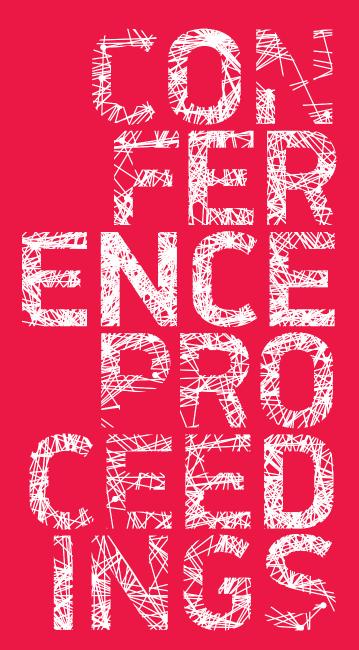


3_{RD} INTERNATIONAL ACADEMIC CONFERENCE ON PLACES AND TECHNOLOGIES

EDITORS EVA VANIŠTA LAZAREVIĆ MILENA VUKMIROVIĆ ALEKSANDRA KRSTIĆ-FURUNDŽIĆ AND ALEKSANDRA ĐUKIĆ



3_{RD} INTERNATIONAL ACADEMIC CONFERENCE ON PLACES AND TECHNOLOGIES

EDITORS EVA VANIŠTA LAZAREVIĆ MILENA VUKMIROVIĆ ALEKSANDRA KRSTIĆ-FURUNDŽIĆ AND ALEKSANDRA ĐUKIĆ

PLACES AND TECHNOLOGIES 2016

CONFERENCE PROCEEDINGS OF THE $3^{\rm RD}$ international academic conference on places and technologies

EDITORS:

Eva VaništaLazarević, Milena Vukmirović, Aleksandra Krstić-Furundžić, Aleksandra Đukić

FOR PUBLISHER: Vladan Đokić

PUBLISHER: University of Belgrade - Faculty of Architecture

DESIGN: Stanislav Mirković

TECHNICAL SUPPORT: Jasna Marićević

PLACE AND YEAR: Belgrade 2016

ISBN: 978-86-7924-161-0

ORGANIZERS





MAIN CONFERENCE SUPPORT

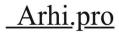








CONFERENCE SUPPORT















PLACES AND TECHNOLOGIES 2016

KEEPING UP WITH TECHNOLOGIES TO CREATE COGNITIVE CITY BY HIGHLIGHTING ITS SAFETY, SUSTAINABILITY, EFFICIENCY, IMAGEABILITY AND LIVEABILITY

CONFERENCE PROCEEDINGS OF THE 3RD INTERNATIONAL ACADEMIC CONFERENCE ON PLACES AND TECHNOLOGIES

CONFERENCE ORGANISERS

University of Belgrade – Faculty of Architecture and Professional Association Urban Laboratory

ORGANIZING COMMITTEE

Founding members of the Organizing committee

Dr Eva Vaništa Lazarević

Conference Director, University of Belgrade, Faculty of Architecture, Belgrade, Serbia

Dr Milena Vukmirović

Conference Executive Coordinator, University of Belgrade, Faculty of Architecture and Urban Laboratory, Belgrade, Serbia

Dr Aleksandra Krstić Furundžić

University of Belgrade, Faculty of Architecture, Belgrade, Serbia

Dr Aleksandra Đukić

University of Belgrade, Faculty of Architecture, Belgrade, Serbia

Associate members of the Organising committee

Jelena Samardžić

Faculty of Information Technology Belgrade Metropolitan University, Belgrade, Serbia

TECHNICAL COMMITTEE

Dr Milena Vukmirović

Conference Executive Coordinator, University of Belgrade, Faculty of Architecture and Urban Laboratory, Belgrade, Serbia

Branislav Antonić

University of Belgrade, Faculty of Architecture, Belgrade, Serbia

SCIENTIFIC COMMITTEE

In Alphabetical order

Dr Laura Aelenei,

National Energy and Geology Laboratory (LNEG), Lisbon, Portugal

Dr Ivan Aleksić,

University of Belgrade, Faculty of Civil Engineering, Department of Geodesy and Geoinformatics, Belgrade, Serbia

Dr Evangelina Athanassiou,

Aristotle University of Thessaloniki School of Architecture, Thessaloniki, Greece

Dr Milica Bajić Brković,

ISOCARP - The International Society of City and Regional Planners, The Hague, Netherlands

Dr Ljiljana Blagojević,

University of Belgrade, Faculty of Architecture, Belgrade, Serbia

Dr Ružica Božović Stamenović,

University of Belgrade, Faculty of Architecture, Belgrade, Serbia and National University of Singapore, Singapore

Dr Olja Čokorilo,

University of Belgrade, Faculty of Transport and Traffic Engineering, Belgrade, Serbia

Dr Grygor Doytchinov,

Institute for Urban Design, Technical University of Graz, Austria

Dr Nataša Danilović Hristić.

Urban Planning Institute of Belgrade, Belgrade, Serbia

Dr Vladan Đokić,

University of Belgrade, Faculty of Architecture, Belgrade, Serbia

Dr Aleksandra Đukić,

University of Belgrade, Faculty of Architecture, Belgrade, Serbia

Dr Alenka Fikfak,

University of Ljubljana, Faculty of Architecture, Ljubljana, Slovenia

Dr Dejan Filipović,

University of Belgrade, Faculty of Geography, Belgrade, Serbia

Dr Darija Gajić,

University of Banja Luka, Faculty of Architecture and Civil Engineering, Banja Luka, Republic of Srpska, Bosnia and Herzegovina

Dr Bob Giddings,

Northumbria University, Faculty of Engineering and Environment, Newcastle, United Kingdom

Dr Jelena Ivanović Šekularac,

University of Belgrade, Faculty of Architecture, Belgrade, Serbia

Dr Vlatko Korobar,

St. Cyril and Methodius University, Faculty of Architecture, Skopje, FYR Macedonia

Dr Saja Kosanović,

University of Priština, Faculty of Technical Sciences, Department of Architecture, KosovskaMitrovica, Serbia

Dr Aleksandra Krstić-Furundžić,

University of Belgrade, Faculty of Architecture, Belgrade, Serbia

Dr Višnja Kukoč,

University of Split, Faculty of Civil Engineering, Architecture and Geodesy, Split, Croatia

Dr Piotr Lorens,

Gdansk University of Technology, Faculty of Architecture, Gdansk, Poland

Dr Lucia Martincigh,

University of Roma Tre, Faculty of Architecture, Rome, Italy

Prof. LjubomirMiščević,

University of Zagreb, Faculty of Architecture, Zagreb, Croatia

Acad. BranislavMitrović,

University of Belgrade - Faculty of Architecture, Belgrade, Serbia

Dr Juan Luis Rivas Navarro,

University of Granada, Department of Urban and Regional Planning, Granada, Spain

Dr Grzegorz Peczek,

Sopot University of Applied Science, Sopot, Poland

Dr Lea Petrović Krajnik,

University of Zagreb, Faculty of Architecture, Zagreb, Croatia

Dr Miroslava Raspopović,

Faculty of Information Technology, Belgrade Metropolitan University, Belgrade, Serbia

Dr Ralf Risser,

Research Institute FACTUM, Vienna, Austria

Dr Lina Seduikyte,

Kaunas University of Technology, Faculty of Civil Engineering and Architecture, Kaunas, Lithuania

Manfred Schrenk,

CORP - Competence Center for Urban and Regional Planning, Vienna, Austria

Dr Jasmina Siljanoska,

St. Cyril and Methodius University, Faculty of Architecture, Skopje, FYR Macedonia

Dr Metka Sitar

University of Maribor, Faculty of Civil Engineering, Traffic Engineering and Architecture, Maribor, Slovenia

Dr Predrag Šiđanin,

University of Novi Sad, Faculty of Technical Sciences, Novi Sad, Serbia

Dr Ljupko Šimunovic,

University of Zagreb Faculty of Transport and Traffic Sciences, Zagreb, Croatia

Dr Stefan van der Spek,

Delft University of Technology, Faculty of Architecture and Built Environment, Delft, Netherlands

Dr Svetlana Stanarević,

University of Belgrade, Faculty of Security Studies, Belgrade, Serbia

Dr Milena Stavrić

Graz University of Technology, Faculty of Architecture, Institute of Architecture and Media, Graz, Austria

Dr Aleksandra Stupar,

University of Belgrade, Faculty of Architecture, Belgrade, Serbia

Dr Eva Vaništa Lazarević,

University of Belgrade, Faculty of Architecture, Belgrade, Serbia

Dr Milena Vukmirović,

University of Belgrade, Faculty of Architecture and Urban Laboratory, Belgrade, Serbia

Dr Salih Yilmaz,

Izmir KatibCelebi University, Department of Engineering and Architecture, Izmir, Turkey

REGIONAL AND GUEST DEANS COMMITTEE

In Alphabetical order

Dr Bálint Bachmann,

University of Pécs, Pollack Mihály Faculty of Engineering and Information Technology, Pécs, Hungary

Dr Dženana Bijedić,

Vice-dean), University of Sarajevo, Faculty for Architecture, Sarajevo, Bosnia and Herzegovina

MSc Peter Gabrijelčič,

University of Ljubljana, Faculty of Architecture, Ljubljana, Slovenia

MSc Boris Koružnjak,

University of Zagreb, Faculty of Architecture, Zagreb, Croatia

Dr Florian Nepravishta,

(Department department), Polytechnic University of Tirana, Department of Architecture, Tirana, Albania

Dr Svetislav Popović,

University of Montenegro, Faculty of Architecture, Podgorica, Montenegro

Dr Milenko Stanković,

University of Banja Luka, Faculty of Architecture and Civil Engineering, Banja Luka, Republic of Srpska, Bosnia and Herzegovina

REVIEWERS

Dr Evangelina Athanassiou,

Aristotle University of Thessaloniki School of Architecture, Thessaloniki, Greece

Dr Ljiljana Blagojević,

University of Belgrade, Faculty of Architecture, Belgrade, Serbia

Dr Ružica Božović Stamenović,

University of Belgrade, Faculty of Architecture, Belgrade, Serbia and National University of Singapore, Singapore

Dr Olja Čokorilo,

University of Belgrade, Faculty of Transport and Traffic Engineering, Belgrade, Serbia

Dr Grygor Doytchinov,

Institute for Urban Design, Technical University of Graz, Austria

Dr Nataša Danilović Hristić,

Urban Planning Institute of Belgrade, Belgrade, Serbia

Dr Aleksandra Đukić,

University of Belgrade, Faculty of Architecture, Belgrade, Serbia

Dr Alenka Fikfak.

University of Ljubljana, Faculty of Architecture, Ljubljana, Slovenia

Dr Darija Gajić,

University of Banja Luka, Faculty of Architecture and Civil Engineering, Banja Luka, Republic of Srpska, Bosnia and Herzegovina

Dr Bob Giddings,

Northumbria University, Faculty of Engineering and Environment, Newcastle, United Kingdom

Dr Jelena Ivanović Šekularac,

University of Belgrade, Faculty of Architecture, Belgrade, Serbia

Dr Vlatko Korobar.

St. Cyril and Methodius University, Faculty of Architecture, Skopje, FYR Macedonia

Dr Saja Kosanović,

University of Priština, Faculty of Technical Sciences, Department of Architecture, KosovskaMitrovica, Serbia

Dr Aleksandra Krstić-Furundžić,

University of Belgrade, Faculty of Architecture, Belgrade, Serbia

Dr Višnja Kukoč,

University of Split, Faculty of Civil Engineering, Architecture and Geodesy, Split, Croatia

Dr Lucia Martincigh,

University of Roma Tre, Faculty of Architecture, Rome, Italy

Dr Juan Luis Rivas Navarro,

University of Granada, Department of Urban and Regional Planning, Granada, Spain

Dr Grzegorz Peczek,

Sopot University of Applied Science, Sopot, Poland

Dr Lea Petrović Krajnik,

University of Zagreb, Faculty of Architecture, Zagreb, Croatia

Dr Miroslava Raspopović,

Faculty of Information Technology, Belgrade Metropolitan University, Belgrade, Serbia

Dr Ralf Risser,

Research Institute FACTUM, Vienna, Austria

Dr Metka Sitar,

University of Maribor, Faculty of Civil Engineering, Traffic Engineering and Architecture, Maribor, Slovenia

Dr Predrag Šiđanin,

University of Novi Sad, Faculty of Technical Sciences, Novi Sad, Serbia

Dr Ljupko Šimunovic,

University of Zagreb Faculty of Transport and Traffic Sciences, Zagreb, Croatia

Dr Stefan van der Spek,

Delft University of Technology, Faculty of Architecture and Built Environment, Delft, Netherlands

Dr Svetlana Stanarević,

University of Belgrade, Faculty of Security Studies, Belgrade, Serbia

Dr Aleksandra Stupar,

University of Belgrade, Faculty of Architecture, Belgrade, Serbia

Dr Eva Vaništa Lazarević,

University of Belgrade, Faculty of Architecture, Belgrade, Serbia

Dr Milena Vukmirović,

University of Belgrade, Faculty of Architecture and Urban Laboratory, Belgrade, Serbia

TABLE OF CONTENTS

ARCHITECTURAL TECHNOLOGIES I - ENERGY ISSUES

DETERMINATION OF ENERGY CHARACTERISTICS OF TRANSPARENT ELEMENTS OF ENVELOPE OF RESIDENTIAL BUILDINGS IN BOSNIA AND HERZEGOVINA Darija Gajić	3
ECO-ENERGETIC RECONSTRUCTION OF ARCHITECTURAL STRUCTURES BY APPLYING MODERN FACADE TECHNOLOGIES Olja Joksimović, Katarina Vukosavljević	11
MODERNIZATION OF EXISTING GLASS FACADES IN ORDER TO IMPLEMENT ENERGY EFICIENCY AND MEDIA CONTENT Jasna Čikić Tovarović, Jelena Ivanović Šekularac, Nenad Šekularac	19
EFFECTS OF WINDOW REPLACEMENT ON ENERGY RENOVATION OF RESIDENTIAL BUILDINGS – CASE OF THE SERBIAN BUILDING PRACTICE Ana Radivojević, Aleksandar Rajčić, Ljiljana Đukanović	27
GREEN ROOF RETROFIT POTENTIAL IN A DENSELY POPULATED BELGRADE MUNICIPALITY Katarina Vukosavljević, Olja Joksimović, Stevan Vukadinović	35
ENERGY REFURBISHMENT OF PUBLIC BUILDINGS IN SERBIA Milica Jovanović Popović, Miloš Nedić, Ljiljana Djukanović	43
PROBLEM OF PROTECTION OF ORIGINAL APPEARANCE OF PREFABRICATED CONCRETE FACADES AND ENERGY IMPROVEMENT MEASURES – EXAMPLE OF NEW BELGRADE Nikola Macut, Ana Radivojević	51
SUNLIGHTING: A BRIGHT LIGHT SOURCE FOR MULTI-STORY BUILDING CORES Liliana Beltran	59
ARCHITECTURAL TECHNOLOGIES II - INNOVATIVE METHODS, SOFTWARE AND TOOLS	
BIM AND GREEN BUILDING DESIGN: EXPECTATIONS, REALITY AND PERSPECTIVES gor Svetel, Marko Jarić, Nikola Budimir	69
UNDER THE SKIN - DETERMINING ELECTRICAL APPLIANCES FROM SURFACE 3D SCANS Urlich Krispel, Torsten Ullrich, Martin Tamke	77
ARCHITECTURAL DIAGRAM OF A CITY Olivera Dulić, Viktorija Aladžić	85
DIGITAL TOOLS - BASED PERFORMANCE EVALUATION OF THE ADAPTIVE BUILDING ENVELOP IN THE EARLY PHASE OF DESIGN Kompon Žižić Aleksandra Kretić-Eurundzić	93

INCREASING QUALITY OF PLACE BY USERS VALUE ORIENTATION Alenka Temeljotov Salaj, Svein Bjorberg, Nikolaj Salaj	101
COMFORT QUALITY IN THE ARCHITECTURAL TRANSFORMATION OF EXISTING FACILITIES Saša B. Čvoro, Malina B. Čvoro, Una Umićević	109
BUILDING STRUCTURES AND MATERIALS	
CONCEPTUAL STRUCTURAL DESIGN STRATEGIES FOR REDUCING ENERGY CONSUMPTION IN BUILDINGS Aleksandra Nenadović, ŽikicaTekić	119
COMPARISON OF THE SUSTAINABILITY OF DIFFERENT TECHNIQUES FOR THE STRENGTHENING OF REINFORCED CONCRETE COLUMNS Tanya Chardakova, Marina Traykova	125
THE ARCHITECTURAL ASPECT OF DESIGNING THE OFFICE ENVIRONMENT IN THE MULTIFUNCTIONAL BUILDING IN THE CITY CENTRE Anna Rynkowska-Sachse	133
MITIGATE THE HOUSING DEPRIVATION IN THE INFORMAL CITIES: MODULAR, FLEXIBLE AND PREFAB HOUSES Frabrizio Finucci, Adolfo Barrata, Laura Calcagnini, AntonioMagaro, OttavioMinnella, Juan Martin Piaggio	141
AN EXAMPLE OF USING RECYCLED CRUSHED CLAY BRICK AGGREGATE: A PREFABRICATED COMPOSITE FAÇADE PANEL WITH THE FACE OF STONE Tijana Vojinović Ćalić, Dragica Jevtić, Aleksandra Krstić-Furundžić	149
CLIMATE CHANGE I – ENERGY ISSUES	
ENERGY MAP OF KRAGUJEVAC AS AN INTRODUCTION TO THE ANALYSIS OF NECESSARY INTERVENTION MEASURES ON BUILDINGS IN ORDER TO ADAPT TO CLIMATE CHANGE Iva Poskurica Glišović	159
THE IMPACT OF CLIMATE CHANGE ON THE ENERGY PERFORMANCE OF HISTORICAL BUILDINGS Alexandra Keller, Cristian Petrus, Marius Mosoarca	167
INFLUENCE OF DIFFERENT PAVEMENT MATERIALS ON WARMING UP OF PEDESTRIAN AREAS IN SUMMER SEASON Jelena Đekić, Petar Đekić, Milena Dinić Branković, Mihailo Mitković	175
ANALYSIS OF ELECTRICITY GENERATION RESULTS OF FIRST MINI SOLAR POWER PLANTS IN THE SOUTH OF SERBIA WITH VARYING INCLINATION OF PHOTOVOLTAIC PANELS AND DIFFERENT ENVIRONMENTAL CONDITIONS Mihailo Mitković, JelenaĐekić, Petar Mitković, Milica Igić	183
EDUCATION NEEDS AND INFLUENTIAL FACTORS ON ENVIRONMENTAL PROTECTION IN FUNCTION OF SUSTAINABLE DEVELOPMENT AT HIGHER EDUCATION INSTITUTIONS Marijola Božović, Milan Mišić, Zorica Bogićević, Danijela Zubac	191

BUILDING CLIMATE CHANGE II – STRATEGIES, PROTECTION AND FLOODS

EVALUATING THE CO-BENEFITS OF FLOOD MITIGATION MEASURE – A CASE STUDY OF SOUTHERN YUNLIN COUNTY IN TAIWAN Yi-Hsuan Lin	201
FLOODING RISK ASSESSMENT IN MOUNTAIN VILLAGES—A CASE STUDY OF KAOHSIUNG CITY Ting-Chi Hsu, Han-Liang Lin	209
SPATIAL PLANNING IN VIEW OF FLOOD PROTECTION-METHODOLOGICAL FRAMEWORK FOR THE BALCAN COUNTRIES Brankica Milojević	217
CLIMATE WARS AND REFUGEES: HUMAN SECURITY AS A PATHWAY TOWARDS THE POLITICAL? Thomas Schad	225
LOW-IMPACT DEVELOPMENT STRATEGIES ASSESSMENT FOR URBAN DESIGN Yu-Shan Lin, Han-Liang Lin	235
SUSTAINABLE COMMUNITIES AND PARTICIPATION I – PLANNIG ISSUES	
THE POSSIBILITIES OF SURVEY AS A METHOD TO COLLECT AND THE DERIVE MICRO-URBAN DATA ABOUT NEW COLLECTIVE HOUSING IN SERBIA Branislav Antonić	247
POSITION OF THE SOCIAL HOUSING ACCORDING TO THE URBAN PLANNING REGULATION OF THE CITY OF NIS – DO THEY PROMOTE THE INCLUSION? Nataša Petković Grozdanović, Branislava Stoiljkovic, Goran Jovanović	255
INFLUENCE OF DIFFERENT APPROACHES IN DEVELOPMENT OF LOCAL RESIDENTIAL BUILDING TYPOLOGIES FOR ESTIMATION OF BUILDING STOCK ENERGY PERFORMANCE Milica Jovanović Popović, Dušan Ignjatović, Bojana Stanković	263
TOWARDS A LOW-CARBON FUTURE? CONSTRUCTION OF DWELLINGS AND ITS IMMEDIATE INFRASTRUCTURE IN CITY OF SPLIT Višnja Kukoč	271
SCENARIOS IN URBAN PLANNING AND THE MULTI-CRITERIA METHOD. A MEANINGFUL EXPERIENCE IN ITALY: PIANO IDEA IMPLEMENTED IN JESI AN,2004 Giovanni Sergi, Paolo Rosasco	279
THE PUBLIC INSIGHT AND INCLUSIVITY IN THE PLANNING PROCESS Nataša Danilović Hristić, Nebojša Stefanović	287
TOWARD THE SUSTAINABLE CITY - COMMUNITY AND CITIZENS INCLUSION IN URBAN PLANNING AND DESIGN OF URBAN GREEN SPACES: A REVIEW OF SKOPJE	295
Nivna Pančić Snazhana Nomazetovska Stefanka Hadii Pecova	

SUSTAINABLE COMMUNITIES AND PARTICIPATION II – CONCEPTS, METHODS AND COMMUNITY

HOW TO DEVELOP AND DESIGN HEALTHY URBAN ENVIRONMENT? Sanja Štimac, Anja Jutraž	305
SUSTAINABILITY AND BROWNFIELD REGENERATION Kristina Azarić	313
THE SOCIAL DIMENSION OF A SUSTAINABLE COMMUNITY: UNDERSTANDING OF THE EXISTING SPACE Silvia Grion, Elisabeth Antonaglia, Barbara Chiarelli	319
HOW TO UNDERSTAND THE GLOBAL PHENOMENON OF URBAN SHRINKAGE AT LOCAL LEVEL? COMPARISON OF URBAN AREAS IN ROMANIA AND SERBIA Mihai-Ionut Danciu, Branislav Antonić, Smaranda Maria Bica	327
SPATIAL PATTERNS OF SERBIAN MIGRANTS IN VIENNA AND IN THE SETTLEMENTS OF THEIR ORIGIN IN EASTERN SERBIA Branislav Antonić, Tamara Brajović	335
KEEPING THE CITY LIVEABLE FOR INHABITANTS AND EFFICIENT FOR TOURISTS: THE PILGRIMAGE ROUTES Lucia Martincigh, Renata Bizzotto, Raffaella Seghetti, Marina Di Gauda, Giovanni Perrucci	347
ENVIRONMENTAL PROBLEMS AND CITIZEN PARTICIPATION IN MEDIUM-SIZED TOWNS OF SERBIA Anđelka Mirkov	355
URBAN PROBLEMS OF HILLY AND MOUNTAINOUS RURAL SETTLEMENTS IN NIŠ MUNICIPALITY Milica Igić, Petar Mitković, Jelena Đekić, Milena Dinić Branković	361
IMAGE, IDENTITY AND QUALITY OF PLACE I – PLANNING ISSUES	
THE STRATEGIES OF PLACE-MAKING. SOME ASPECTS OF MANIFESTATIONS OF POSTMODERN IDEAS IN LITHUANIAN ARCHITECTURE Martynas Mankus	373
DESIGNING CENTERS OF SUBURBAN SETTLEMENTS IN THE POST-SOCIALIST CITY – NIŠ CASE STUDY Milena Dinić Branković, Jelena Đekić, Petar Mitković, Milica Igić	381
TRANSITION AND THE CITY: TRANSFORMATION OF URBAN STRUCTURE DURING THE POST-SOCIALIST PERIOD Dejana Nedučin, Milena Krklješ	389
POST INDUSTRIAL CITIES: CREATIVE PLAY - FAST FORWARD BELGRADE 2016 Eva Vaništa Lazarević, Marija Cvetković, Uroš Stojadinović	395
THE FUTURE OF OLD INDUSTRIAL AREAS - SUSTAINABLE APPROACH Anica Tufegdžić, Maria Siladji	405

CREATING IDENTITY AND CHARACTER OF NEW SETTLEMENT FORMED DUE TO GROWTH OF THE CITY- ON THE EXAMPLE OF PODGORICA Ema Alihodžić Jašarović, Edin Jašarović	413
SPINUT-POLJUD RESIDENTIAL AREA IN SPLIT, CROATIA Vesna Perković Jović	421
IMAGE, IDENTITY AND QUALITY OF ZAPRUĐE HOUSING DEVELOPMENT IN NOVI ZAGREB Ivan Milnar, Lea Petrović Krajnik, Damir Krajnik	429
URBAN IDENTITY OF BORDER SPACES. CONSTRUCTING A PLACE IN THE BORDER CROSSING BETWEEN SPAIN AND MOROCCO IN CEUTA Belen Bravo Rodriguez, Juan Luis Rivas Navarro, Alicia Jiménez Jiménez	435
ZEITGEIST & GENIUS LOCI: TRADE VALUE AESTHETIC AND WEAKNESS OF AUTHOR'S IDENTITY IN RECENT SERBIAN ARCHITECTURE Aleksandar Kadijević	445
IMAGE, IDENTITY AND QUALITY OF PLACE II – PUBLIC SPACES	
PRESERVING PLACE MEANING IN FUNCTION OF TRANSFORMATION OF OPEN PUBLIC SPACES Ana Špirić, SanjaTrivić	455
STREET LIFE DIVERSITY AND PLANNING THE URBAN ENVIRONMENT. COMPARATIVE STUDY OF SOFIA AND MELBOURNE Silvia Chakarova	463
TRANSFORMATIONS AND PERMANENCE OF REPUBLIC SQUARE Stefan Škorić, Milena Krklješ, Dijana Brkljač, Aleksandra Milinković	473
THE IMAGE OF THE CITY VS. SEMI-PUBLIC SPACES OF SHOPPING MALLS: CASE STUDY OF BELGRADE Marija Cvetković, Eva Vaništa Lazarević	481
THE MARKET HALL OF PÉCS Balazs Kokas, Hutter Ákos, Veres Gábor, Engert Andrea, Greg András, Sike Ildikó, Alexandra Pető	489
INNOVATIVE PUBLIC SPACE REHABILITATION MODELS TO CREATE CONDITIONS FOR COGNITIVE - CULTURAL URBAN ECONOMY IN THE AGE OF MASS INDIVIDUALISATION Katarzyna Bartoszewicz, Piotr Lorens	497
ILLUMINATION OF FACADES OF PUBLIC BUILDINGS IN NOVI SAD AND ITS IMPACT ON SPATIAL PERCEPTION Dijana Brkljač, Milena Krklješ, Aleksandra Milinković, Stefan Škorić	507
COGNITIVE PERFORMANCES OF PEDESTRIAN SPACES Milena Vukmirović, Branislav Folić	515

IMAGE, IDENTITY AND QUALITY OF PLACE III – CONCEPT, METHODS, EDUCATION

•	
THE CRIMINAL CITY: URBAN RESET AFTER "COLECTIV" Agelica Stan	527
TOWARD THE ULTIMATE SHAPE-SHIFTER: TESTING THE OMNIPOTENCE OF DIGITAL CITY Aleksandra Stupar, Tatjana Mrđenović	535
MANAGEMENT OF URBAN IMAGE AS A TOOL FOR PLANNING. THE CASE OF THESSALONIKI Kleoniki Gkioufi, Eleni Gavra	541
VISIBLE AND INVISIBLE PROCESSES AND FLOWS OF TIME-SPACE OF ARCHITECTURAL AND URBAN CONTINUITY OF THE CITY Velimir Stojanović	549
FORMS OF CONTINUITY IN ARCHITECTURAL SPACE Petar Cigić, Milena Kordić	555
URBAN DESIGN EDUCATION FOR PLACEMAKING: BETWEEN COGNITION AND EMOTION Jelena Živković, Zoran Đukanović, Uroš Radosasvljević	565
SKETCHBOOK AS AN ARCHITECTURAL DESIGN INSTRUMENT OF THE COGNITIVE CREATION PROCESS FOR THE QUALITY OF PLACE Igor Rajković, Uroš Radosavljević, Ana Zorić	573
THE MUSICALITY OF UNDULATING GLASS PANES IN THE CONVENT OF LA TOURETTE Marko Slaviček, Anja Kostanjšak	581
THE ROUTES OF DIGITALIZATION – FROM REAL TO VIRTUAL CITY AND VICE VERSA Miodrag Ralević, Tatjana Mrđenović	587
RESILIENCE OF PLACES	
A SHRED OF PLACE IN A DIGITAL ERA HUMANITARIAN DISASTER Pavlos Lefas, Nora Lefa	599
URBAN SPACES MORPHOLOGY AND MICROCLIMATE CONDITIONS: A STUDY FOR A TYPICAL DISTRICT IN THESSALONIKI Stella Tsoka, Katerina Tsikaloudaki, Theodoros Theodosiou	605
SPONTANEOUS DEVELOPMENT AND RESILIENCE PLACES – A CASE STUDY OF ELECTRONIC INDUSTRY NIS (SERBIA) Liljana Jevremović, Branko Turnsek, Aleksandar Milojkovic, Milanka Vasic, Marina Jordanovic	613
SUSTAINABLE MODEL FOR REGIONAL HOSPITALS IN HUMID TROPICAL CLIMATE Nataša Čuković Ignjatović, Dušan Ignjatović, Dejan Vasović	621

MATERIAL AND COGNITIVE STRUCTURES OF BUILDINGS AND PLACES AS INTEGRATED PATTERNS OF PAST, PRESENT AND FUTURE Dženana Bijedić, Rada Cahtarevic, Mevludin Zecević, Senaida Halilović	627
BOOSTING THE RESILIENCE OF THE HEALTHCARE SYSTEM IN BELGRADE: THE ROLE OF ICT NETWORKS Jelena Marić, Aleksandra Stupar	635
INTERCONNECTION OF ARCHITECTURE AND NEUROSCIENCE - RESHAPING OUR BRAINS THROUGH PHYSICAL STRUCTURES Morana Pap, Mislav Pap, Mia Pap	645
THE POTENTIAL OF URBAN AGRICULTURE IN REVITALIZATION OF A METROPOLIS Gabriela Rembarz	651
ADAPTIVE REUSE	
IMPROVING STRATEGIES FOR FUNCTIONAL UPGRADE FOR AN "INTEGRATED REHABILITATION" Francesca Guidolin	661
ADAPTIVE REUSE AND SOCIAL SUSTAINABILITY IN THE REGENERATION PROCESSES OF INDUSTRIAL HERITAGE SITES Sonja Ifko, Ana Martinović	669
REVEALING THE MONTENEGRIN KATUN AS A PLACE OF REUSABLE COGNITIVE TECHNOLOGIES Edin Jašarović, Ema Alihodžić Jašarović	683
INTERSECTIONS OF NOW AND THEN; IMPLEMENTATION OF ADAPTIVE REUSE AS CATALYST OF SPACE TRANSFORMATION Anja Kostanjšak, Nikola Filipovic	691
MULTIFAMILY HOUSING IN BELGRADE – ENERGY PERFORMANCE IMPROVING POTENTIAL AND ARCHITECTURAL CHALLENGES Nataša Ćuković Ignjatović, Dusan Ignjatovic, Bojana Stankovic	699
SPATIAL STRUCTURE OF THE SUBURBAN ZONES IN SELECTED ENTREPRENEURSHIPS NESTS OF THE TRICITY METROPOLITAN AREA Grzegorz Pęczek, Justyna Martyniuk-Pęczek	707
INNOVATIVE METHODS AND APPLICATIONS FOR SMART(ER) CITIES	
TECHNOLOGY AS A MEDIATOR BETWEEN MAN AND CITY IN THE CONTEXT OF CONTEMPORARY CHALLENGES Katarina Stojanović	725
CITY INTELLIGENCE INFORMATION MODELING Alice Pasquinelli, Silvia Mastrolembo, Franco Guzzeti, Angelo Ciribini	731
AN INTRODUCTION TO THE PHYSICAL PLANNING INFORMATION SYSTEM OF CROATIA AND NEW GENERATION OF SPATIAL PLANS Sunčana Habrun, Lidija Škec, Danijel Meštrić	739

THE CONCEPT OF SMART ARCHITECTURE IN SERBIA – ONE BELGRADE EXPIRIENCE Dragan Marčetić, Andrej Josifovski	747
THE IDEA OF COGNITIVE CITY - A CHALLENGE FOR NEW TECHNOLOGY TO PROMOTE HEALTH Aleksandra Krstić Furundžić, Nikola Z. Furundzić, Dijana P. Furundzić	755
MIXED REALITY ENVIRONMENT AND OPEN PUBLIC SPACE DESIGN Aleksandra Đukić, Dubravko Aleksić	761
VULNERABILITY OF PUBLIC SPACE AND THE ROLE OF SOCIAL NETWORKS IN THE CRISIS Milena Vukmirović, Miroslava Raspopović	769
NEUTRAL GROUNDING POINTS WITHIN THE GENERAL DISTRIBUTION SYSTEM AS AN ELEMENT OF ENVIRONMENTAL PROTECTION Zorica Bogićević, Slobodan Bjelić, Bojan Jovanović, Milan Misic	779
THE ROLE OF COGNITIVE – CULTURAL ECONOMY IN CITY'S GLOBAL POSITIONING Sanja Simeunčević Radulović, Biserka Mitrović	789
URBAN MOBILITY, TRANSPORT AND TRAFFIC SOLUTIONS	
THE CONTRIBUTION OF ITS TO THE SAFETY IMPROVEMENT OF VULNERABLE ROAD USERS Bia Mandžuka, Ljupko Šimunović, Pero Škorput	799
BUILDING ENVIRONMENTAL PERSPECTIVE OF AIRCRAFT OPERATIONS AROUND BELGRADE NIKOLA TESLA AIRPORT Olja Čokorilo, Ivana Čavka	805
TRANSPORT PROJECTS AND PUBLIC PARTICIPATION Davor Brčić, Stjepan Kelcec-Suhovec	813
DISLOCATION OF THE EXISTING RAILWAY AND BUS STATION IN THE CITY OF KUMANOVO AND THEIR INTEGRATION INTO A TRANSPORT HUB WITH ADJOINING CONTENTS Mihajlo Zinoski, Medarski Igor, Stefani Solarska	817
THE IMPACTS OF TRANSPORT INFRASTRUCTURES ON URBAN GEOGRAPHY Federico Andrea Innarone	825
LIQUID LIFE: A RELATIONSHIP BETWEEN VULNERABILITY AND MOBILITY – THE CONSEQUENCES FOR A SUSTAINABLE CITY, StevanTatalović	831

URBAN DESIGN EDUCATION FOR PLACEMAKING: BETWEEN COGNITION AND EMOTION

Jelena Živković¹

Associate Professor, University of Belgrade Faculty of Architecture, Bulevar kralja Aleksandra 73, Belgrade, Serbia, i_zivkovic@ptt.rs

Zoran Đukanović

Assistant Professor, University of Belgrade Faculty of Architecture, Bulevar kralja Aleksandra 73, Belgrade, Serbia, duke@arh.bg.ac.rs

Uroš Radosavljević

Associate Professor, University of Belgrade Faculty of Architecture, Bulevar kralja Aleksandra 73, Belgrade, Serbia, yros@arh.bg.ac.rs

ABSTRACT

The paper explores possibilities for linking knowledge and emotions in urban design education for placemaking.

The concept of placemaking emphasises the need for strengthening connections between people and the places they share. These connections are based not only on knowing but also on experiencing and loving particular places. Besides that, place making refers to a collaborative process of shaping public realm in order to maximize shared value. In this process, urban designers are just one of the actors involved. Therefore, placemaking, as a new paradigm in urban design, asks for reconsidering and strengthening links between aesthetic, social, and technical dimensions of urban design process.

All of this implies not only changes in professional domain, but in the education for urban design as well. The research is based on experiences of two urban design projects from the elective course "Art in Urban Public Spaces – PaPs" at the University of Belgrade - Faculty of Architecture. We analyse various paths of educational urban design process that have been conducted in collaboration with local communities in Belgrade and Negotin, and discuss different possibilities of linking cognitive and emotional aspects in urban design process for placemaking.

Keywords: urban design, placemaking, education, cognition, emotion

_

¹ Corresponding author

INTRODUCTION

In order to reverse the process of urban space production from producing non-places to creation of feelings of belonging and authenticity of space, the concept of placemaking became a new paradigm for urban design and planning. This approach aims on strengthening the connections between people and the places they share so as to form the basis for sustainable urban development (Healey, 1997). Since these connections are established through knowing but also through experiencing particular places - emotional, affective dimensions of urbanism are recognised as important for urban sustainability (Kyle & Chick, 2007)

This adds a new dimension to traditional approaches to urban design, where emphasis was made on the urban design *project* and professional *cognition* and *knowledge* of space. Placemaking approach refers to a collaborative *process* of shaping public realm in order to maximize shared value (PPS, 2012). This process is deeply linked to lay knowledge and *emotions* of people, and in this process, urban designers are just one of the actors involved. In that sense, the concept of placemaking asks for reconsidering relations between emotions and cognition/knowledge, as well as the relations between aesthetic, social, and technical dimensions of urban design - in order to strengthen links between all actors involved and places they make through process of urban design.

All of this leads to necessary changes in urban design professional practice, but also to changes in urban design education. In that context, this paper explores how may urban design education for placemaking be conceptualised, and more precisely, how to educate future generation of urban design professionals so that they are able to integrate emotions with knowledge in the process of placemaking?

In order to answer this question two experimental urban design educational projects for placemaking will be presented, in which possibilities and forms to link cognitive and emotional aspects of urban design process will be explored. The paper is organised in two parts. In the first part we present the concept of placemaking as a new paradigm in urban space development and implications that it has for the discipline of urban design. In the second, after presenting an overview of forms of urban design education, we explore different paths of educational urban design process, based on experiences of the elective course "Art in Urban Public Spaces – PaPs" at the University of Belgrade - Faculty of Architecture.

PLACEMAKING AS A FRAMEWORK FOR URBAN DESIGN

Placemaking and urban design

Placemaking is a people-centered, multi-faceted approach to the planning, design and management of public spaces. It is based on a local community's assets, inspiration, and potential and uses them in order to create good public spaces that invite greater interaction between people and foster healthier, more social, and economically viable communities. It is both a process and philosophy of acting in human environment (PPS, 2012) and a "hands-on tool for improving a neighbourhood, city or region" (Project for Public Spaces + Metropolitan Planning Council, 2008). It can be used to improve different spaces that comprise the gathering places within a community such as: streets, sidewalks, parks, buildings, etc. Since personal and cultural identities are related to places, the role of urban design as artistic, technical and socio-cultural process become crucial to place-making (Madanipour, 1996).

Urban design is the process and product of designing and shaping built environment: cities, towns and villages. It is focused on making connections between people and places, movement and urban form, nature and the built fabric. In order to do this, urban designers need to address technical, social and expressive concerns, through visual and verbal means of communication (Madanipour, 1996). Although urban design operates from the macro scale of the urban structure

(planning, zoning, transport and infrastructure networks) to the micro scale (street furniture and lighting) - much of urban design is concerned with the design and management of public spaces and the way they are used and experienced.

Urban design involves placemaking as creation of a setting that imparts a sense of place to an area. This can be done through establishing identifiable neighbourhoods and aesthetically pleasing public places, unique architecture and identifiable landmarks, and through a human element established by compatible scales of development and on-going public stewardship" (The Center for Design Excellence, 2013).

But placemaking is more than just creating better design of public spaces, since the possibilities for making places solely through physical design are limited (Seamon, 1993). It facilitates creative patterns of activities and connections (cultural, economic, social, and ecological) that define a place and support its on-going evolution. In that sense, "placemaking is how we collectively shape our public realm to maximize shared value" (PPS, 2012). An effective placemaking process capitalizes on a local community's potential for creating good public spaces that promote people's happiness, health and feelings of well being, and that have meaning and value for different people (Djukanović & Živković, 2015).

Cognitive and emotional aspects of urban design: traditional and placemaking approach

In the placemaking theoretical framework the emphasis is made on the urban design process that generates valuable relations between people and places. These relations are cognitive but emotional, as well. Maximizing *shared value* is deeply linked with *emotions* of various people included in this process – citizens, visitors, government representatives and urban designers, as well. But this dimension is not well developed in traditional approaches to urban design.

Traditional (technical and artistic) approaches to urban design take into account emotions towards space, but reduced to the emotions of the author of the project, and conceptualised more as a result than as a part of urban design process. In technical (problem-solving) approach to urban design, projects are based on *information, cognition and* knowing of spaces. In the artistic approach to urban design, design projects are based on aesthetic norms, knowledge and emotions towards (real or imagined) spaces, but are linked solely to urban designer - the author of the project. In both cases, emotions of local people towards spaces are seen as a consequence of the project, not as its part.

Placemaking framework reminds us that knowledge and feelings are separate domains, but both important for quality of place and its sustainability. Contemporary approaches to urban planning and design work on integrating emotions in development process. One of the best known is the use of ICT (cognitive and smart city solutions) for marking individual citizen's emotions towards space for various purposes. In this case, citizens' emotions are conceptualised as impersonal information. This contributes to the placemaking by enabeling the identification of important places and citizens attitudes towards them.

But we argue that cognition and emotions can be linked in various forms in urban design process and that this is important for achieving creativity in placemaking process. Testing possible relations can be done by innovative urban design practice, but also through initiating experimental educational urban design projects, that at the same time prepare students for future placemaking practice.

LINKING COGNITION AND EMOTION IN URBAN DESIGN EDUCATION FOR PLACEMAKING

Forms and approaches to urban design education

The Urban design is a discipline oriented towards practice and production of urban space. Therefore, the concept of "learning by doing" ² is widely recognised and practiced in various forms as a teaching perspective in urban design education (Scot Brown, 1990; Đukanović & Živković, 2015).

Though learning about theories of urban design is usually achieved through seminars, basic unit in most bachelor and master urban design academic programs is urban design studio. Work in an urban design studio enables students to connect theoretical knowledge and urban design methods and technics while working in specific urban context (Milovanović- Rodic, D. et al., 2013). Besides that, smaller, elective courses can be organised, based on *problem-based learning approach* (PBL) that teaches not only the information but also the thinking strategies concerned. It involves students to problem solving, therefore increasing their interest levels in the subject. Besides transferring information, this approach makes knowledge more memorable (Altomonte, 2012).

The orientation towards placemaking (as a basis for sustainability) implies broadening the basis and creating synergies in making sustainable urban places. This means that communication and collaboration of all interest groups and individuals is prerequisite for sustainable placemaking. In this way learning by doing in urban design education means not only learning theoretical concepts and developing artistic and technical skills, but also *learning how to communicate and collaborate* with various stakeholders, professionals and broad public in process of placemaking. And this can be done properly and effectively only in natural setting of working together on real-life urban problems. Therefore many contemporary urban design curriculums are developed to work in partnership with local authorities and citizens in testing solutions for real problems through students design projects. In this way students learn about diversity and conflictual nature of urban development values and approaches (Archeworks, 2011).

Possible ways of linking cognition and emotion in urban design process will further be explored on two experimental urban design educational projects for placemaking.

Case studies

Educational Project 1 - Step to the River, Belgrade

a) Project description

The aim of the project "Step to the River" was to bring people from the city center to the riverbanks by using temporary spatial interventions. The idea was to sprinkle pedestrian pathways with the magnetic "art dust": small-scale but numerous temporary design interventions and events, which will lure people into taking these shortcuts between the existing public spaces. The purpose was not to speed up the walk but to make it more enjoyable, thus increasing the intensity of the urban experience.

The experimental project "Step To the River", was conceived as a simultaneous presentation of the results of 13 workshops that were conducted by interdisciplinary teams of students that worked with the team of mentors, local community and officials. In making or supporting project 3 Academic institutions, 7 national public institutions, 15 local public institutions, 2 institutions of

² "Learning by doing" means learning from experiences resulting directly from one's own actions. Actions do not only follow thinking – they induce thinking. The thinking generated from action is relative to the action and this recursive practice is the essence of experiential learning (Đukanović & Živković, 2015)

civic sector and 22 private sector participants were included. The project was structured in 3 phases: initiation, concept design, and realisation - each having its own spatial and media results that were presented to the public, thus generating support for the next phase. Each of these stages had material results which were presented to public institutions and local citizens with an idea to gain their active support (Figure 1)

- Phase 1 initiation: Defining goals, objectives and fields of action. Identification of public spaces and analysis of their potentials for public art, done by students of Faculty of Architecture. Result: Catalogue of public spaces in central core
- Phase 2 conceptualization and design: 13 workshops were organized as interdisciplinary teams of students who worked together with interdisciplinary team of mentors on developing design solutions for chosen sites. Result: Catalogue of projects - digital simulation of public art interventions in space.
- Phase 3 realization: Design projects were modified due to chosen path to the river and budget. Different forms of public art were presented to broad public. Result: one-day event on 10 locations forming a path to the river

The one-day event "Step to the River, organised as a series of public events on the chosen pedestrian paths, took place on the 12th of July 2003 and was opened by the city mayor. More than 2,500 people attended the event, and after decades of living in oblivion, the old Sava port belonged to the people again, at least for a day. By increasing density of events the intensity of urban experience and recognition of the place increased, too (Živković&Đukanović, 2010).

b) Linking cognitive and emotional aspects in process of urban design for placemaking

In the first phase of the project, knowledge on citizen's emotions towards urban space was indirectly recognised through study of literature and art that expressed emotional response of the authors. This knowledge was included in the "Catalogue of public spaces in central urban core" as a description of the central and marginal urban spaces, and helped find locally valuable public spaces.

Second phase of the project mainly took place *in situ*. The basement of the Museum of the applied arts became "classroom" and a meeting point. This enabled students to actually live on the location for almost two months. In that way, they become intimately connected to the space and got to know local people as well. They proposed projects as "Catalogue of digital simulation of spatial interventions in space" based on their visions, emotions and knowledge of people and their emotional relations to space.

For some groups, work with local community was even more intense. In the third phase – realisation of the "Step to the river" event – they actually worked together, sharing space, time, feelings and ownership of the project.



Figure 1: Step to the river project, PaPs archive

3rd INTERNATIONAL ACADEMIC CONFERENCE

Educational Project 2 - Vino-grad: The Art of Wine, Negotin

a) Project description

The aim of the project "The Art of Wine" was to shed a light to a wine region of Negotin and to help activating its spatial and cultural potentials through students' projects of small spatial interventions and cultural programs. On conceptualising and designing the projects, students worked with the mentors, wine experts, local community and officials of the City of Negotin.

Work on the project was organised in three phases: initial, exploration and design phase. In initial phase, students were introduced to wine culture through serial of lectures and workshops and individual literature research. Second phase started with getting to know the Negotin region, cultural landscapes, people and the city. Through communication with local authorities and citizens, students gain knowledge about the space and culture. Based on direct experience of place, and knowledge gained through communication, research and lectures, students proposed design solutions to small but essential interventions that were supposed to re-establish the identity and promote the specific place.

Third phase included exhibition and promotion of students work in several spaces, thus informing local people and showcasing spatial and cultural potentials of the place. The semester works were finished in spring 2012, and after three successfully exhibitions held the same year, the Municipality of Negotin decided to realize the project named: "Rogljevo wine and jazz festival" (Đukanović & Živković, 2015.b).

b) Linking cognitive and emotional aspects in process of urban design for placemaking

In the first phase, students' emotional response was induced through direct contact with elements of wine culture. Though connection with the place (Negotin) was not established, these steps enabled widening views and preparing students for more open attitude towards people and places they would be able to experience in the second project phase.

The second phase brought both direct experience of place and people by visiting and getting to know Negotin region. At the same time, connection to the local community was established in short, but intense workshops and discussions that informed design projects but also started constructing relations between local officials and inhabitants and young designers (Figure 2).

The third phase enabled students and local representatives to work together on presenting the results in chosen locations. The exhibition and presentation was very successful on many levels. Although co-working and sharing values didn't happen between students-designers and citizens, positive emotional response happened. In this case, local government appreciated student's efforts and provided support for realisation of one of the projects.



Figure 2: Vino-grad: The Art of Wine, PaPs archive

DISCUSSION

In presented projects at least three new positions of linking people's emotions with knowledge in urban design process, can be identified.

The first one stresses designers (as well as decision-makers) knowledge on emotions of citizens towards certain spaces. When these emotions are sensed, identified and marked they can be used to identify and compare urban spaces that people value the most, or that are in a need for intervention. In the broadest sense, this forms a part of cognitive city, considering cognition as the ability of a system to learn from previous experiences and adapt its behaviour based on them (Mostashari et al., 2011). For urban design education, this relates to the information basis for project planning and design.

The second position relates to gaining emotions (of students) through better knowing of certain urban space. This means not only knowing physical attributes of space (traditional approach), but also relates to knowing local people and all living things that inhabit the space. Though emotional respond can be linked to specific formal and aesthetic features as well as to the history of space, intensity and durability of feelings can be linked to the time spent on location and to possibilities of knowing it in a more complex ways. For urban design education this is linked to place-based learning approach (Nikezić, 2013) as part of process of placemaking.

Finally, the third possible link between cognitive and emotional aspects in urban design, considers working together on urban design project through emotions of both designers and citizens. For this to happen, personal openness, time spent together, quality of communication and small, but visible results, are necessary preconditions for success in process of placemaking.

CONCLUSIONS

The concept of placemaking asks for reconsidering relations between knowledge and emotions in process of urban design. Therefore, in this paper we presented and analysed two paths of educational urban design process that have been conducted in collaboration with local communities in Belgrade and Negotin, and identified different possibilities of linking cognitive and emotional aspects in urban design process for placemaking.

The research results showed that besides traditional (technical and artistic) approaches to urban design, in which knowledge and emotions of the author/urban designer about the physical space can be integrated into urban design project, at least three more positions of linking people's emotions with knowledge in process of urban design can be identified:

a) knowledge on emotions, b) gaining emotions through better knowledge on space and

c) working together on design projects through emotions, sharing values and knowledge, and thus contributing to placemaking.

Acknowledging that cognition and emotions can be linked in various forms in urban design process is important for conceptualising education for placemaking. In that sense, urban design education for placemaking should not be developed as a prescription of a new educational model. It may and should encompass various approaches to urban design that, throughout academic curriculum, enables students to develop their artistic, technical and communication skills as well as sensitivity towards real-life situations, thus helping them to become informed, creative, collaborative and pro-active partners in placemaking processes.

*This paper is prepared as part of the project: Spatial, Environment, Energy and Social Aspects of Developing Settlements and Climate Change - Mutual Aspects, which is financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia, No. TR 36035.

REFERENCES

Altomonte, S. (ed.).2012. EDUCATE: Framework for Curriculum Development, EDUCATE Project Partners, www.educate-sustainability.eu (8.10.2013).

Archeworks. 2011. Sustainable Urban Design Program: Curriculum 2011 – 2012, www.archeworks.org/.../2011-12%20Curriculum%20and%20Speakers.pdf, (10.10.2013).

3rd INTERNATIONAL ACADEMIC CONFERENCE

Đukanovic, Z., Živkovic, J. 2015. A "Public Art & Public Space Program: Learning, But Doing!" *ANNALES-Anali za istrske in mediteranske studije-Series historia et sociologia*. Vol . 25/1, pp. 49-65, Koper: Historical Society of Southern Primorska of Koper

Đukanović, Z., Živković, J. (eds.).2015. b *Vino-Grad: The Art of Wine*, Beograd: Univerzitet u Beogradu Arhitektonski fakultet

Healey, P. 1997. Collaborative Planning: Shaping Places in Fragmented Societies, Vancouver: UBC Press

Kyle.G., Chick,G. 2007. The Social Construction of a Sense of Place. Leisure Sciences, 29: 209-225.

Madanipour, A. 1996. Design of Urban Space: An Inquiry Into A Socio-Spatial Process, Chichester and New York: Wiley.

Milovanović-Rodic, D., Živković, J., Lalovic, K. 2013. "Changing architectural education for reaching sustainable future: A contribution to the discussion". *Spatium*, (29): 75-80.

Mostashari, A., Arnold, F., Maurer, M., Wade, J.: Citizens as sensors: the cognitive city paradigm. *International Conference & Expo on Emerging Technologies for a Smarter World*, pp. 1–5. IEEE (2011)

Nikezić, A.(ed.).2013. *Playing Landscape – Košutnjak*, Belgrade: University of Belgrade Faculty of Architecture Project for Public Spaces. 2012. *Creativity and Placemaking*, http://www.pps.org/reference/creativity-placemaking-building-inspiring-centers-of-culture (10.10.2013).

Project for Public Spaces + Metropolitan Planning Council. 2008. *A Guide to Neighborhood Placemaking in Chicago*, http://www.placemakingchicago.com/cmsfiles/placemaking_quide.pdf, (10.10.2013)

Seamon, D. 1993. Dwelling, Seeing, and Designing: Toward a Phenomenological Ecology, NY: State University of New York Press

Scot Brown, D. 1990. Between Three Stools: A Personal View of Urban Design Pedagogy, *Architectural Design: Urban Concepts*, Academy Groups LTD.

The Center for Design Excellence. 2013. The Art Of Creating And Shaping Cities And Towns http://www.urbandesign.org/ (11.4.2014)

Živkovic, J., Đukanovic Z. 2010. "Small Steps Towards Big Vision: Taking People To The River (Again) in Belgrade", *PORTUS 20*, Venezia: RETE, pp 36-41