] Casey, E. S. (2001), 'Between Geography and Philosophy: What Does It Mean to Be in the Place-World?', *Annals of the Association of American Geographers*, 91 (4), 683-93.
- [6] Tuan, Yi-Fu (1977), *Space and Place-The Perspective of Experience* (Minneapolis: The University of Minnesota Press) 235.
- [7] Relph, E. (1986), *Place and placelessness* (London: Pion Limited) 156.

- [8] Massey, D. (1991), *A Global Sense of Place / Marxism Today*, June 1991, pp. 24-29
- [9] Lynch, K. (1972), *Biographical details and theoretical context*, in *Key Thinkers on Space and Place*: editors Phil Hubbard and Rob Kitchin, SAGE, 2010
- [10] Norberg-Schulz, C. (1980), *Genius Loci, Towards a Phenomenology of Architecture* Rizzoli, New York.
- [11] *A History of Public Health / G. Rosen // Johns Hopkins University Press, 1993, pp. 74 - 77.*
- [12] *A Golden thread - 2500 Years of Solar Architecture and Technology / K. Butti, JK. Perlin // Marion Boyars, London, 1980. pp 56 - 60.*
- [13] *The Chinese House: Craft, Symbol and the Folk Tradition / RG. Knapp // Hong Kong, Oxford University Press, 1990, pp 33 - 42.*
- [14] *In search of Healthy Cities / R. Hobdy // Daylight&Architecture Magazine by Velux, vol. 17, pp. 5-8.*
- [15] *Small Is Beautiful: Economics as if People Mattered / Schumacher, E.F. // London: Blond & Briggs, 1973.*
- [16] *Materijali, konstrukcije i životna sredibna: Materijali i konstrukcije 4/57 / Krnjetin S. // zbornik radova // 2005. pp.56-61*
- [17] *Building with earth materials: Reevaluating Tradition of the region, Research Overview / Krnjetin, S., Konstantinović, D., Zeković, M. // Ecologica 15/50, 2007. pp.49-57*
- [18] *Razvoj grada kroz stoljeća / Milić, B. // Školska knjiga, Zagreb, 1999. Pp 27-63*
- [19] *Zemlja kao građevinski material: Uticaj klimatskih promena na planiranje i projektovanje / Ivana Petruševski // Univerzitet u Beogradu, Arhitektonski fakultet. Beograd, 2011. Pp. 144-167.*
- [20] *Natural Architecture. In: Lee, S. (ed.) Aesthetics of Sustainable Architecture. / Kuma, K. // Rotterdam: 010 Publishers, 2011. pp. 179-186.*
- [21] *The Post-Industrial Culture of Regionalism / J. Cook /, Proceedings of the International Conference on Passive Solar Architecture - PSA'88, Bled Ljubljana, 1988., pp. 1-8.*
- [22] *Tradicionalna arhitektura Cme Gore i bioklimatizam / D.Vuksanović /, Monografija, Zadužbina Andrejević, Beograd, 1998. , pp 23 - 27.*
- [23] *Equality in Variety - A Review of Bioclimatic Growth of Buildings on Yugoslav Territory/ A. Krainer, //Proceedings of the Fifth International PLEA Conference -PLEA'86, Pecs, 1986., pp. 168-219.*
- [24] *Mogućnosti primene modularnih sistema u projektovanju održivog i klimatski svesnog socijalnog stanovanja. Arhitektura i urbanizam No.33 // Bajić, T., Pantović, K. / Institut za arhitekturu i urbanizam Srbije, Beograd, 2011 pp. 42-59.*
- [25] *Nova ideološka paradigma-energetski odgovorna arhitektura, Planning, design, construction and building renewal ,iNDis 2012 // Pantović, K., Parežanin, V. Thematic conference Proceedings, 2012. pp. 398-404.*