

**MORTISE/ TENON**



# RESEARCH

## BORN OF JOINERY

Sashimono: Assemble things  
Japanese craftsmen used complex, interlocking joints to **connect pieces of wood** for structures and beams, helping to create a uniquely Japanese wood aesthetic



## DIFFERENCES

### Western Joinery

- Used most for **furniture application**
- The join is always **visible**
- **Not geometrical** shapes
- Possibility to connect **different sizes and shapes** of wood



### Eastern Joinery

- Used for **furnitures and architectures**
- The join is mostly **not visible**
- **Geometrical** shapes
- Furniture joints presents **natural shpaes** contrary to architectural ones
- Frequent use of additional pieces to **lock** the whole join



# EXPERT OPINIONS

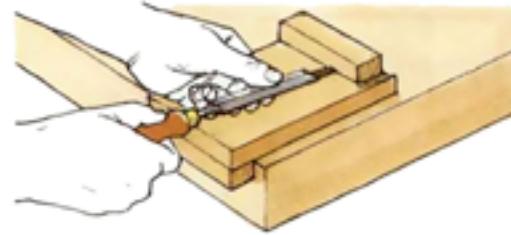
WHAT KIND OF TRADITIONAL JOINERY ARE USED MORE COMMONLY?

HOW THESE TRADITIONAL JOINERIES PERFORM IN THE MODERN FURNITURE?

GENERALLY USED IN WHICH PART OF THE FURNITURE?

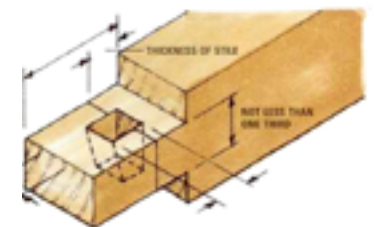
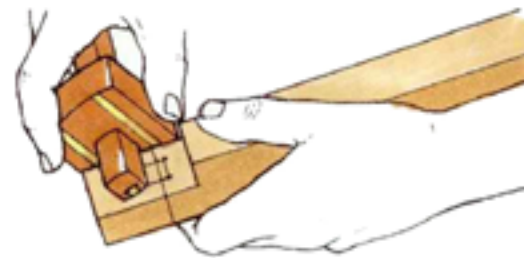
## WEDGED NAIL TENON

Small triangular of wood  
Thin and strong  
Denser wood  
Smaller gap  
Strong structure



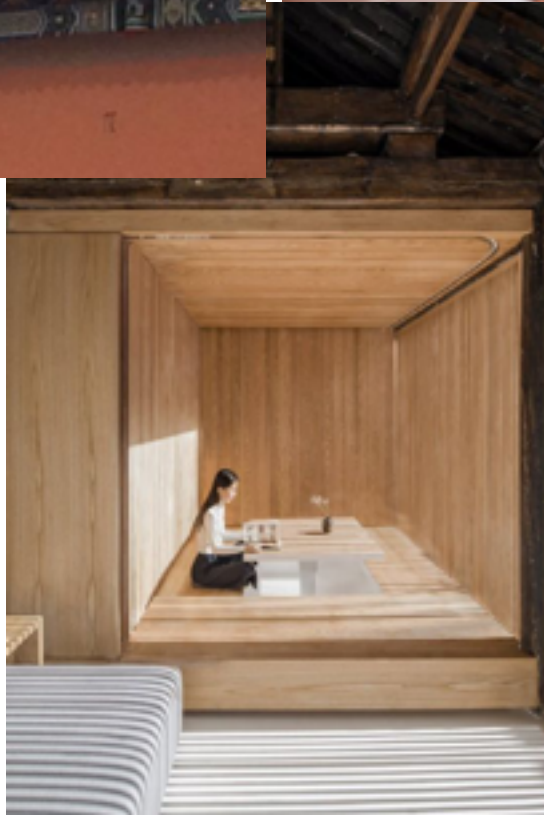
## THROUGH NAIL TENON

Bigger addition of wood  
More resistance  
Denser wood  
Pieces connection (T)  
Strong structure





# MOODBOARD



Ash wood

Beech wood

Birch wood

Walnut wood

Red oak

White oak



# CONCEPT

## CULTURAL ASPECT

Our idea is to combine **the anciant oriental traditional ways of join the wood, with the new technologies** that allows you to simplify the process.

The main challenge will be mantaining the deep visual meaning of an old handworking practice, respecting:

**The beauty of construction**

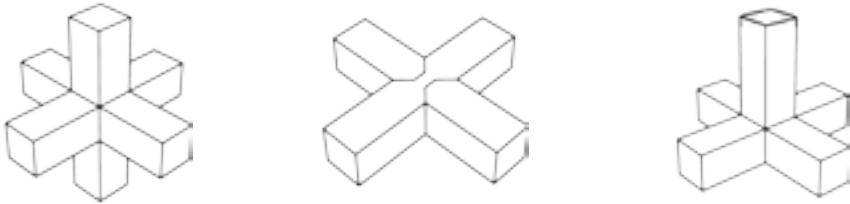


# DISTINGUISH POINT

The idea is to take two of the most used techniques in the eastern joinery: **the locking system (Through tenon-wedge nail tenon)**

Use it to create new furnitures with the same distinguish point wich can be easily recognized as oriental joinery technique.

Selecting 3 main INTERLOCK for the structure,

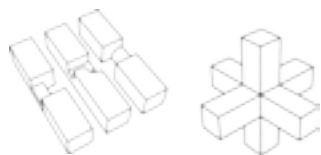


and 3 main categories of furniture,

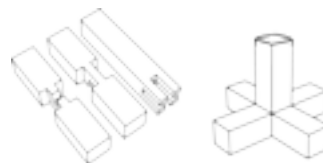
**SEAT**    **TABLE**    **STORAGE**

the results will be a series of 9 objects, for 9 different uses and in 9 different "oriental look"

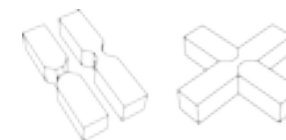




SAMPO-GUMI-SHIKUCHI



IGETA-SHIKUCHI



ARIGATA-TSURI-SHIKUCHI

SEAT



Bench

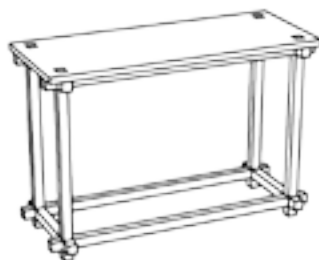


Stool



Chair

TABLE



Dining



Coffee



Working

STORAGE



Shelves

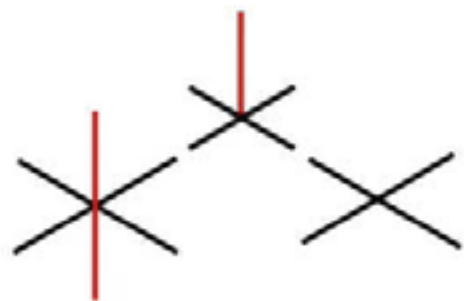


Clothing



Shoes





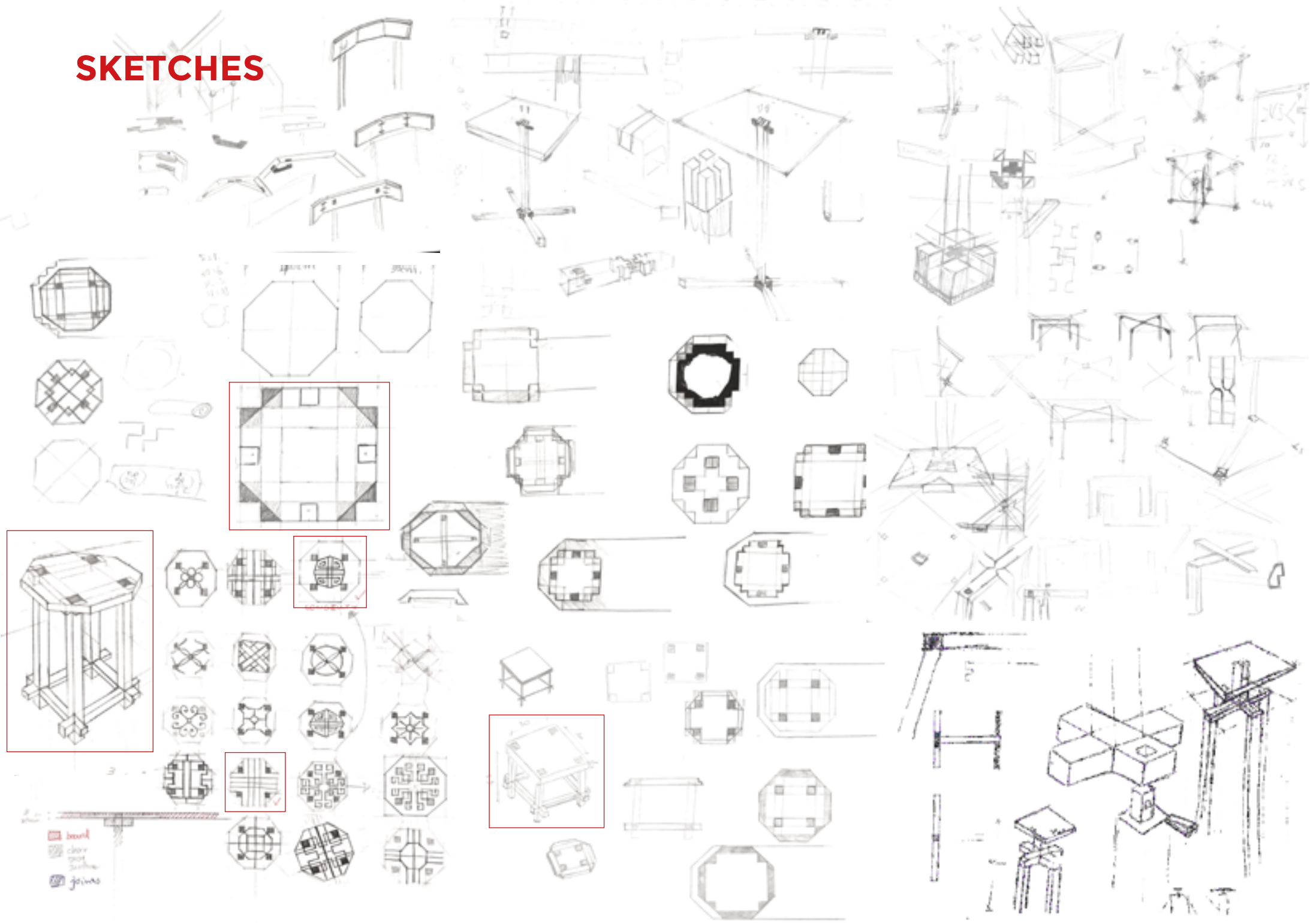
**MORTISE/ TENON**

# INSPIRATION

**Feng shui:**  
is a Chinese metaphysical and philosophical system  
that seeks to harmonize individuals with their  
surrounding environment.



# SKETCHES



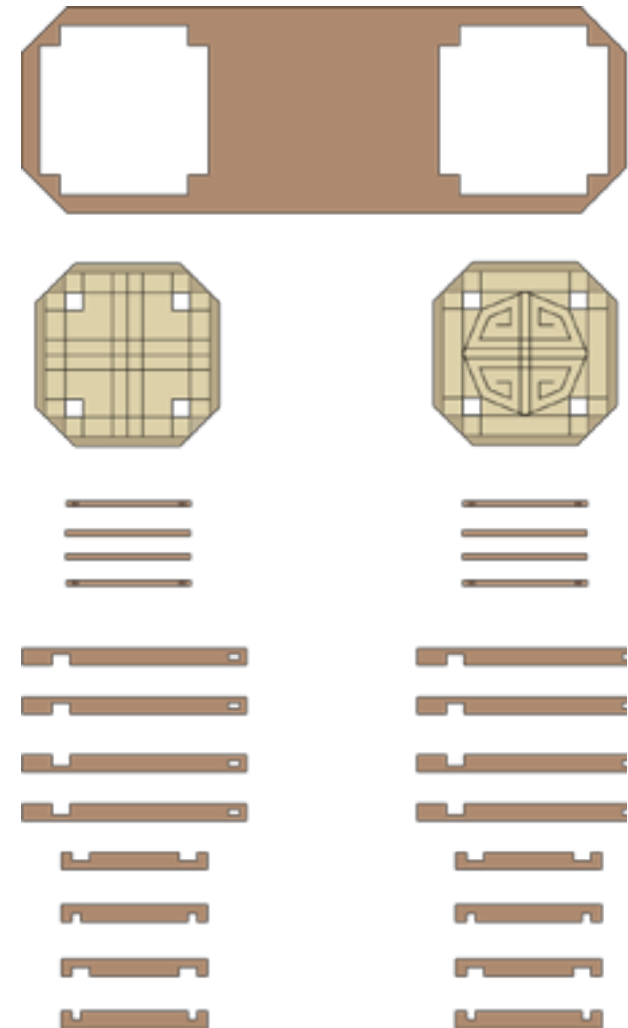
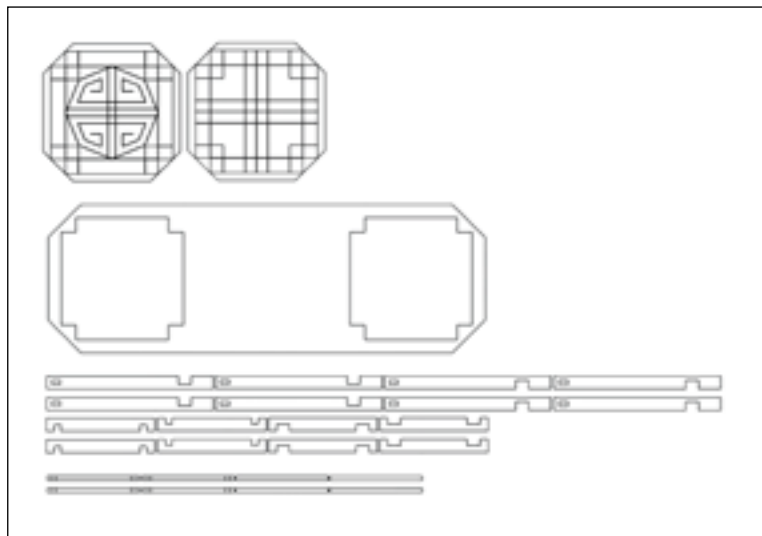


# HOW IT WORKS

Using the bench as an “icebreaker” we would like to introduce the concept of **CRAFT YOUR EXPERIENCE**

You can download the file with the joint you prefer, for the furniture you prefer.  
In files you can find **all the technical drawings for the furniture** with everything you need for start realizing your stool,

## 3dm File settings

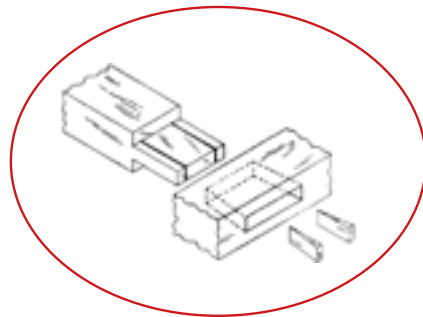


# CRAFT IT

To push the idea of crafting with hand we provide for you everything you need, except the “nail part”

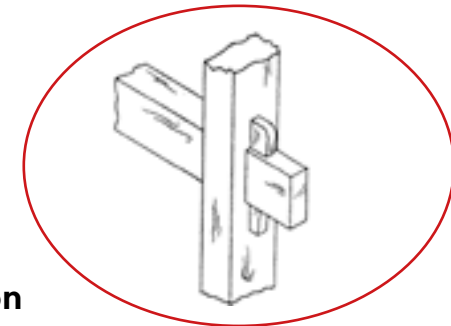
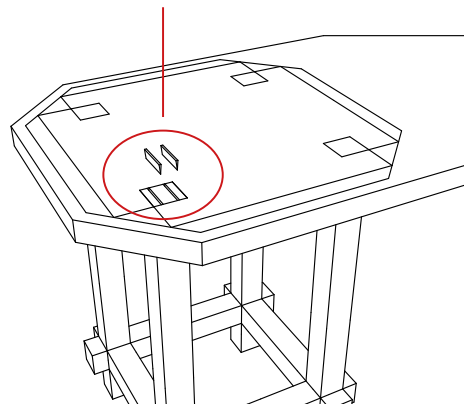
The nail part (that is impossible to realize by cnc) should be cutted by hand under our instruction.

The stool of course will be stable even without the nail part



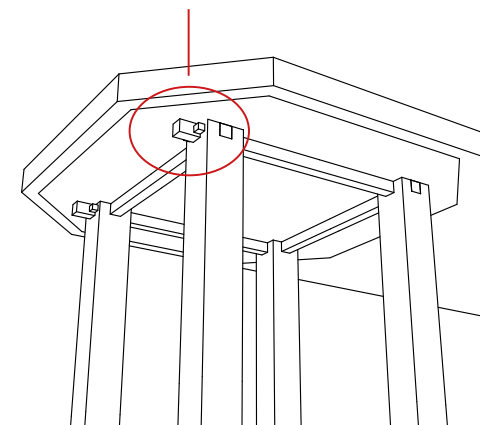
**Wedged Nail Tenon**

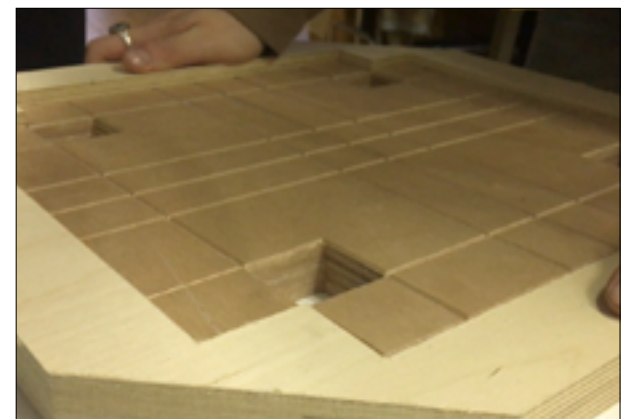
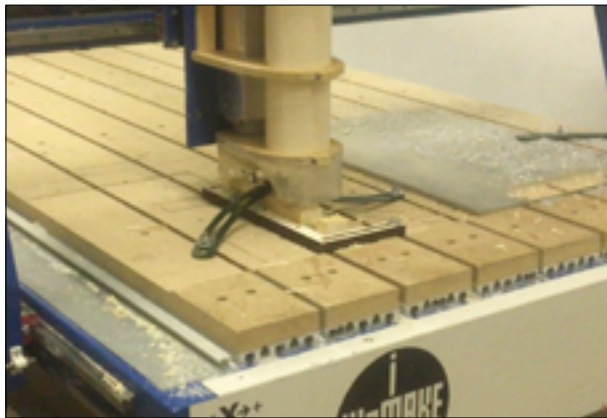
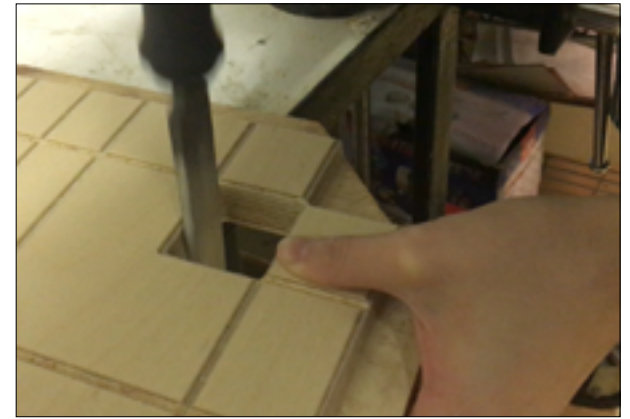
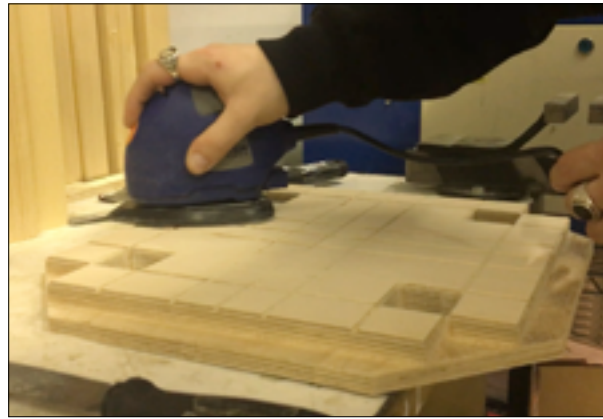
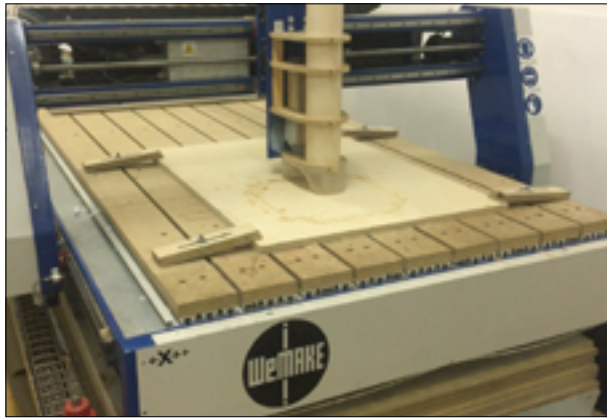
Realize 2 small triangles of wood with relative “female” on top of each long legs



**Trough Nail Tenon**

Make an horizontal hole on the underseat piece and insert a vertical “male” piece in it



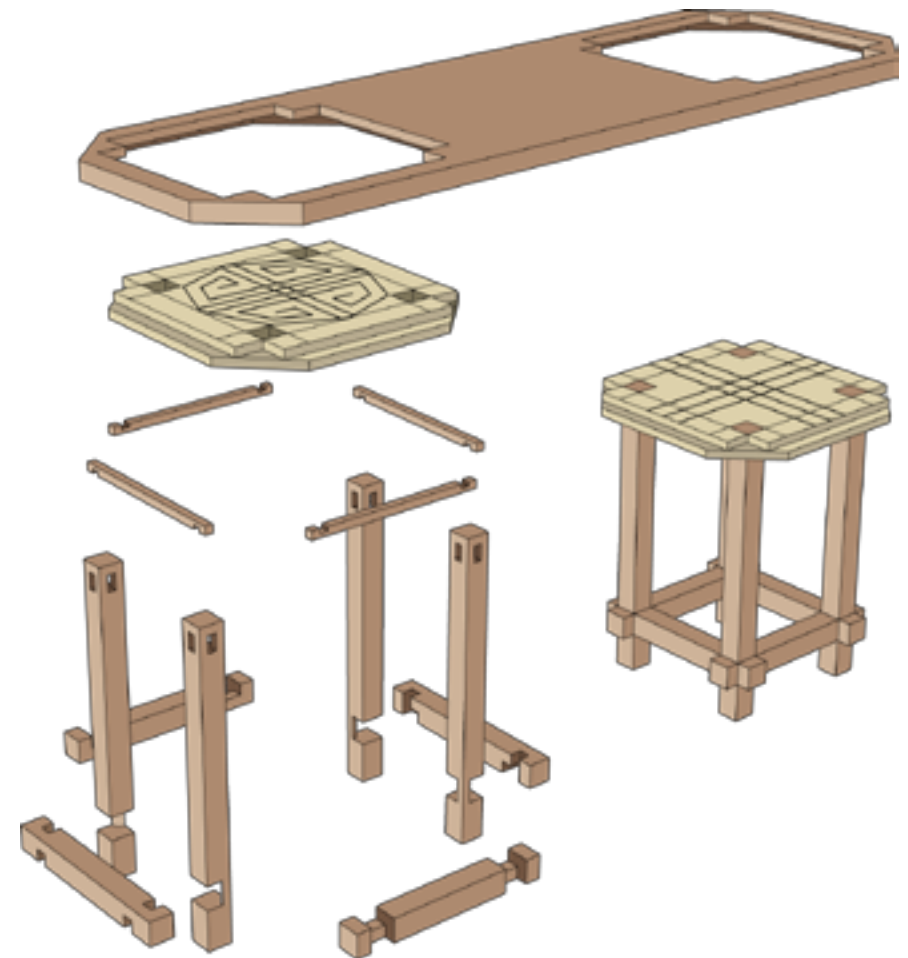
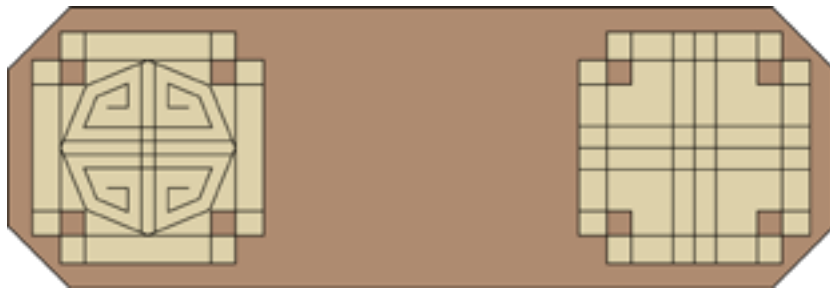




# FAB-LAB

We decided also to use bench because working in fab lab means **adapt yourself to necessities**. Fab Lab and co-working space are places in constantly moving. Hosting various events and workshop, they need a **modular furniture to share not just knowledges but also the space itself**.

Easy to build and use.



## MATERIAL\* & PRICES\*\* cad.

### CHEAP VERSION

Legs:

6x 35 x 35 x 1000 mm **Abete**  € 2,99

Seat:

2x 370 x 370 x 25 mm **Abete multistrato / MDF**  € 16,67  € 8,90

Bench:

1x 400 x 1150 x 25 mm **Abete multistrato**  € 16,67

### PREMIUM VERSION

Legs:

2x 40 x 40 x 3040 mm **Rovere massello**  € 6,51

Seat:

2x 370 x 370 x 27 mm **Rovere / Betulla / Samba**  € 30,57  € 24,46  € 16,67

Bench:

1x 400 x 1150 x 27 mm **Okumé / Faggio**  € 31,22  € 31,16

Price references:



\* materials are just suggestions, you can use any materials you like

\*\* prices are indicating to our references

# TIME & CNC PRICES

CNC €48 h

BIG LASER € 42 h

Pocket SEAT = 45 mins

Squares SEAT = 07 mins

Outline SEAT = 08 mins

Engraving SEAT = 02 mins

---

Fina time SEAT = **61 mins**

Roughing LEG 1A = 20 mins

Roughing LEG 1B = 20 mins

Finishing LEG 1 = 5 mins

---

Fina time LEG 1 = **45:00 x 4 = 180 mins**

Roughing LEG 2 = 18 mins

Finishing LEG 2 = 10 mins

---

Fina time LEG 1 = **28:00 x 2 = 56 mins**

Roughing LEG 3 = 22 mins

Finishing LEG 3 = 11 mins

---

Fina time LEG 1 = **33:00 x 2 = 66 mins**

Locking UNDERSEAT = 3 mins

\*Big laser

FINAL TIME 1 STOOL  
**366 MINS**

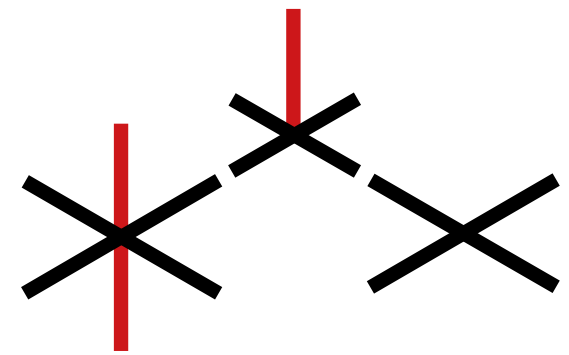
FINAL PRICE 1  
STOOL WORKING  
**290 €**





**CRAFT YOUR EXPERIENCE**





**MORTISE/ TENON**

# PROTOTYPE











SAMPO-GUMI-SHIKUCHI

# MORTISE/ **TENON**

CRAFT YOUR EXPERIENCE



*Giacomo Conti  
Shu Yang*



Cerca



mortise/tenon @ wemake

Segui già

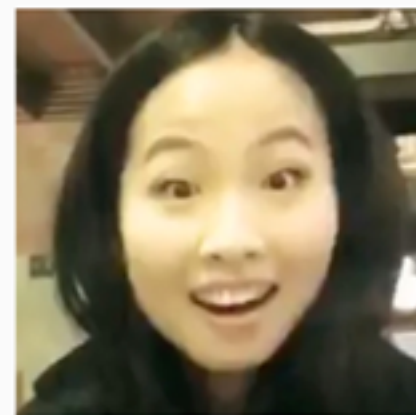
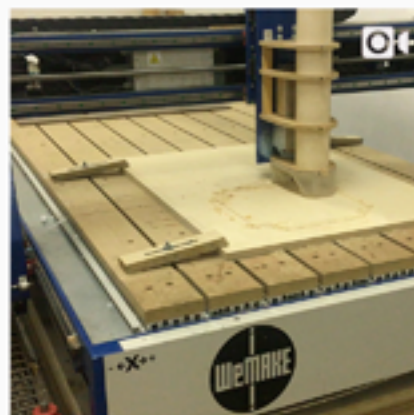
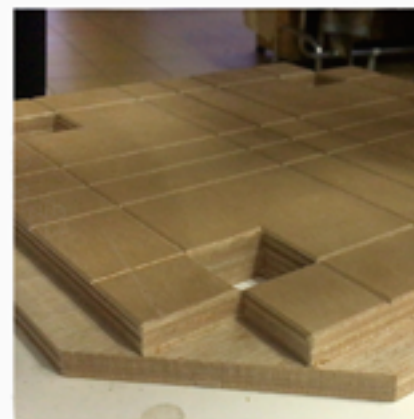


79 post

1.222 follower

831 profili seguiti

Mortise and Tenon it's a project realized by Giacomo Conti and Shu Yang aims to give people who want to realize their own furnitures, an easy and personal way to do it. You just have to download the file you prefer, bring materials you like and start to CRAFT YOUR EXPERIENCE

[www.wemake.cc/event](http://www.wemake.cc/event)

**THANKS/ FOR ATTENTION**