

Univerza  
v Ljubljani

Biotehniška fakulteta  
*Oddelek za lesarstvo*

Fakulteta  
*za arhitekturo*



„2000-2010“

# Les v sodobni slovenski arhitekturi

## *Wood in Contemporary Slovenian Architecture*

Manja Kitek Kuzman





Dr. **Manja Kitek Kuzman**, univ. dipl. inž. arh. je svojo strokovno in znanstveno pot začela v praksi kot samostojni arhitekt in kot vodja inženirskih poslov v Lesnini inženiring, ter jo nadaljevala na Oddelku za lesarstvo Biotehniške fakultete na Univerzi v Ljubljani. Na Fakulteti za arhitekturo je leta 2007 doktorirala z naslovom disertacije Leseni prostorski konstrukcijski elementi v procesu arhitekturnega načrtovanja- novi načini uporabe lesa. V času podiplomskega študija je nabirala mednarodne izkušnje pri vodilnih svetovnih strokovnjakih. Tako se je izobraževala pri prof. J. Nattererju v Švici na Ecole Polytechnique Fédérale de Lausanne ter pri prof. R. Schweitzerju, École d'Architecture de Paris-Tolbiac v Franciji in v letih 2002-2003 raziskovala na Comité National pour le Développement du Bois v Parizu. Sedaj se ukvarja s pedagoško-raziskovalnim delom s področja razvoja lesene gradnje v Sloveniji ter z možnostmi širše inovativne uporabe lesa. Sodeluje v mednarodnih in domačih arhitekturnih raziskovalnih projektih. Največji izziv se ji zdi vzpostaviti obostrostransko komunikacijo in izmenjavo znanja in izkušenj med znanostjo in gospodarstvom. Leta 2008 je izdala knjigo Gradnja z lesom- izziv in priložnost za Slovenijo (ponatis 2009), v kateri so prvič zbrani prispevki o prednostih lesa kot gradbenega materiala, ki so jih napisali najvidnejši slovenski strokovnjaki z različnih področij.

After completing her architecture studies, **Manja Kitek Kuzman**, PhD, continued her scientific and professional career as an independent architect and as head of engineering at the company "Lesnina Inženiring". She worked at the Department of Wood Science and Technology at the Faculty of Biotechnology of the University of Ljubljana. In 2007 she received her doctorate from the Faculty of Architecture with a thesis on wood structures. In her postgraduate studies she acquired further experience by leading international experts in the sector of wood structures. She studied under Professor J. Natterer in Switzerland at the Ecole polytechnique de Lausanne and under Professor R. Schweitzer, Ecole d'architecture de Paris Tolbiac in France. Between 2002 and 2003 she conducted research with the Comité national pour le développement du Bois in Paris. Presently, she is focused on teaching and researching the development of wood construction in Slovenia and the possibilities of a more extensive and innovative use of wood. She also participates in international and national architectural research projects. Her greatest challenge is to establish mutual communication and exchange of knowledge and experience between the scientific and industrial sectors. In 2008, she published a book entitled «Wood Construction – A Challenge and an Opportunity for Slovenia» (reprinted in 2009), assembling all the contributions on the advantages of wood as a building material, written by the most prominent Slovenian experts from different fields.





Johannes Dragoj | The Fishing Pavilion



Harald Otapen | The New Wood



Wing Yoo in Espenbakk | The Wood Pavilion



Hilko Utjavic | The Tree House



Rajpeter na Rogli | The Chapel in Rogla



Duhovna kapelica | The Chapel in Duhovna



Spremnika kapelica v Rogli | The Chapel in Rogla



Lestven-ogledalni stolp | The Wooden Observation Tower



Prehajalnica za prostori inost | The Chapel in Ljubljana



Kolovozni uhoj pot | The Runway in Ljubljana



Kolovozni uhoj pot | The Runway in Ljubljana



Kolovozni uhoj pot | The Runway in Ljubljana



Lestveni stolp | The Runway in Ljubljana



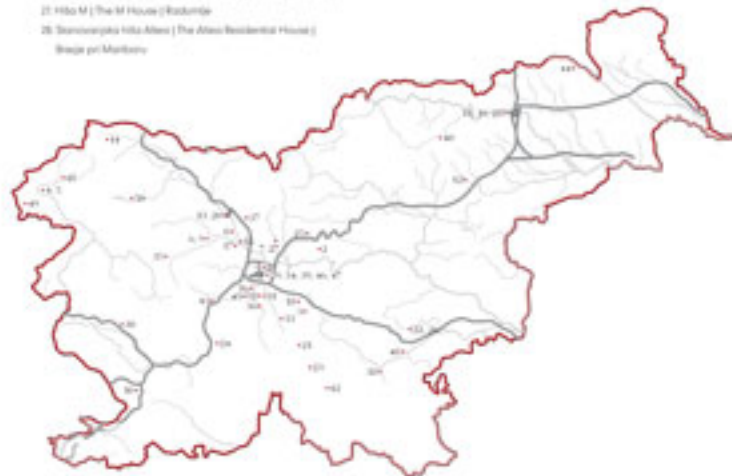
Rajpeter na Rogli | The Chapel in Rogla



Senk vrtovarske palače | The Runway in Ljubljana

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Wilo paviljon | The Lookout Pavilion



Hiba v Poljčani | The House in Poljčana



Enodružinska hiša Novak | The House of the Woods



Enodružinska hiša Čavotič | The Family's Wooded House



Papornova stavba | Wood Landscape



Hiba Mali | The Wood House



Hiba 5 Podgorje | The 4-Roomed House



Stavbena hiša v okolici Ljubljane | The House with a View



Hiba v poljanah | The House with a View



Patena hiša pri Šteti | The Family House



Wilo Nova | The House



Hiba Janča | The Green House



Hiba 18 | The 18 House



Hiba Podgorje | The Podgorje House



Hiba Kuzina | The Kuzina House



Design 18 | The 18 House



Kuhinja na pobočju | The 18 House



Letalska hiša | The Planning Box



Patena hiša v letalnici | The House in Maribor



Paviljon | The Pavilion



Patena hiša Ptuj | The House in Ptuj



Hiba Janča Pula | The Fish House



Stavbna stavbna stavba | The House of the Woods



Stavbna stavbna stavba | The House of the Woods



Stavbna stavbna stavba | The House of the Woods



Konceptna stavbna stavba | The Fish House



Hiba M | The House



Stavbna stavbna stavba | The House of the Woods



Patena stavbna stavba pri mar | The House



Hiba Z | The House



Stavbna stavbna stavba | The House of the Woods



Stavbna stavbna stavba | The House of the Woods



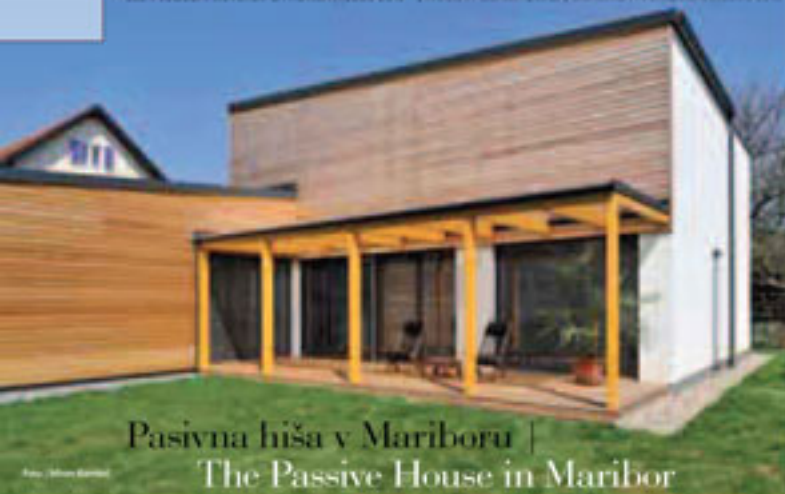
Hiba v Šteti | The House in Maribor



Stavbna stavbna stavba | The House of the Woods



Stavbna stavbna stavba pri Čavotič | The House of the Woods



## Pasivna hiša v Mariboru | The Passive House in Maribor

<b>Tip objekta   Typology</b>	Enodomenovni objekt   Residential building
<b>Lokacija   Location</b>	Maribor
<b>Izvedba   Year</b>	2009

### Arhitektura | Architecture

Milica Petec, uštica, MAM(B) in Danijel Čeligo, uštica

**Projektivna podjela | Architectural engineering company**  
MMA Arhitektura, AMMO D o.o.

### Statika | Structural engineer

Projektiranje in svetovanje Bojan Rjavec s.p.

**Energetska učinkovitost | Energy efficiency**  
pasivna | passive

**Minimalno toplota za ogrevanje | Required heat for heating**  
10 kWh/m<sup>2</sup>/yr

**Površina | Surface**  
165,50 m<sup>2</sup>

### U vrednost | U-value

stena | wall 0,10 W/m<sup>2</sup>K, streha | roof 0,28 W/m<sup>2</sup>K,  
okna | glass 0,10 W/m<sup>2</sup>K, okna | window 0,80 W/m<sup>2</sup>K

### Struktura gradnje | Construction system

panelna konstrukcija | panel construction

### Izvajalec | Contractor

Lumar IG D o.o.

### Čas gradnje | Construction time

5 mesecev | months

**Izvedba sko sklado | Financed by the Eco-Found**



www.mma-architects.com

Zanimivo odziva pasivna hiša sprejema po vsebi programskih. Dnevne prostore na dnevni in nočni del. Odklapi hiša sledi klasičnemu nastopu prostorov po obodu spirale, ki se kaže v kompoziciji prostora. Ta se prvine pri servisirani st. vhodnem delu in se nastavlja prek nočnega dela, ki se na terasu dvigne in zveže nad dnevni prostor, ki je središnji prostor hiše in je v celoti odprt proti zraku. Spirala se zveže v večnamenski prostor v goleni nad dnevni delom hiše, ki je najbolj svetel prostor v hiši. Panoramsko okno sprejema skoraj celotno zahodno svetlobo, ki prek galerije poredno osvetljuje tudi dnevni prostor v priložju. Navzven se dvigovanje spirale kaže kot rama vstoparje strehe po obodu. Hiša se lahko v skladu s potrebami investitorja loti na začetku spirale - ali z stacionarnim modulom dnevne delu objekta tako, da se formira celotni prostori hiše. Konstrukcija, izvedba in oblikovanje sodotone strukture hiše (sprejema) je razdeljena, nastane in post kontrolirani pregled letalne prelatih strone lesene montažne gradnje.

The basis for the urban passive house is the clear division into day and night spaces. The shape of the house follows the idea of living rooms along the circumference of the spiral, visible in the spiral composition. It starts with the utility at the entrance and continues with the bedrooms, living of the end and curving above the living area, which is the central space, entirely open towards the urban. The spiral's central point is a multifunctional space in the gallery above the living area - the most intimate part of the house. The panoramic window illuminates the ceiling and the ground floor living area with soft western light. On the exterior, the spiral's extension in height is shown in a soft inclination of the roof along the circumference. According to the needs of the investor, the house can be expanded by adding a module to the living area. The construction, realization, and design of this modern urban house arise from the principles of a fair prefabricated wooden construction, manufactured in a controlled environment with attention to detail.

