



# **CROATIAN TRADITIONAL CONSTRUCTION AND HERITAGE AS INSPIRATION FOR THE DESIGN OF CONTEMPORARY MODULAR DISPLAYS FOR PUBLIC EVENTS**

**Matija Lozančić, Luka Janković, Robert Roginić, Karlo Babić, Vlado Maršić, Danijela Domljan**

University of Zagreb - Faculty of Forestry - Wood Technology Department

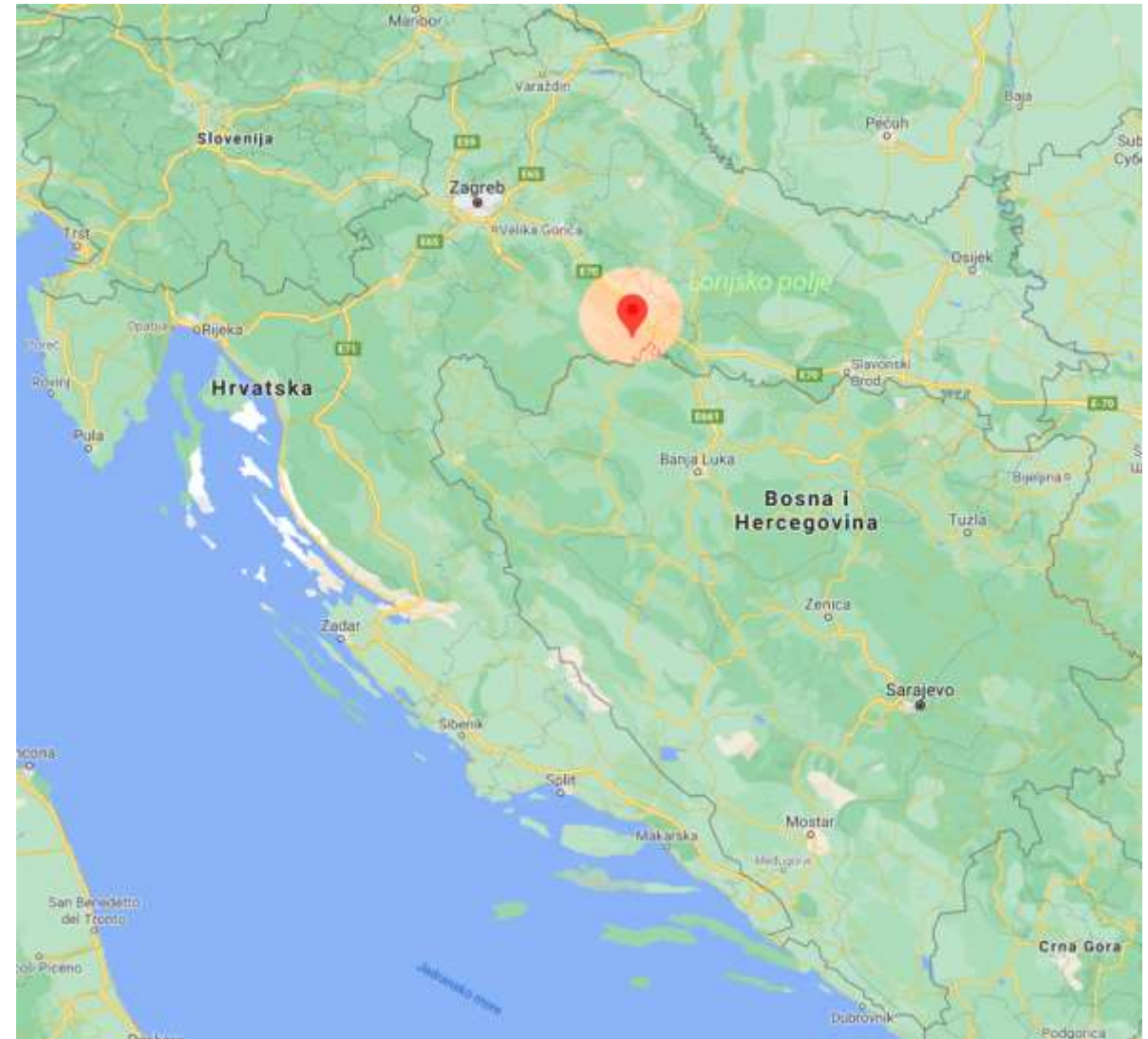
## INTRODUCTION

- The aim of the paper is to collect and present visual, aesthetic and particularly wooden constructional details used in traditional constructions in different Croatia regions as the main inspirations for the next step in design concepts of local stands.
- Neglect of tradition
- The need for small authentic objects
- A great amount of different types of buildings that represent the vast variety of traditional heritage.
- The appearance of houses depends on the geographical location



## INTRODUCTION

- Because of this great variety of traditional buildings in Croatia, we decided to analyze traditional houses in Posavina county.



## MATERIALS AND METODS

- The research was conducted in June 2020 at the sites of the Sisak-Moslavina County of the Republic of Croatia, in the area of Lonjsko polje park and the Čigoč and Krapje villages.
- Photographing on the site and interviewing



## RESULTS AND DISCUSSION



- Kind of plot shape had conditioned the shape of the family houses, which are narrow and long.
- Residential houses (*cro: hiža, iža, kuća na trem, čardak*) in Posavina are mostly two-story, but can also be single-story houses with different floor plan dimensions and room layouts.
- Vertically, the house is divided into the following areas: ground floor as an area used for all kinds of work purposes or as a craft room, first floor as a residential area and an attic.

## RESULTS AND DISCUSSION

- The rooms on the ground floor were never used for housing
- Upstairs, the room nearest to the street is the largest (known as the family room). The other part of the room was the kitchen.
- There are two ways of vertical connection of the living space on the first floor with the ground floor with the yard.





## RESULTS AND DISCUSSION

- Small and discreet windows

## RESULTS AND DISCUSSION

- The roofs of Posavina houses are two-sided, and are covered with so called *biber* roof tiles if they have been renovated in recent times.
- The inside walls of the house are lined with a mixture of clay and chaff which was put on the prior placement of willow or hazel branches.
- The clay plaster was painted with lime.
- The floors are boarded with a compacted earth layer for thermal protection.





## RESULTS AND DISCUSSION

- In the Posavina area, the buildings were made out of pedunculate oak, which could be cut in forests that spread in flood-prone areas along the Sava, Lonja, Odra and other streams of these rivers.
- The basic building elements were oak planks that were stacked horizontally and joined with wooden wedges. The planks were previously sawn and then processed with a hand planer.
- Angular joints were made in two ways, the so-called Croatian or German type of joint.



## RESULTS AND DISCUSSION

- If the planks were not long enough, which was often the case, then the elements were joined lengthwise to the oblique.



- If the planks were not long enough, which was often the case, then the elements were joined lengthwise to the oblique.
- Originally, the houses were built above the ground on wooden, or sometimes stone columns called *bapke* to protect against floods. They were later replaced by brick pillars, and eventually, the foundations were built entirely out of brick.

## CONCLUSION

- Croatian traditional heritage is rich in wooden elements and construction details that give the buildings a recognizable visual aesthetics and design, depending on the locality in which it was built.
- This paper represents the first in a series of analyzed localities of the Republic of Croatia, and includes Sisak-Moslavina County and the area of Lonjsko polje and surrounding villages.
- In these villages, Croatian traditional houses are still preserved, worth mentioning, but also worth further analysis in order to apply in the designing of design solutions for buildings of modern purpose.
- Traditional construction is an underrated topic in the modern context, those houses have provided shelter and security to man throughout history, and today we can learn from that tradition and apply it in solving the problems we face today.
- The collected photo documentation and knowledge presented in this paper will be used in the future design of contemporary modular displays for public events.



THANK YOU FOR ATTENTION!



WoodEMA 2020 & ICWST 2020  
SUSTAINABILITY OF FOREST-BASED INDUSTRIES IN THE GLOBAL ECONOMY  
Vinkovci, Croatia, September 28<sup>th</sup>- 30<sup>th</sup> 2020