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**Peter Marolt**

**VZPODBUJANJE LIKOVNE OBČUTLJIVOSTI  
IN OBČUTKA ZA PROSTOR NA PRVI STOPNJI  
UNIVERZITETNEGA ŠTUDIJA URBANIZMA  
ENCOURAGEMENT OF FINE ARTS SENSITIVITY  
AND SENSE OF SPACE ON THE FIRST LEVEL OF  
UNIVERSITY STUDY OF URBAN PLANNING**

**International Scientific Conference and Workshop  
Smart Urbanism - Teaching Sustainability**

**Ljubljana, Slovenia, 19. - 21.6.2014**

[http://www.fa.uni-lj.si/filelib/obvestila/2014/pametni\\_urbanizem\\_2014\\_090614.pdf](http://www.fa.uni-lj.si/filelib/obvestila/2014/pametni_urbanizem_2014_090614.pdf)

Gibanje po prostoru je eden temeljnih vidikov spoznavanja s prostorom. Poleg risbe, različnih računalniških predstavitev in modela prostora, za bodoče oblikovalce prostora, obstajajo tudi manj ustaljeni načini dojemanja in predstavitve prostora, ki se navezujejo na širše področje likovne umetnosti. Pri kolažu ali trganki se sicer ne obremenjujemo z realno obstoječim prostorom, a lahko predstavljata koristno orodje tudi bodočega arhitekta urbanista. V kontekstu pedagoškega procesa gre za vajo, ki glede na minimalne omejitve in kolikor toliko svoboden pristop h kompoziciji, študente posredno navaja k boljši orientaciji v dvodimenzionalnem prostoru.

Pri določenih vajah gre za način, kako študente napeljati k opazovanju in izluščiti takšne sestave elementov, ki v sebi nosijo nek likovni smisel. Pri tem je pomembno vzpodbujanje slušateljev, da celo v navideznem neredu prepoznajo skrito urejenost. Namen tovrstnih likovno-kompozicijskih vaj je pri študentih vzbuditi radovednost, inventivnost in kreativnost. S tovrstnimi vajami jih seznanjamo tudi s tipnim vidikom likovne umetnosti in posredno razvijamo ročne spretnosti. Predvsem pa s tem lahko v oblikovanje prostora vnesemo sočnost, domiselnost in nekonvencionalni pristop likovnega ustvarjalca.

Vzdušje v prostoru je na neverbalni ravni mogoče predstaviti s pomočjo likovnega izraza. Smisel vaj, ki se sicer bolj kot ne tičejo slikarskih tehnik, pa je posredno razvijati občutek za elemente, ki prostor soustvarjajo, od svetlobe do teksture na primer, kar bi študentom kasneje koristilo pri oblikovanju prostora. Likovno razmišljanje pa lahko dejansko predstavlja abstraktno metodo, ki posredno usmerja k nekemu splošnemu modelu kako pristopati k vsaki kompleksni oblikovalski nalogi.

*Movement across space is one of the fundamental aspects of discovering space. In addition to the drawings, different computer presentations and model, for future space designers there are existing also less conventional methods of perception and representation of space, which are related to the broader field of fine arts. In a collage or torn paper technique we do not worry over the real existing space, but can be a useful tool for the future architect urban planner. In the context of a pedagogical process, it is the practice, which considering the minimum limits as far as free approach to composition gets students indirectly accustomed to better orientation in two-dimensional space.*

*In certain tutorials, it goes more for the way to bring students to the point of observation and to distinguish elements in the composition that have an art meaning. In the process, it is*

*important to encourage listeners to identify hidden orderliness in an even seeming mess. The purpose of such fine arts compositional tutorials is to raise a curiosity, inventiveness and creativity in students. In such a manner, we familiarize them with the tactile aspect of the fine arts and indirectly we develop hand making skills. But mainly with that we may bring in the space design field the juiciness, imagination and unconventional approach of fine arts creator.*

*The atmosphere in the space is possible to represent on the nonverbal level by the means of fine art expression. The meaning of tutorials, which are more than not pertinent to painting techniques, however, are developing indirectly a sense of components that are co-creating a space, from the light to the textures as example, what would later benefit students in the space design field. Fine arts thinking can actually represent an abstract method which indirectly leads to some general model of how to step in any task of complex design.*

MAROLT, Peter. Encouragement of Fine Arts Sensitivity and Sense of Space on the First Level of University Study of Urban Planning. V: FIKFAK, Alenka (ur.), Smart Urbanism: Teaching Sustainability: Book of Proceedings. (Scientific Meeting from the Field of Urbanism, Ljubljana, 19th-21st June 2014.) Faculty of Architecture, Ljubljana, 2014, str. 133-145, ilustr. [COBISS.SI-ID 3050884]

**Lara Slivnik**

**THREE-HINGED STRUCTURES IN A HISTORICAL  
PERSPECTIVE.**

**Second International Conference Structures and  
Architecture, ICSA 2013**

**University of Minho, School of Architecture**

**Guimarães, Portugalska, 23. - 26.7.2013**

<http://www.icsa2013.arquitectura.uminho.pt/>

Portugalsko mesto Guimarães je ponovno gostilo Mednarodno konferenco o konstrukcijah in arhitekturi. Tematika povezovanja obeh področij je pritegnila skoraj 400 arhitektov in gradbenih inženirjev iz več kot 40 večinoma evropskih in severnoameriških držav. Udeleženci konference so konstruktorji, arhitekti ali gradbeniki, ki delujejo v praksi, so raziskovalci in znanstveniki ali pa poučujejo na univerzah.

V štirih dneh smo se udeleženci dobro spoznali. Vsako dopoldne smo začeli z dvema uvodnima predavanjema, ki sta nakazala glavne teme dneva. Čast prvega predavatelja je pripadla španskemu profesorju Félixu Escrigu, ki je predstavil delo Emilia Péreza Piñere, manj znanega rojaka, arhitekta in inovatorja različnih paličnih konstrukcij. Profesor Andrea Deplazes s Zürichške ETH je kritično razmišljal o Arhitektoniki in arhetipih konstrukcije, torej o področju, ki je postalo zelo aktualno po izidu Framptonove knjige leta 1995. Profesor Ulrich Knaack s Tehnične univerze v Delftu se ukvarja z materiali in je predstavil različne možnosti inovacij fasad glede na različna gradiva, energijsko učinkovitost in njihovo funkcijo. Zaslužni profesor Mario A. Chiorino s Politehniko v Torinu je celovito predstavil življenje in delo inženirja Pier Luigi Nervija

v predavanju Arhitektura kot izziv. Ameriški profesor Randolph Langenbach, ki se ukvarja z analizo objektov po potresih, je predstavil samosvoj in nekoliko kontroverzen pogled na potresno odporno gradnjo v predavanju z naslovom Ponovna presoja tradicionalne in moderne gradnje.

Ob konferenci so bili organizirani trije mini simpoziji in posebne sekcije. Splošne sekcije so zajemale obširne vsebine različnih vrst konstrukcij (betonske, jeklene, kompozitne, lesene in zidane, poleg tega pa še membranske ter posebne konstrukcije), Uporabo novih gradiv, Kompleksne oblike in Fasadni ovoj. Z več predavanji je bila predstavljena Uporaba digitalnih pripomočkov, razloženo je bilo Interdisciplinarno delo, Tektonika arhitekturnih rešitev, včasih tanka Meja med arhitekturo in konstrukcijo ter Poučevanje študentov arhitekture in gradbeništva. Sama sem v sekciji Inovativna arhitektura in oblikovanje konstrukcij predstavila prispevek Zgodovinski razvoj tročlenskih konstrukcij.

**Lara Slivnik**

**HRADECKEGA MOST NA TRETJI LOKACIJI**  
**35. zborovanje gradbenih konstruktorjev Slovenije**

**Slovensko društvo gradbenih konstruktorjev**

**Ljubljana, Slovenija, 22.11.2013**

<http://www.sdgc.si/?id=80>

Letošnje leto je bilo Zborovanje gradbenih konstruktorjev Slovenije močno okrnjeno. Gospodarska kriza, ki je posebej močno prizadela gradbeništvo, je prisilila organizatorje, da so tokratno zborovanje organizirali v Ljubljani, brez tujih vabljenih predavateljev, prispevkov pa se je nabralo le za en dan.

Vabljeni predavanji sta imela dva priznana slovenska strokovnjaka. Marjan Pipenbaher je (skupaj z zagrebškim profesorjem Juretom Radićem) pripravil predstavitev načrtov za most med kopnim in polotokom Pelješcem. Gorazd Humar nam je prikazal originalni Stari most v Mostarju, med vojnim obstreljevanjem in opozoril na pomanjkljivosti ponovne izgradnje.

Sledilo je 18 prispevkov, ki so bili razdeljeni na štiri tematske skupine: Mostovi, Konstrukcije, Eksperimentalna in numerična analiza konstrukcij ter Gradbeni materiali. V sekciji Mostovi sem predavala o prestavitvi konstrukcije prefabriciranega mostu na že njegovo tretjo lokacijo. Prispevek obravnava Hradeckega most v Ljubljani, delo inženirja Johanna Herrmanna. V uvodnem delu je predstavljena zgodovina lokacije prvega mostu. Sledi opis mostu na treh lokacijah: na mestu Šuštarškega in Mrtvaškega mostu ter današnja lokacija. Osrednji del je namenjen podrobnemu opisu litoželeznega ločnega mostu: prefabrikacije sestavnih delov, tročlenskega konstrukcijskega sistema, rezultatov preizkusov obtežbenega testa iz leta 1867 ter arhitekturnih, oblikovalskih in urbanističnih značilnosti. Prispevek je zaključen z opisom fragmentov iz življenjepisa inženirja Herrmanna in z dejstvom, zakaj je Hradeckega most izredno pomemben za evropsko industrijsko dediščino.

SLIVNIK, Lara. Hradeckega most na tretji lokaciji = Hradecky bridge at its third location. V: LOPATIČ, Jože (ur.), MARKELJ, Viktor (ur.), SAJE, Franc (ur.). Zbornik 35. zborovanja gradbenih konstruktorjev Slovenije, Ljubljana, Fakulteta za gradbeništvo in geodezijo, 22. november, 2013. Ljubljana: Slovensko društvo gradbenih konstruktorjev, 2013, str. 45-52, ilustr. [COBISS.SI-ID 2952580]

**Lara Slivnik**

**ARCHITECTURE, COMPETITION, PAVILON:**  
**YUGOSLAV PAVILION AT MONTREAL EXPO 67**

**Ephemeral architecture in Central-Eastern Europe in the 19<sup>th</sup> and 20<sup>th</sup> centuries. The Research Centre for the Humanities, Institute of Art History; Hungarian Academy of Sciences in cooperation with CentrArt Association - New Workshop for Art Historians**

**Budimpešta, Madžarska, 28. - 29.11.2013**

<http://www.arthist.mta.hu/index.php/en/esemenyek-2/277-ephemeral-architecture-in-central-eastern-europe-in-the-19th-and-20th-centuries>

V Budimpešti smo se zbrali raziskovalci, predvsem umetnostni zgodovinarji in arhitekti, ki se ukvarjamo z začasno arhitekturo Srednje in Vzhodne Evrope. Tema konference je bila začasna arhitektura, predvsem začasni paviljoni na industrijskih razstavah, tako na lokalnih, mednarodnih ali svetovnih razstavah. Po uvodnih nagovorih smo poslušali prvo uvodno predavanje z naslovom Utopia of Transparency: 19th-Century Exhibition Pavilion Architecture as Mythological Project. Program se je nadaljeval s skupno sekcijo, ki pa je sledila zgodovinskemu razvoju: Architecture, origins, materials; The Hungarian Millennium at the Crossroad of Nation Buildings; 'Western Venues, Eastern Nations.' in 'Eastern Venues, Eastern Nations.'. Drugi dan smo začeli z uvodnim predavanjem, naslov tokratnega je bil Shaping Ephemeral Architecture by the Media. Sledilo je nadaljevanje skupne sekcije z razvojem začasne arhitekture po prvi svetovni vojni: Rise, Fall and Shift of Ideologies; Bridges over the Iron Curtain I; Bridges over the Iron Curtain II in Contemporary Reception of Ephemerality. V sekciji Bridges over the Iron Curtain II sem predstavila Jugoslovanski paviljon na svetovni razstavi v Montrealu leta 1967.

*Yugoslavia built its own pavilions at four World Exhibitions only: in Barcelona (1929), Paris (1937), Brussels (1958), and Montreal (1967). After a short description of the political situation in Yugoslavia in the late 1960s, all six entries awarded at the architectural competition for the pavilion at Montreal EXPO 67 are presented. The first prize and the realization went to Miroslav Pešić. The other awards went to architects Vjenceslav Richter (2nd) and Ivan Štraus (3rd), and the teams of Sima Miljković and Nikola Milutinović (4th), Marko Mušič, Jernej Kraigher and Lojze Drašler (5th) and Ivo Filipčić and Berislav Šerbetić (6th). The analysis of all awarded pavilions is made from the architectural and the political perspective. The Montreal pavilion is described in depth. Pešić designed it as a prefabricated structure made of seven steel triangle prisms with some help from Oscar Hrabovski who took care*



*of the prefabricated construction. The prisms were strung together one beside another in a straight line, but the fourth, sixth and seventh prisms were twisted. The interior, designed by Vjenceslav Richter, was dedicated to four main themes: the role of Yugoslavia in the world, the Yugoslav culture, the Yugoslav economy and tourism, and finally, the political and social organization in Yugoslavia. In its afterlife the pavilion was reconstructed as the Seamen's Museum in Grand Bank, Newfoundland, Canada. The pavilion is analyzed in terms of architectural history, architectural criticism, and political history. A report on how the pavilion was mentioned in Yugoslav and other architectural journals at that time is included as well. Thus, the paper shows the Yugoslav pavilion at Montreal EXPO 67 as an interaction between architectural concepts and politics, i.e., competition entries and national representation in a troubled multi-ethnic country.*

SLIVNIK, Lara. Architecture, competition, pavilion [!]: Yugoslav pavilion at Montreal Expo 67. V: *Ephemeral architecture in Central-Eastern Europe in the 19th and 20th centuries*: Budapest, 28-29th November 2013, Conference hall of Budapest City Archives: [program and abstracts]. Budapest: [s. n.], 2013, str. 35. [COBISS.SI-ID 2957188]

**Andrej Mahovič**  
**RIAS International Convention 2014**  
**UIA Sports & Leisure Group Meeting & Venue Visits**  
**Glasgow, Velika Britanija 15. - 17.5.2014**

V mesecu maju 2014 so v Glasgowu v Veliki Britaniji potekali letna konvencija The Royal Incorporation of Architects in Scotland (RIAS), ki je največji dogodek organizacije in je hkrati največja arhitekturna konferenca v Evropi, strokovna ekskurzija po objektih XX. iger Commonwealtha (Glasgow, Velika Britanija) in sestanek mednarodne skupine International Union of Architects, Sports and Leisure Programme (UIA Sports & Leisure Programme Group). V dvodnevni konvenciji so se zvrstila različna predavanja strokovnjakov s celega sveta, ki so predstavili svoje poglede in razmišljanja o umeščanju in zasnovi objektov za šport in prosti čas, med njimi: Tom Jones (Populous) in Alessandro Zoppini (Studio Zoppini asociati). Predavanja so imela poudarek na dosedanjih izkušnjah arhitektov pri zasnovi športnih centrov za izvedbo mednarodnih športnih prireditev večjih dimenzij ter reševanje problemov projektnih skupin pri načrtovanju in izvedbi tako obsežnih športnih središč in objektov.

Na konvenciji smo prisostvovali tudi člani mednarodne skupine UIA Sports & Leisure Programme, ki smo se udeležili predavanj in sodelovali v razpravah.

Na strokovni ekskurziji smo si mednarodni strokovnjaki programa UIA Sports & Leisure Programme pod vodstvom Iana McKenzieja, člana organizacijskega odbora XX. iger Commonwealtha, pristojnega za razvoj in integracijo prizorišč iger, ogledali objekte in inovativne tehnološke rešitve prenovljenih in novo zgrajeni športnih objektov za namen XX. iger Commonwealtha: nastanitvena vas udeležencev iger (Commonwealth Games Athletes' Village), stadion za hokej na travi (Glasgow National Hockey), plavalni

bazen (Tollcross International Swimming Centre), dvorano in velodrom (Emirates Arena & Sir Chris Hoy Velodrome), stadion (Hampden Park Stadium) in večnamensko dvorano (SSE Hydro). Od zgoraj omenjenih objektov je potrebno še posebej izpostaviti Hampden Park Stadium, ki se ponaša z inovativno tehnološko zasnovano začasne spremembe nogometnega stadiona v atletski stadion. Celotna prireditvena površina je dvignjena s kovinsko podporno konstrukcijo za 2 metra, kar je omogočilo, da se nogometni stadion spremeni v atletski stadion. S to rešitvijo se pridobi večja prireditvena površina, sicer na račun zmanjšanja kapacitete sedežev za gledalce, vendar njihovo število še vedno ostaja znotraj normativa za izvedbo dogodkov, kot so otvoritev iger in tekmovanja v atletiki. Vzporedno z ogledom objektov je potekala strokovna razprava o zasnovi in tehnoloških rešitvah pri načrtovanju in prenovi objektov. Udeleženci smo predstavili poglede na razvoj športnih objektov v prihodnosti, pri čemer smo izhajali iz lastnega znanstveno-raziskovalnega in strokovnega dela. Sestanek skupine UIA Sports and Leisure Programme je potekal v prostorih Glasgow 2014 Board Room, Commonwealth House, Glasgow. Na sestanku mednarodne skupine so prisostvovali člani skupine: Ian McKenzie; Ruth Pujol Blume; Conrad Boychuk; Phillipe Capelier; Benjamin Flowers; Harald Fux; Shlomo Gendler; Meidad Gendler; Mike Hall; Gar Holohan; Geraint John; Tom Jones; Rene Kural; Xinggang Li; Andrej Mahovič; Denes Patonai; Agustin Garcia Puga; Filipp Ramirez; Karin Schwarz-Viechtbauer; Bill Stonor in Pino Zoppini. Na sestanku smo izrekli dobrodoščilo novim članom skupine, naredili krajši povzetek konvencije, seminarja in strokovne ekskurzije, obravnavali izvolitev in predloge za izvolitev novega predsednika skupine, delo in prihodnje aktivnosti skupine ter imeli predstavitev dosežkov posameznih članov skupine s področja načrtovanja objektov za šport in prosti čas. Svoje delo so predstavili: Xinggang Li; Ruth Pujol Blume in Filipp Ramirez; Benjamin Flowers; Agustin Garcia Puga in Meidad Gendler. Na sestanku smo se dogovorili o tesnejšem sodelovanju članov skupine na področju izmenjave znanja in izkušenj med člani pri načrtovanju športnih objektov, meduniverzitetnem sodelovanju in sodelovanju članov v novi mednarodni skupini za posodobitev normativov za načrtovanje objektov za šport in prosti čas ter doseganje večje prepoznavnosti skupine v mednarodnem okolju.

*In May 2014, a three-part event took place in Glasgow (UK): the annual convention of The Royal Incorporation of Architects in Scotland (RIAS), a study excursion of the XX. Commonwealth Games facilities, and a meeting of the International Union of Architects, Sports and Leisure Programme (UIA Sports & Leisure Programme Group). The two-day convention hosted many renowned experts from around the world who shared their views and thoughts on the placement and design of sports and leisure facilities. The study excursion focused on innovative technological solutions of the renovated and newly constructed sports facilities for the XX. Commonwealth Games. The main purpose of the final meeting of the UIA Sports & Leisure Programme Group was to present achievements of individual members of the group in the design of sports and leisure facilities, and to discuss the future orientation and activities of the group.*

**Andrej Mahovič**  
**ŠPORTNI CENTRI, IGRISČE ZA VSE LJUDI**  
**Ljubljana, Slovenija, 26.9.2012**

Seminar 'Športni center, igrišče za vse ljudi' je del izobraževalnega programa 'Mednarodna šola managementa infrastrukture za šport in prosti čas'. Program je razvil konzorcij, v katerem sodelujejo univerze, podjetja, izobraževalni centri in združenja upravljavcev infrastrukture. Pri razvoju vsebine seminarja so sodelovali: Spolint, Inštitut za šport, Univerza v Ljubljani, Fakulteta za šport in Fakulteta za arhitekturo, Univerza na Primorskem, Pedagoška fakulteta Koper, Znanstveno-raziskovalno središče, Ministrstvo za infrastrukturo in prostor, Direkcija Republike Slovenije za ceste, Inštitut za športne inovacije Flisek d.o.o., Koren Sports, Agencija za športne avanture in potovanja, Športni center Ilirija in Fit Camp PrejPotem.

Seminar je potekal v Ljubljani 26. Septembra 2012. Udeležilo se ga je štirideset predstavnikov univerz, občin, javnih zavodov, podjetij in drugih upravljavcev infrastrukture za šport in prosti čas.

Predavatelji in organizatorji seminarja so bili: prof. dr. Milan Žvan, dekan Fakultete za šport, Univerza v Ljubljani; prof. dr. Rado Pišot, Univerza na Primorskem, Pedagoška fakulteta Koper, Znanstveni – raziskovalno središče; dr. Milan Hosta, Spolint, Inštitut za razvoj športa; Mojmir Flisek, Flisek d.o.o., Inštitut za športne inovacije; asist. Andrej Mahovič, Univerza v Ljubljani, Fakulteta za arhitekturo; Gregor Pečovnik, direktor Športnega centra Ilirija; Jože Jenšterle, direktor Združenja športnih centrov Slovenije in Tatjana Janežič, poslovna sekretarka Združenja športnih centrov Slovenije.

Vsebina seminarja je bila usmerjena v spreminjanje filozofije / paradigme športa, prostega časa ter infrastrukture v državi. Od načrtovanja in izgradnje novih velikih prireditvenih objektov se bo razvoj v prihodnosti usmeril v:

- rekonstrukcije in obnove obstoječih športnih centrov, objektov in površin,
- zagotavljanje pogojev za trajnostni razvoj,
- razvoj sistema 'socialnega upravljanja',
- uvajanje novih energetsko učinkovitih in ekološko sprejemljivih tehnologij ter
- razvoj inovativnih programov za vse ljudi.

Seminar je bil namenjen:

- ministrstvom in državnim institucijam, ki oblikujejo državne politike in pripravljajo zakonodajo na področju športa, prostega časa ter infrastrukture,
- občinam, ki so lastnice in investitorice v infrastrukturo,
- upravljavcem infrastrukture ter
- podjetjem, ki poslujejo na trgih športa, prostega časa ter infrastrukture (urbanisti, projektanti, gradbeništvo, industrija opreme in rekvizitov, turistična industrija, organizatorji prireditev, ponudniki programov in storitev na področju športa in prostega časa).

Na seminarju so potekala predavanja s področja:

- Filozofija športa in športna etika.  
Tema: Zdravje, vseživljenjsko izobraževanje, uspeh,

zaupanje, igrivost, veselje in sproščenost; Predavatelj: dr. Milan Hosta, Spolint, Inštitut za razvoj športa.

- Filozofija športa in športna etika / Vrste programov in storitev  
Tema: Gibalni razvoj otroka in gibalne navade ljudi skozi vse življenje; Predavatelj: prof. dr. Rado Pišot, Univerza na Primorskem, Pedagoška fakulteta Koper, Znanstveno-raziskovalno središče Koper.
- Standardi in normativi načrtovanja in gradnje infrastrukture za šport in prosti čas objektov in vadišč / Prenova športnih objektov / Drugi športni objekti / Vrste programov in storitev  
Tema: Sodobna zasnova športnih centrov; Predavatelj: Mojmir Flisek, Inštitut za športne inovacije, Flisek d.o.o.  
Tema: Vsebinska in tehnološka prenova športnega centra Ilirija; Predavatelj: Gregor Pečovnik, direktor Športnega centra Ilirija.  
Tema: Urbanistično načrtovanje infrastrukture za šport in prosti čas; Predavatelj: asist. Andrej Mahovič, Univerza v Ljubljani, Fakulteta za arhitekturo.  
Tema: Rekonstrukcije, obnove in posodobitve obstoječe infrastrukture za šport in prosti čas; Predavatelj: asist. Andrej Mahovič, Univerza v Ljubljani, Fakulteta za arhitekturo.

Po predstavitvi posameznih tem na seminarju se je razvila razprava. Predavatelji so odgovarjali na vprašanja in predloge slušateljev. Oblikovali smo naslednja priporočila za razvoj infrastrukture za šport in prosti čas:

- Država (ministrstva, direktorati, državni zavodi, Fundacija za financiranje športa), občine (lastnice ter investitorice), upravljavci in uporabniki infrastrukture (javni zavodi in podjetja, občinske uprave, društva, klubi in zveze, Olimpijski komite) ter gospodarstvo (urbanisti, projektanti, gradbeništvo, industrija opreme in rekvizitov, turistična industrija, organizatorji prireditev, ponudniki programov in storitev na področju športa in prostega časa), potrebujejo standarde in normative za načrtovanje, gradnjo, upravljanje, vzdrževanje in uporabo infrastrukture za šport in prosti čas. Pri pripravi standardov in normativov morajo sodelovati občine, upravljavci in uporabniki infrastrukture ter gospodarstvo.
- Demografsko smiselni in ekonomsko učinkovit razvoj regij ter razvoj športa in prostega časa potrebujeta mrežo športnih centrov, ki bo v prostoru opredelila mrežo lokalnih, regijskih, nacionalnih panožnih in olimpijskih športnih centrov.
- Izobraževani program 'Mednarodna šola managementa infrastrukture za šport in prosti čas' ter strokovno usposabljanje upravljavcev infrastrukture se mora vključiti v nacionalni izobraževalni sistem ter zagotoviti finančna sredstva za njegovo pripravo in izvedbo.
- Upravljavci in uporabniki infrastrukture za šport in prosti čas bodo sodelovali v mednarodnem projektu

SMART, v katerem mednarodni partnerji razvijajo nove tehnologije reciklaže gum ter razvoja novih proizvodov iz umetnih trav in športnih podov.

**Andrej Mahovič**  
**UIA Sports & Leisure Group**  
**Sustainable Architecture and Legacy Strategy Seminar**  
**London, Velika Britanija 17. - 19.4.2012**

Sto dni pred otvoritvijo XXX. poletnih olimpijskih iger v Londonu je mednarodna skupina International Union of Architects, Sports and Leisure Programme (UIA Sports & Leisure Programme Group) organizirala tridnevni seminar na temo Trajnostne arhitekture in strategija zapuščine (Sustainable Architecture and Legacy Strategy).

Na seminarju, ki je potekal v Royal Institute of British Architects (RIBA), so sodelovali mednarodni strokovnjaki s področja načrtovanja športnih objektov in objektov za prosti čas, ki so predstavili najnovejše dosežke pri načrtovanju in zasnovi športnih in drugih objektov za poletne olimpijske igre v Londonu 2012. Izvedene so bile naslednje predstavitve: Delivering the Games and Legacy, Ian Crockford, Olympic Delivery Authority (ODA); Designing the Games, Kevin Owens, London 2012 Organising Committee (LOCOG); Designing for Legacy, Tom Jones, Populous Architects; The Olympic Velodrome, Chris Bannister, Hopkins Architects; The Olympic Aquatic Centre, Barbara Bochnak, Zaha Hadid Architects; The Olympic Stadium, Tom Jones, Populous Architects; The Olympic White Water Centre at Lee Valley, Michael Hall, FaulknerBrowns Architects. Udeleženci so dobili vpogled v zakulisje načrtovanja in informacije o poteku izvedbe olimpijskih objektov ter prisluhnili izkušnjam strokovnjakov pri načrtovanju objektov in njihovi izvedbi. Vsakemu predavanju je sledila razprava z udeleženci.. Po zaključku predavanj prvega dne so se v prostorih RIBA zbrali udeleženci seminarja in predstavniki inštituta RIBA ter izmenjali izkušnje in znanja s področja načrtovanja športnih objektov. Razpravi so se pridružili tudi različni strokovnjaki in predstavniki gospodarstva, ki so navezali stike s slušatelji ter izmenjali izkušnje pri načrtovanju, gradnji in umeščanju športnih objektov v prostor.

Drugi dan seminarja je sledila strokovna ekskurzija po olimpijskih objektih, ki smo si jih udeleženci ogledali še pred njihovo javno otvoritvijo. Najprej se je skupina odpravila v olimpijski park, kjer smo si pod vodstvom organizatorja ogledali priprave in izgradnjo celotnega parka. Med predstavljenimi objekti so bili olimpijski plavalni center (The Olympic Aquatic Centre, Zaha Hadid), Velodrom (The Olympic Velodrome, Chris Bannister, Hopkins Architects), olimpijska košarkarska dvorana (The Basketball Arena; Wilkinson Eyre Architects & KSS Design Group), olimpijski stadion (The Olympic Stadium, Populous Architects) ter spremljajoči objekti. Ena največjih zanimivosti pri zasnovi olimpijskih objektov za XXX. Olimpijske igre je, da je bilo kar 40% sedežev za obiskovalce montažnih, prav tako tudi skoraj tretjina objektov, ki so bili po zaključku olimpijskih in paraolimpijskih iger odstranjeni iz prizorišč in je prostor, ki

so ga v času organizacije olimpijskih iger zasedali, bil vrnjen svojemu osnovnemu namenu ali pa so na njem nastali drugi mestotvorni programi. Po ogledu olimpijskega parka smo se podali v Lee Valley White Water Centre, kjer smo si ogledali celotni kompleks novo zgrajenega vodnega parka za potrebe tekmovanj v kajaku in kanuju na divjih vodah. Ta je bil v celoti zgrajen v prostoru rekreacijskega parka kot dodatna ponudba parka po zaključku olimpijskih igre ter za izvedbo svetovnega prvenstva slaloma v kanuju 2015. Nazadnje smo si ogledali tudi O2 Indoor areno v središču Londona, ki je bila nadgrajena za potrebe organizacije olimpijskih in paraolimpijskih iger.

Po ogledu olimpijskih objektov je v popoldanskih urah potekal sestanek mednarodne skupine UIA Sports & Leisure Programme Grup, na katerem sem sodeloval kot zunanji član. Pred pričetkom sestanka sem imel individualne razgovore in predstavitev svojega znanstveno-raziskovalnega, strokovnega in pedagoškega dela za sprejetje v mednarodno skupino UIA Sports & Leisure Group z vodilnima članoma Geraint Johnom in Billom Stonerjem ter predsednikom skupine Ianom McKenziem. Na sestanku se je s položaja predsednika skupine UIA Sports & Leisure Programme poslovil Ian Mckenzie, predstavil pa se je novi direktor Joreg Joppien. Ta je pred potrditvijo članov predstavil svoj program vodenja skupine ter vizijo razvoja in prepoznavnosti skupine v mednarodnem prostoru, kot telesa z mednarodnim članstvom strokovnjakov s področja načrtovanja športnih objektov in objektov za prosti čas. Nato sem imel kratko javno predstavitev svojega dela pred vsemi člani skupine, ki so me po priporočilu izr. prof. dr. Borisa Leskovca ter častnih članov Geraint Johna, Billa Stonerja in dosedanjega predsednika Iana Mckenzija soglasno izvolili za novega člana mednarodne organizacije UIA Sports & Leisure Programme. Ob zaključku seminarja je skupina UIA Sports & Leisure Programme sestavila deklaracijo o planiranju, načrtovanju in konstruiranju glavnih športnih objektov za športne dogodke, pri kateri smo sodelovali vsi člani skupine in jo nato tudi javno objavili in posredovali Mednarodnem olimpijskemu komiteju.

Zadnji dan seminarja je člane mednarodne skupine UIA Sports & Leisure Programme gostil svetovno znani biro za načrtovanje športnih objektov Populous. Predstavili so nam nekaj svojih zadnjih projektov, med njimi The Olympic Stadium (London, Velika Britanija), Silverstone Circuit (Silverstone, Velika Britanija) in Aviva Stadium (Dublin, Irska).

### **Resolutions**

#### **Declaration of the UIA Sports & Leisure Programme Group (London 2012)**

*This results from the group's seminar, 'Sustainable Architecture and Legacy Strategy for London 2012' on 17th April 2012, and the experience of visits to the Olympic Park, Lee Valley White Water Centre, and the O2 Indoor Arena on 18th April 2012*

*In the brief-making, planning, design and construction of facilities for major sports events, the UIA Sports & Leisure Programme Group (the Group) supports limiting the gigantism of Olympic and Paralympic Games. It urges the IOC to review and evaluate the actual sustainability levels of recent Olympic*



and Paralympic facilities during the long legacy periods following the Games and it would be pleased to assist in this exercise. The Group endorses the following principles:

1. To apply and incorporate legacy considerations into all stages of brief-making and design: to build permanent facilities only where there is a proven need and there are sound prospects of realistic after-use; to use existing and temporary facilities wherever possible; to carefully consider the scale of spectator numbers which are appropriate to the sport and to limit the increasing and unrealistic demands of sports bodies and federations.
2. To seek a high standard of design which successfully balances aesthetics with construction budget and with costs in use during the long legacy period: to use architectural competitions where appropriate - but always ensure that the Games' mode is as architecturally satisfying as the legacy mode.
3. To produce sustainable designs with environmental awareness: to follow the principles of reuse, reduce and recycle.
4. To incorporate considerations of accessibility, comfort and friendliness for all with special needs - participants, spectators and all other users.
5. To employ a forward - planning programme which has an appropriately generous timescale.

The group congratulates the organisers of the London 2012 Olympic and Paralympic Games in seeking to achieve and apply these principles. London now has a wide range of existing, new and temporary venues which contain facilities which are either permanent, permanent-but adaptable, temporary and relocatable, or temporary and disposable. At the same time it has used the opportunity of the 2012 Olympic and Paralympic Games to produce a catalyst for the regeneration of one of its poorest developed areas. Hopefully, the London facilities in their Games mode and during the long legacy period which follows, will establish positive guidelines for future major event venues.

**Andreja Benko**  
**WOMEN OF TUM 2013 – STAY CONNECTED**  
**WORLDWIDE**  
**München, Tutzing, Nemčija, 9. - 14.10.2013**

V mesecu oktobru 2013, je Tehniška univerza v Münchnu organizirala seminar z osnovnim naslovom Stay connected worldwide, namenjen promociji žensk v znanosti, ki so študirale na TUM in po študiju z njo tudi aktivno sodelujejo. Seminar, pod pokroviteljstvom Deutsche akademische austausch dienst (DAAD), je trajal pet dni.

Kot vsako leto, je tudi v letu 2013, bila skupina udeleženk izbrana na podlagi priporočil, poročil o delu, promocije in aktivnosti, sestavljale pa so jo udeleženske z različnih strokovnih profilov s področja, medicine, biologije, kemije, ekonomije, matematike, strojništva, managementa, agronomije, kemije, gradbeništva, arhitekture in še nekaterih drugih ved, pri čemer je poseben poudarek na mednarodni udeležbi (Nemčija, Egipt, Grčija,

Bolgarija, Romunija, Indija, Čile, Rusija, Hrvaška, Kazahstan, Turčija, Iran, Kitajska in Slovenija) in na povezovanju med različnimi državami in strokami.

Tema v letu 2013 je bila Go in and win, čemur so bile namenjene različne delavnice za motivacijo, predstavitve dela ipd.

V sklopu petdnevnega programa smo se udeležile tudi dvodnevne seminarja v Tutzingu, Evangeličanski akademiji, ki vsakoletno organizira posebne seminarje namenjene ženskam. Tema v letu 2013 je bila Welt-Raum-Mensch (Svet-prostor-človek), kjer so bila na vrsti predavanja z interakcijo v obliki okrogle mize. Teme so bile naslednje:

- 'Politische Räume: Arenen der Öffentlichkeit' Prof. Dr. Ursula Münch (Direktorin der Politischen Akademie)
- 'City of the Future' Dr. Katharina Beumelburg (Siemens)
- 'Eine Welt, viele Welten' Okrogla miza z Juliano von Krause, Barbaro Lochbihler in Hannah Wettig

Za zaključek so bile organizirane različne delavnice s področja: Alexandertechnik: Jana M. Dobrick, Improtheater: Dorothea Anzinger, Spiraldynamik: Carolyn Ohnesorge, Zeitmanagement: Dr. Stephanie Hann.

Moja izbrana delavnica je Zeitmanagement pri Dr. Stephanie Hann. Skupina je štela 14 udeleženk. Zadnji dan seminarja v Tutzingu je vsaka skupina predstavila svoje delo tudi ostalim skupinam. Posebej zanimivo je bilo to, da je bila vsaka delavnica organizirana po principu brainstorminga in sodelovanja ter spoznavanja različnega principa dela v različnih državah po svetu in širjenju znanja.

Na podlagi predstavitve je vsaka udeleženka prejela tudi certifikat o udeležbi in doprinosu pri reševanju strokovne problematike. Po seminarju v Tutzingu, smo se udeleženke TUM Alumnae vrstile v München, kjer smo obiskale v gradu Nympehnburg, klasični koncert Vivaldija - 4 letni časi. Zjutraj pa nadaljevali delo v prostorih Tehniške univerze v Münchnu, in sicer na temo TUMnet Community, kako ohraniti stike in kako ta nova znanstva in vezi prenesti v skupno sodelovanje delo, na princip osnovnega združevanja, študija na Tehniški univerzi v Münchnu.

Skozi vseh pet dni je bilo delo zastavljeno zelo resno, predvsem pa s poudarkom na mreženju in promociji Tehniške univerze v Münchnu in našem doprinosu k izboljšavi aktivne mreže in povezavi med nami (teambuildingu).

**Andreja Benko**  
**ArchTheo 13-THEORY OF ARCHITECTURE CONFERENCE**  
**Sources of creativity, autonomy & function**  
**Istanbul, Turčija, 4. - 5.12.2013**

V začetku decembra 2013, je v Istanbulu/Turčija, potekala mednarodna konferenca Archtheo 2013, namenjena arhitekturni teoriji in razvoju arhitekture. Konferenco je gostila Mimar Sinan fine arts University, potekala pa je v organizaciji DAKAM (Eastern Mediterranean Academic Research Center) in MSFAU (Mimar Sinan Fine arts University). Konferenca je bila namenjena teoriji, razvoju in pregledu bivanjske arhitekture, saj je bilo vodilo leta 2013 Sources of creativity, autonomy &



function. Konferenca je bila sestavljena iz treh različnih sklopov, tako da so si znanstveni prispevki sledili po vnaprej določenemu vrstnemu redu.

Na konferenci je sodelovalo mnogo strokovnjakov in tudi profesorjev s področja arhitekture na različnih fakultetah za arhitekturo. Tako so bile zastopane države: Egipt, Turčija, Južnoafriška republika, Kanada, Nemčija, Brazilija, Italija, Avstralija, ZDA, Slovenija, Bosna in Hercegovina... Konferenca je potekala vsak dan od 10 ure pa vse do 6 ure popoldan v glavnem avditoriju Mimar Sinan Univerze. Predstavljeni različni pogledi na arhitekturo, arhitekturno teorijo, razvoj teorije, kot tudi prikaz praktičnih primerov iz prakse. Prav tako so organizatorji dali možnost virtualnih predstavitev avtorjev oz. možnost udeležbe na delavnici s študenti. Rezultati delavnice so bili predstavljeni zadnji dan konference. Svoj članek z naslovom *Role of the architect in the building process/Architects' influence on the economical site of building* sem predstavljala drugi dan konference, ki je v celoti objavljen v zborniku konference.

***Role of the architect in the building process / architects' influence on the economical site of building.***

***Architects with their work represent special junction for a user, especially in the design of residential buildings. This paper focuses on work from economic point of view, among the architect and investor who is also user of the house.***

*The emphasis and importance of the responsible architect are shown throughout the whole process of construction of the facility (design + construction). Recently financial side of the planner investment is exceptional important. Users, who decide to build, primarily see just a short-term financial plan. The architect's responsibility in this case is to present also a long-term investment value. The architects' decisions have also a significant impact on the economic side of the investment, which is often quite important to a user. It is thus possible to optimize a construction, with a planned reasonable design and collaboration with user from the beginning of the whole process. Here needs to be mentioned also investors - who are not limited with financial funds but that kind of investors are relatively rare. For the most common investor, it makes sense that he does the outset to determine the investment budget. The importance of the budget defines not only the design but also makes possible to complete the whole building process. As a result of poorly estimated budget are not finished facilities. In this way, the architect and the user bundle trusting bond that is quite important.*

*Unfortunately common practice of Slovenian investors is all too often trying to save a bit of funds by choosing the cheapest design offer. But as a rule, in the process of building a house, it always turns out to be the money twice lost. Often the result of such decision is problematic as active collaboration with architect can provide quality work, thought through design and also economical completion of building. In view of the entire process of construction of a facility, the clients often do not realize that a well chosen architect will be the one, that will draw the plans for individual house, will also get them the permit to build the*

*object, but at the same time he will economically optimize the construction and maintenance of the facility.*

*The architects' aim of this process is indisputably large, as he helps the user to make his future home useful. But he – the architect, should also be aware, that he will not be the user of a designed architecture. The customers' wishes have to be included in a facility, where he primarily has to allow his own expression of creativity, autonomy, but as an expert he has to ensure the functionality of the building and involvement of the building to the traditional architectural landscape. Architect therefore should be familiar with fields of psychology, a sociology, communication, organization, economy and in particular, a consultant, who follows the specific of the chosen environment and satisfies the needs of future user of the facility.*

*This is important for new construction, such as for the renovation of the building - the architect must actively participate and interact with future users of the facility. A responsible architect with a sense of architecture understands and knows what the identity of the landscape is and has integrated approach to the design. Any interference in the landscape is public and with inappropriate intervention in space can affect many people. This is the point, where the profession gets more value and is important, that architects interfere more in the outer coat of the object and leave more creativity, autonomy to the user inside of the house.*

BENKO, Andreja. Creativity : role of the architect in the building process. V: ÇATAK, Neslihan (ur.), DUYAN, Efe (ur.). ARCHITHEO '13 : conference proceedings, December 4-6 2013, Mimar Sinan Fine Arts University, [Istanbul], Creativity, autonomy, function in architecture. Istanbul: Mimar Sinan Güzel Sanatlar Üniversitesi Yayınları, cop. 2013, str. 293-299, ilustr. [COBISS.SI-ID 2955652]

**Andreja Benko  
ISG Graz 2013. Mitten am Rand  
Graz, Avstrija 21.6.2013**

V Grazu (Avstrija), se je tudi leta 2013 že tradicionalno odvijal 4. mednarodni simpozij ISG Graz, namenjen arhitektom in urbanistom. V letu 2013 je potekal pod temo *Mitten am Rand/ On the Fringe*. Simpozij je trajal tri dni, in sicer je bil razdeljen na prvi dan, ko se je odvijala ekskurzija, drugi dan, ki je bil v celoti namenjen predavanjem in zaključni tretji dan, ko je bil organiziran sprehod po mestu.

Udeležili smo se drugega dneva, ki je bil namenjen predavanjem. Glede na tematiko tega leta, je bilo precej predavanj vezanih na temo, izpostavljenih pa je bilo precej podobne problematike iz preostalega evropskega prostora, kot jo zasledimo tudi v Sloveniji. Čez dan se je zvrstilo več predavanj, in sicer:

- Mit einer neuen Raumplanungspolitik gegen die Zersiedlung, Dr. Raimund Rodewald, Stiftung Landschaftsschutz Schweiz
- Zwischenstadt – Städtebauliche Zumutung oder notwendiges Übel in der automobilen Gesellschaft?, Dr. Martin Gegner, Soziologe, Sao Paulo
- Lage, Lage, Lage: Stadt und Konsum im digitalen

Zeitalter, Univ. Prof. Arch. Dr. Wolfgang Christ, Bauhaus-Universität Weimar

- Warum es ums Ganze geht. Baukultur im ländlichen Raum, DI Arch. BDA Manfred Brennecke, ARC Architekten, München
- Bürgerbeteiligung – das Ende von Architektur und räumlicher Entwicklung? Dorfentwicklungsprojekte in Tirol, DI Nikolaus Juen, Land Tirol, Abteilung Bodenordnung
- Dornbirns Dörfer – Städtische Siedlungsgebiete im Bregenzerwald, DI Johann Peer, Architekt und Denkmalpfleger, Wolfurt
- HISTCAPE – Ländliche Baukultur und Landschaft, GF Christian Gummerer, Landentwicklung Steiermark
- Bauen in Welterbe-Regionen und schützenswerten Landschaften, DI Herbert Bork, Büro StadtLand, Wien
- Zürich West – Stadtentwicklung im Randbereich (angefragt)
- Graz Reininghaus – Stadt am Rand und in der Mitte, Stadtrat Univ.Do. DI Dr. Gerhard Rüscher, Graz
- Ländliche Regionen inwertsetzen und in eine neue verheißungsvolle Zukunft transformieren, Landtagsabgeordneter Ing. Josef Ober, Land Steiermark

Predavatelji so mnogokrat izpostavili problematiko etike v arhitekturnem načrtovanju in predvsem neprimerne posege v prostor in s tem rušitev tradicionalne arhitekturne krajine. Namen simpozija je bil tudi navezava kontaktov, med udeleženci, čemur je bil namenjen čas med različnimi predavanji.

V reviji, ki jo ISG Graz izdaja, in je bila na isto temo (Mitten am Rand/On the Fringe), sva ob tej priložnosti objavili tudi dva prispevka na to temo.

BENKO, Andreja. Die Identität der Architekten bestimmt die Identität der architektonischen Landschaft = The architects' identity determines the identity of the architectural landscape. ISG Magazin, ISSN 2309-1215, 2013, [H.] 2, str. 9-12, ilustr. [COBISS.SI-ID 2868612]

**Domen Kušar**

**Mateja Volgemut**

**IZPOLNJEVANJE ZAHTEV VARSTVA PRED POŽAROM IN ZAŠČITE PRED HRUPOM NA PRIMERU VEČSTANOVANJSKIH OBJEKTOV OD A-M V DOLU PRI LJUBLJANI**

**UL FKKT – oddelek za tehniško varnost**

**Klinični inštitut za medicino dela, prometa in športa**

**Združenje za medicino dela, prometa in športa**

**Zbornica varnosti in zdravja pri delu**

**RS MDDSZ – Inšpektorat RS za delo**

**Portorož, Slovenija, 13. - 14.5.2014**

Posvet je bil namenjen strokovnim delavcem za varnost in zdravje pri delu ter požarno varnost, izvajalcem medicine dela, vodstvenim strukturam v podjetjih ter upravnim organom ter drugim zainteresiranim, ki si prizadevajo za varno in zdravo delo. Letošnji osnovna tema je bila podpora trenutni aktualno kampaniji 2014/2015 EU: 'Obvladajmo stres za zdrava delovna mesta' za spodbujanje učinkovitega obvladovanja psihosocialnih

tveganj in stresa, povezanega z delom, kar postaja eden najpomembnejših problemov, tudi pri nas.

Najin prispevek je prikazoval izpolnjevanje zahtev s področja varstva pred požarom in zaščite pred hrupom, ki sta dve od bistvenih zahtev skladno z Zakonom o graditvi objektov. Obravnaval je projekt 13 večstanovanjskih objektov v občini Dol pri Ljubljani kot primer celovitega urejanja prostorske enote od prostorskega načrtovanja do izvedbe objektov.

Projekt se je začel z izdelavo izvedbenega prostorskega načrta in nadaljeval s projektno dokumentacijo, ki je še podrobneje določila zahteve s področja varstva pred požarom in zaščite pred hrupom, ki sta jih morala tako prostorski načrtovalec kot projektant smiselno vključiti v projekt.

Prostorski akt je določil tudi ukrepe, ki se nanašajo na urbanistično zasnovo območja in ukrepe za zaščito pred naravnimi in drugimi nesrečami. Študija požarne varnosti, kot sestavni del projektne dokumentacije, je določila ukrepe za zagotovitev predpisane ravni požarne varnosti v objektih.

V elaboratu zaščite pred hrupom, je bilo predvideno, da bo objekt ob klančini v podzemno garažo bolj izpostavljen hrupu in bodo zato potrebni dodatni ukrepi zniževanja ravni hrupa. Navedeni ukrepi so bili predstavljeni z načrti, detajli arhitekture in fotografijami.

KUŠAR, Domen, VOLGEMUT, Mateja. Izpolnjevanje zahtev varstva pred požarom in zaščite pred hrupom na primeru večstanovanjskih objektov od A-M v Dolu pri Ljubljani. V: Varstvo pri delu, varstvo pred požari in medicina dela : dvodnevni posvet z mednarodno udeležbo, Portorož, 13.-14. 5. 2014. Ljubljana: Fakulteta za kemijo in kemijsko tehnologijo, Oddelek za tehniško varnost, 2014, str. [1-38]. [COBISS.SI-ID 3068036]

**Domen Kušar**

**Mateja Volgemut**

**THIRTEEN YEARS OF MRT – RESULTS, OPTIONS AND DILEMMAS**

**The 16<sup>th</sup> International Conference on Geometry and Graphics, Unit for Geometry and CAD**

**University of Innsbruck**

**Innsbruck, Avstrija, 4. - 8.8.014**

<http://geometrie.uibk.ac.at/icgg2014/>

Konferenca, ki jo je organiziralo Mednarodno združenje za geometrijo in grafiko (ICGG) je bila namenjena strokovnjakom, raziskovalcem in pedagogom, ki se ukvarjamo s širokim področjem geometrije in grafike. Na konferenci je sodelovalo preko 200 udeležencev z vsega sveta (večina je bila iz Japonske, Kitajske in Avstrije), ki smo predstavili svoje novosti na področju geometrije in grafike ter si izmenjali pedagoške in strokovne izkušnje.

*During the 2013-2014 academic year, the 13th annual test of spatial ability is being performed at the Faculty of Architecture of the University of Ljubljana.*

*The first goal of the test is to obtain information about spatial ability of first-year students. Thus, the test is performed at the beginning of the academic year and covers the population of first-year students. Several ways of checking spatial ability exist, since this is a complex field that contains various aspects of spatial ability. At*

the Faculty of Architecture, we use the Mental Rotation Test which is one of generally recognized tests for checking spatial ability. The conditions of the test have stayed the same throughout the years (time, exam papers etc.) which enables us to objectively compare different generations.

Considering the structure of the test, its primary goal is to check the capability of mental rotation, which is an integral part of spatial ability. More than 2000 ( $n=2094$ ) students have performed the test up to now. Besides basic data about generations, for the past three years we have also been comparing the differences in terms of left-handedness and right-handedness. The results show no statistically provable differences. But it is true that the tested population of left-handed students is, despite the above, relatively small ( $n=66$ ) even though it proportionately does not deviate from the share of the entire population. An interesting phenomenon is also the poorer results of each third generation, which has been appearing throughout the years. This difference has been statistically proven for 2009 and 2012, while the difference for 2003 and 2006 has not yet been statistically proven.

Processing of results with the help of statistical software makes it possible to check various hypotheses from the area of spatial ability and provides interesting conclusions, presented in the article. A large digital database also makes it possible to evaluate the test and the students' approach towards solving it. This opens up new possibilities in the area of comprehensively treating spatial ability and, at the same time poses new questions and dilemmas. One such dilemma is the existing scoring system.

Results obtained in the joint project of the Faculty of Architecture of the University for Technology and Economics in Budapest, Ybl Miklos University for Architecture and Civil Engineering of the Szent Istvan University of Budapest and the Faculty of Architecture of the University of Ljubljana namely show that the existing scoring system is not the most appropriate since it does not provide the envisaged normal distribution of the sample. Based on obtained data, a new scoring system has been proposed which enables a normal sample distribution.

KUŠAR, Domen, VOLGEMUT Mateja: Thirteen Years of MRT – Results, Options and Dilemmas. V: SCHROCKER, Hans Peter, HUSTY Manfred. The 16th International Conference on Geometry and Graphics, Innsbruck, August 4-8, 2014. Program and Abstracts. Innsbruck, University of Innsbruck, 2014, str 269.

**Martina Zbašnik-Senegačnik**  
**Boris Azinović**  
**SEISMIC SAFETY OF PASSIVE HOUSES FOUNDED ON THERMAL INSULATION**  
**17th International Passive House Conference 2013**  
**Passive House Institute**  
**Frankfurt (Main), Nemčija, 19. - 20.4.2013**  
[http://passiv.de/former\\_conferences/siebzehnte/Englisch/index\\_eng.html](http://passiv.de/former_conferences/siebzehnte/Englisch/index_eng.html)

The inserting of soft thermal insulation (TI) layers under the foundation of a building increases its period of vibration, what could result (in the case of very stiff structures) in larger earthquake forces acting on the building. The presented paper deals with the seismic response of passive buildings founded

on TI layer made of extruded polystyrene (XPS). In order to obtain the material characteristics of XPS thermal insulation boards, the axial compressive and shear tests were carried out. The obtained data were then used in a numerical parametric study. The research has shown that in general the seismic safety of passive houses with the height up to 2 or 3 stories is not of critical concern. For higher (or slenderer) buildings, however, the negative effects of TI layer under foundation slab are more important and can lead to overstress in the TI layer itself, or to the increase of stresses and top displacement of the building.

KOREN, David, KILAR, Vojko, ZBAŠNIK-SENEGAČNIK, Martina. Seismic safety of passive houses founded on thermal insulation. V: 17th International Passive House Conference 2013, 19-20 April, Frankfurt am Main. FEIST, Wolfgang (ur.). Conference proceedings. Darmstadt: Passive House Institute, 2013, str. 573-574, ilustr. [COBISS.SI-ID 2842244]

**Boris Azinović**  
**SEISMIC SAFETY OF LOW-ENERGY BUILDINGS**  
**Erasmus izmenjava za pedagoge in zaposlene na FA**  
**Escola Tècnica Superior d'Arquitectura de Barcelona**  
**Barcelona, Spain, 5. - 10.10.2013**  
<http://www.etsab.upc.edu/web/frame.htm?i=2&m=inicio&c=inicio>

Predavanje je bilo osredotočeno na predstavitev koncepta energijsko učinkovitih stavb, med katere štejemo tudi pasivne hiše. V obravnavani predstavitvi je bil največji poudarek posvečen zahtevi o sklenjenemu toplotnoizolacijskemu ovoju, ki je ena izmed zahtev takšnih stavb. V osrednjem delu predavanja pa je bil predstavljen vidik njihove potresne varnosti. Izpostavljena je bila problematika temeljenja na toplotni izolaciji, ki je eden izmed detajlov z največjim vplivom na potresni odziv. Podani so bili kratki zaključki in priporočila za projektiranje energijsko zelo učinkovitih stavb na potresno ogroženih območjih.

AZINOVIĆ, Boris. Seismic safety of low-energy buildings : [predavanje na Escola Tècnica Superior d'Arquitectura de Barcelona (ETSAB), Španija, 8. 11. 2013]. 2013. [COBISS.SI-ID 2933636]

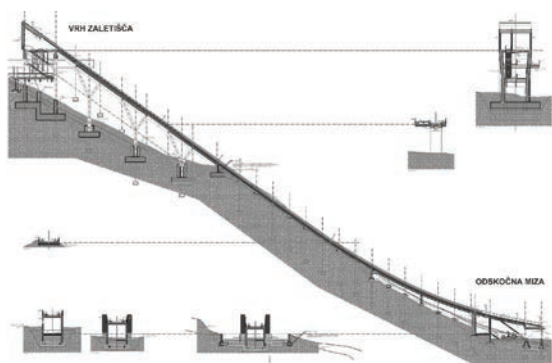
**Vojko Kilar**  
**Boris Azinović**  
**GRADBENA KONSTRUKCIJA NOVE LETALNICE HS225 V PLANICI**  
**35. zborovanje gradbenih konstruktorjev Slovenije**  
**Slovensko društvo gradbenih konstruktorjev**  
**UL, Fakulteta za gradbeništvo in geodezijo**  
**Ljubljana, Slovenija, 22.11.2013**  
<http://www.sdggk.si/index.php>

V prispevku je opisana načrtovana gradnja nove letalnice bratov Gorišek v okviru novega Nordijskega centra v Planici, ki vključuje odstranitev obstoječih objektov, poglobitev in razširitev obstoječega doskočišča in izgradnjo novega zaletišča, ki poteka kot mostna konstrukcija na treh parih Y stebrov visoko nad obstoječim terenom. V obravnavani 1D fazi se gradnja še



dva nova RTV stolpa (mali in veliki), trenerska tribuna, vetrna zaščita, ogrevalni objekt na vrhu zaletišča, konstrukcija za TV zaslon ter rekonstrukcija stavbe Kavka in sanacija obstoječega sodniškega stolpa. Prispevek prikazuje lokacije načrtovanih novih objektov in kratke opise konstrukcijsko najbolj zanimivih detajlov.

LOPATIČ, Jože (ur.), MARKELJ, Viktor (ur.), SAJE, Franc (ur.). Zbornik 35. zborovanja gradbenih konstruktorjev Slovenije, Ljubljana, Fakulteta za gradbeništvo in geodezijo, 22. november, 2013. Ljubljana: Slovensko društvo gradbenih konstruktorjev, 2013, str. 79-88, ilustr. [COBISS.SI-ID 2947460]



Zaletišče HS225 – vzdolžni in prečni prerezi.

**Larisa Brojan**

**CREATIVITY, ALTERNATIVE WAYS OF DESIGNING AND CONSTRUCTING: STRAW BALE WALL DESIGN ALTERNATIVES**

ArchTheo 13-THEORY OF ARCHITECTURE CONFERENCE  
Istanbul, Turčija, 4. - 5.12.2013

Mednarodna konferenca je organizirana v okviru združenja DAKAM (Eastern Mediterranean Academic Research Center) in Mimar Sinan Fine Arts University. Na konferenci je bilo veliko predstavitev s področja arhitekture, teorije načrtovanja in snovanja prostorskega oblikovanja. Poleg javnih predstavitev prispevkov so bile organizirane tudi razprave. S kolegi smo sodelovali pri tematiki socialne vloge arhitekture in vplivom arhitekture na bivanjske navade ljudi. Vsi prispevki so objavljeni v zborniku z naslovom 'Sources of creativity, autonomy & function', kamor je vključena tudi spodaj predstavljena študija. Koordinator konferenca je bil Efe Duyan.

*This paper focuses on the straw bale wall functionality. It is evident from analyses of straw bale houses, how diverse the design of straw bale building can be. Straw bale building has many advantages especially in sense of ecological aspect which is many times also the main reason to build with straw bales.*

*Floor plan design doesn't need any special treatment; there are many possibilities especially when straw bales are used as an infill which is in most projects. But when it comes to building, at first special attention needs to be devoted to bales stacking, bales alignment and finally, the crucial segment of plastering. Since most of builders apply the plaster by hand, extreme precision is needed especially when flat surface is needed.*

*When bales are stacked, alignment is done by pushing and hammering the bales into right position. Next step is straw trimming which makes the wall smooth. Well aligned wall insures the static safety but also many builders decide to increase the safety with mesh which also makes the plaster application easier. Plaster can be applied in case of straw building by hand or by machine. Manual, hand application is most common way though. Functionality is supplemented with appropriate furniture. In case of straw bale walls special attention needs to be devoted to pre-determination of hanging furniture like cupboards or just wall decoration as pictures or other accessories. Since the plaster itself is not thick enough to hold all the weight and straw itself is to 'soft' to hold added item additional substructure is needed. Final image of straw bale plastered wall depends on application precision. Roughly, surface finish can be divided into three groups:*

1. Organically shaped surface
2. Semi leveled surface
3. Completely leveled surface

*Based on the diversity of design that straw bale building offers many requests can be realized. Straw bale building itself does not represent any functional disadvantages if details are carefully planned and delivered.*

BROJAN, Larisa. Straw bale wall design alternatives. V: ÇATAK, Neslihan (ur.), DUYAN, Efe (ur.). ARCHTHEO '13: conference proceedings, December 4-6 2013, Mimar Sinan Fine Arts University, [Istanbul], Creativity, autonomy, function in architecture. Istanbul: Mimar Sinan Güzel Sanatlar Üniversitesi Yayınları, cop. 2013, str. 43-50, ilustr. [COBISS.SI-ID 2956164].

**Larisa Brojan**

**ADVANTAGES AND DISADVANTAGES OF STRAW BALE AS BUILDING MATERIAL**

**The Constructed Environment**

**Lizbona, Portugalska, 4. – 5.10.2013**

Mednarodna konferenca je organizirana v okviru združenja Constructed Environment. Tematika konferenca je bila odnos človeka do naravnega in grajenega okolja. Udeleženci konferenca so bili s celega sveta (ZDA, Evropa, Azija, Južna Amerika itn.). Poleg javnih predstavitev prispevkov so bile organizirane tudi razprave na vodilno temo.

*Paper is focused on general properties of straw bale as a building material which is proven by numerous buildings to be an appropriate material choice in several aspects. The research is divided on to two parts in which advantages and disadvantages of such a building are discussed.*

*The building techniques are relatively easy to learn and performance of straw bale structures has a high value in terms of several aspects as long as the general guidance is considered. The primary benefit of straw bale as building material is its low embodied energy. Therefor the impact on the environment is low which is important since the awareness of building negative impacts on the environment. Above all, the isolation properties are on a high level as thermal as well as sound isolation.*



*Many researches on straw bale building done so far were focused on discovering moisture content in straw bales which is one of the major issues in straw bale building. Therefore special attention needs to be devoted to details such as separation of straw bales of ground and selection of appropriate render material. Render selection is crucial and extremely important step in straw bale building not just in moisture matter but it is the important part as fire protection there for it has to be poorly flammable. In comparison with other building materials straw bale disadvantages is its lack of material research. Regardless the advantages that such a building offers, straw as a building material still is not being recognized as it could be.*

BROJAN, Larisa, CLOUSTON, Peggi L.: Advantages and disadvantages of the straw bale as building material : [predavanje na Fourth International Conference on the Constructed Environment Universidade Nova de Lisboa Lisbon, Portugal 4-5 October 2013]. 2013. [COBISS.SI-ID 2919044]

**Domen Zupančič**  
**SPATIAL PLANNING IN TOURIST CENTRES OF SLOVENIA, EARNINGS BEFORE IDENTITY**  
**ISG Das Internationale Städteforum Graz**  
**4th International Symposium 2013**  
**Graz, Avstrija, 21.6.2013**

Mednarodno združenje zgodovinskih mest in občin je strateški forum strokovnjakov na področju vodenja mest in upravljanja s prostorom; k tem dejavnostim so pridruženi še prostorski načrtovalci, raziskovalne organizacije in arhitekti. Cilji združenja so usmerjeni k temu, da promovirajo procese oblikovanja prostora po načelu soodločanja z upoštevanjem

zgodovinskih danosti okolja. Združenje se ne ukvarja zgolj z mestnim prostorom, posega tudi na področje urejanja naselij in prostora med naselji – krajino.

Redno organizirajo letni večdnevni tematski simpozij, ob tem dogodku izdajo tematsko izredno številko ISG Magazin (ISSN 2309-1215) z izbranimi prispevki. Besedila so dvojezična: NEM in ANG. V letu 2013 je bil simpozij usmerjen gradnjo ob robu naselij. Tematika zajema rob naselja, ločnico med pozidanim in nezazidanim prostorom. Prispevki simpoziju so bili kakovostni in so zajemali teorijo načrtovanja, prakso iz ZDA, Švice, Slovenije in Avstrije.

### **To better spatial solutions**

*It is not just the investor that carries the weight of responsibility, we architects and project planners bear greater responsibility, since we have not succeeded in stemming these wasteful spatial failures or reorienting them into quality. There would have been fewer spatial difficulties if municipalities had introduced the institution of municipal architect or strengthened the municipal spatial planning office with an architect. Many dilettante interventions would have been better managed in this way. Urban planning and architectural workshops are another possible contribution to a rise in quality of the design of space and identity. Market oriented planning offices have limited means (time and money) for dealing with an individual region for the purpose of spatial development. Means are determined by a number of factors, the municipal budget is explicit, the legal framework (existing and newly created legislation) and the capacities of the selected planner. Architectural workshops in this regard are a sensible supplement in planning spatial interventions and shaping guidelines (Zupančič, 2008). Spatial planning has always been part of wider public debate. In the past few years, the major property investment trend*



*An example of an apothecary with housing in Kranjska Gora; the object respects all the given features of the location and all deviations. The roofs are cut-off so that it satisfies the conditions of too small a land plot for such a program.*



*Identity and city.*

*has been exhausted and emptied. Objects were built that were created under the influence of striving for high economic profit. Identity was taboo or only a caricature presentation. Density of building was the essence. It was frequently a combination of maximisation of the exploitation of surface areas and, at the same time, following the minimum standards of design of space.*

ZUPANČIČ, Domen. Raumgestaltung in slowenischen Tourismuszentren, Ertrag vor Identität = Spatial planning in tourist centres in Slovenia, earnings before identity. ISG Magazin, ISSN 2309-1215, 2013, [H.] 2, str. 23-26, ilustr. [COBISS.SI-ID 2872196]

**Domen Zupančič**

**WORKERS DWELLINGS IN AUSTRO-HUNGARIAN MONARCHY: TRZIC SLOVENIA**

**Function: Architectural and Social Function of Space  
ARCHTEO 2013 - Theory of Architecture  
Istanbul, Turčija, 4. – 6.12.2013**

Mednarodna konferenca je organizirana v okviru združenja DAKAM (Eastern Mediterranean Academic Research Center) in Mimar Sinan Fine Arts University. Na konferenci je bilo veliko predstavitev s področja arhitekture, teorije načrtovanja in

snovanja prostorskega oblikovanja. Udeleženci so bili s celega sveta (Japonska, Kitajska, Bližnji Vzhod, Evropa, Egipt,...). Poleg javnih predstavitev prispevkov so bile organizirane tudi razprave. S kolegi smo sodelovali pri tematiki socialne vloge arhitekture in vplivom arhitekture na bivanjske navade ljudi. *The paper presents the possible way to observe development of spatial structures from urban scale to architectural scale through the eyes of prediction of possible social events. There will be presented some examples of working settlements built in Austro-Hungarian Monarchy.*

*The industrial revolution has brought social changes and has changed a whole set of habits of citizens. The role of workers dwellings has been constantly at the edge of decent spatial organization. Generally the workers class was not concerned as an integral part of business management. Those general ideas may seem to be correct but there are several examples prove the opposite. In example one of the oldest set of dwellings for workers is Tell el Amarna in Egypt.*

*Organizing the site and setting dwellings on plot played a key role how social life is going to develop. Rectangular array with quite narrow streets is an optimized composition of a squared plot. The factor of build vs non build area reveals rather dense habitation. This density has an effect on social habits of settlers. The idea that the place was meant for slaves could not be taken as granted, the*



*precise look on plans could expose open fire places, communal rooms and some private rooms. We could set a hypothesis that houses were built not for single persons but for families or some kind of community. Narrow streets in-between the houses with one square at the entrance expose that this community had restricted access or exit of the settlement. Here the idea is the opposite: controlling the community. Narrow streets are helpful for controlling the traffic of people on the streets; they could reduce the speed of moving the people. Those are the benefits for security.*

*The general question is: house units provide a quality of life with fire places and streets are provide quality of mass controlling for the ruler. This is some kind of 'must to do' symbiosis.*

*In Austro-Hungarian Monarchy those working settlements were organized the same as described before. This formula helped both groups: the owners and the workers. In terms of economy this could be named: win - win combination. Here the story of architecture and spatial organization starts.*

ZUPANČIČ, Domen. Workers dwellings in Austro-Hungarian Monarchy : Trzic Slovenia. V: ÇATAK, Neslihan (ur.), DUYAN, Efe (ur.). ARCHTHEO '13 : conference proceedings, December 4-6 2013, Mimar Sinan Fine Arts University, [Istanbul], Creativity, autonomy, function in architecture. Istanbul: Mimar Sinan Güzel Sanatlar Üniversitesi Yayınları, cop. 2013, str. 36-42, ilustr. [COBISS.SI-ID 2955908]

**Borut Juvanec**

**LES GLACIERES DE SLOVENIE**

**La foire de la glace**

**Musee archeologic de Le Van,**

**Mazaugues, Marseilles, February 2013**

*Historical background of the ice houses is well known from the 3rd Millennium BC. The oldest objects can be found in Iran, made of the stone and clay in circular shape of stepped cone. Water is the main material for maintaining the proper temperature: it has three aggregations – water, steam and ice.*

*Needs for chilling the goods and producing ice are close connected to the life of mankind: low temperature lasts the food quality, and the quick cooling stops deterioration of the milk. On the other hand, ice can be used for cooling itself as well as for direct use, icecream for instant or frape. Icecream is not the invention of our days.*

*Appearance of ice houses can be found in the natural underground caves, and as built objects, using the air streams, fresh water; or isolation facilities of the ground materials for retardation of losing temperature. Economy of the ice production can be: for individual use, as craftsmanship and for industrial use.*

*Function of the ice house is keeping the cool air inside: but the basic activity for this is collecting the ice. It can be gathered in free nature, collected with the sort of funnels, in the basins nearby, from the far ponds, or can be 'produced' with beating the snow.*

*Objects for ice houses are built almost under the ground: some of them can be seen as the roof only, or as the monument (the pyramide, for instance). Elements of the objects are as follows: roof, body (sunk into the ground), entrances and outbuildings (as basins,*

*ponds, canals). Ice house can be build in stone, with elements in wood, but smaller objects can be found almost in stone. Stone constructions are made mostly in dry stone walling system, with corbelling or they are vaulted, roofed with straw or reed (leaves), clay tiles or stone plates.*

*Architecture of ice houses can be several, especially their elevations outside, with characteristics of the environment, and in local materials (slopy thached roofs, almost flat roofs in stone plates, circular shapes or leaned to the hill or to other objects). The simplest objects are real cylinders with spyral staircases down to the bottom, but professional built objects have the bodies narrower at the bottom, are made of double walls, with airation and straining canals, corbelled balkonies and sofisticated transport gears for digging out the ice.*

*Examples of ice houses: Spain, France, Switzerland, Italy, Slovenia. Informative material consists sketches, plans, photos and reconstructions of some typical ice houses.*

*Instalation into the environment shows all the possibilities: ice house could be hidden, deep under the fortress (Monza), leaned to the house, in distance from the homestead – but on the sight control, or far at the source of the ice, high on the mountains. Location depends of the source, and of the traffic possibilities (roads, paths: rack waggons, mules), but distance depends on reach to the final user. The names of ice houses depend on locations, languages, local slangs. They are based on the words for snow and ice: neve (neviere in Castillian, also in Italian), ghiaccio, led (ghiacciaia Italian, ledenica Slovene), or the well (pou de sa neu Catalanian), ice and eis (ice house in English, eishaus in German), cellar (eiskeller German, ijskelder in Dutch).*

*Situation today shows all the possibilities of the state, age and the use: original state, destroyed or ruined, use as the cellar (the closest use to the origin), renovation and restauration, use as cultural object (museum), or just as the memory only (In Hungary there are a lot of guesthouses named as 'jegverem', ice houses). This is just understood: the roof collapsed in time, and the hole is dangerous: filling up is the simplest possibility to avoid the risks.*

*Bibliography of ice houses is pretty rich, but very rare shows the system and comparison between several solutions in function, materials, construction and in shape.*

*Ice house as an architectural object is undoubtedly very interesting object, built in local materials, in local styles, full of individual contribution of the builders, but every time in the most usable mode.*

*Today is out of use, it is only the reminder of our past, but because of its rich culture would be preserved for next generations.*

**Borut Juvanec**

**TWO SQUARES AND ONE KOZOLEC**

**ISIS Congress**

**BJ member of ISIS Congress Scientific Committee**

**Hersonisos, Crete Grčija, September 2013**

*A kozolec (plural kozolci: unproper translation into English is 'hayrack' – because the original use of kozolec was drying and storing cereals or corn, only in the last years it is hay) is a free-standing, open, wooden and always covered device for drying and storage. While wheat was formerly stored and dried in it, it is now*

only used for hay and other products, such as corn and maize straw. Kozolec is the most typical Slovene architecture, the only ethnic architecture that I know. It stands in all the Slovene ethnical territory, except on the Karst and in Pannonian plain.

In central Slovenia and above all in Gorenjska, there are most elongated kozolci - around Škofja Loka, they can even be as long as 24 bays. While a low kozolec is the most recent form, the double kozolec is the most characteristic, with the most derivatives in its design (Juvanec, B 2007:45). There are thus two types of double kozolec: those above the river Sava and those below. Those above are slender; below are stocky.

A double kozolec is a composition of two gables and at least one internal bay. The gables have braces, a relatively dense pattern of crossing beams, which primarily resist the wind, prevent the contents from falling out and, with their depth, create shade, which maintains as constant a temperature as possible, which is very necessary for both wheat and hay.

The essence of the erection of a kozolec is that it is longitudinal to the wind and transverse to the sun's rays.

The roof of a kozolec is always symmetrical, always at an inclination of one to one or 45 degrees, almost everywhere - except with new, small kozolci - it is hipped. The hip derives from the thatched roof, by which the problem of wind in the gable is solved. Sadly, there have long been no more thatched roofs.

The most important element of construction of a kozolec is bound to a square and its diagonal. Insofar as the sides of a square equal one, its diagonal is the square root of two. The proportion system, used in a kozolec, shows two squares: the slender one has two squares, one above another, and the stocky one has one square into another. We learn this in primary school and it may seem too much learned. With a kozolec it is essential: it simplifies construction and, with simplicity, prevents possible mistakes. The angle created, 45 degrees, is also essential in details (Juvanec, B 2007:67), since the construction principle of a kozolec is in the cutting the circular trunk of a tree, and beams mainly have a square profile.

A kozolec is today too big, too clumsy and too expensive. But, it represents our culture, which developed over many centuries and always in the order by which it was received with heritage. Not by recipe: each master added something of his own, but within the framework of rules created by nature, by the materials, by need. So all kozolci in Slovenia are uniform but no two are identical. A kozolec is a monument to the culture of our nation and it is today still in use.

**Borut Juvanec**  
**THE STONE ARCHITECTURE IN CORBELLING:**  
**SYSTEM OF DOCUMENTATION**  
**VERSUS Congress, Restapia, Mediterra**  
**ICOMOS CIAV**  
**Cerveira, Portugalska, October 2013**

Threatened dry stone walling system exists as the origin of architecture, in its simplest construction. The first aim was sheltering mankind. Corbelling means construction without cement, in layers, with overhangs, for some ten metres high compositions. The wall consists of constructional layer, the frame and filling inbetween.

These constructions serve as: tomb (nawamis Synai, naveta Minorca), storing for the tools, herdmen's shelter, stalls for livestock, transhumance architecture (Extremadura), temple (Hal Saflieni Malta, Gallarus Oratory Ireland), treasury (Atreus treasury in Micene), control (mantarah Palestine, weinbergshaeuschen Germany, vrtujak Croatia), storing (tazota Morocco, paghliaia Apulia), drying (fiskbirgi Iceland), chilling (crot or scele CH, giazera I), icehouse (nevera Spain, France, Italy, Switzerland, Germany, Great Britain, Slovenia), information transfer (nuraghe Sardinia), palace (Deir el Bahri Egypt) and waterwell (Sardinia, with the miracle - Sant'Anastasia).

Construction is always the same - corbelling, but the several shapes occur, with different details. The main typics is use of square root of three, divided by two. It is composed of three sticks: height of equilateral triangle is by Pythagoras  $\sqrt{3}/2$ . This can be used for restoration of collapsed monuments, constructed in corbelling.

The proposed CIAV project consists of inventarization, documentation, comparison, evaluation, with propositions for the use today. It opens the doors for all the collaborators, to improve the matter and to open - on scientific way - this rich heritage in stone to the public in all the media.

There is an extensive but isolated worldwide research in vernacular architecture (M. Correia). Ljubljana University has work in different cooperation projects with municipalities and local communities, both in Slovenia, Italy, Croatia, Bosnia, Austria, Great Britain, and in some research project of EU.

The Conference ALPS ADRIA on Vernacular Architecture has been organized for 12 years.

The accomplished results during the last tens of years shows important relevance in connecting traditional methods with technological innovations in computing presentations (some thousands of documentation files in FA).

Surveying methods in researches on UL FA reflect good results in publishing (articles, books), in education (lectures, workshops, restoration works) and in science. FA researcher's works had been translated into 12 languages and published in 23 countries. Dry stone walling system and its constructions in corbelling represent the origins of architecture, concerning vernacular heritage. Its contribution to knowledge intends to establish synergies and consistent strategies for disclosure, documentation, evaluation and appreciation of vernacular architecture in the world. It is especially important for the CIAV, and would be highly appreciated for the whole UNESCO mission.