

PORTFOLIO

Aymeric Brouez



I am a Double Master's degree student in Architecture and Urban Planning, a partnership between the CAUP from Tongji University in Shanghai & the énsa-Versailles.

This portfolio includes my CV, recommendation letters, 10 selected academic, personal works and competitions.

If my profile & work is of interest, please contact me:

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Belgium

RESUME

	<u>Education</u>	<u>Experiences & Competitions</u>	<u>Languages</u>	<u>Softwares</u>	<u>Interests</u>
	<p>Franco-Chinese Double Master's Degree « Ecological Urbanism » at CAUP Tongji University, Shanghai and énsa-v, Versailles</p> <p>Architecture Bachelor's Degree, École Nationale Supérieure d'Architecture de Versailles (énsa-v), Yvelines</p> <p>Civil & Urban Engineering, 2 years at Polytech Lille & Université Lille 1</p> <p>Scientific Baccalaureat, physic & chemistry speciality, European distinction, Lycée Saint Adrien in Villeneuve d'Ascq, Nord</p> <p>Driving Licence</p>	<p>2022 Instructorship - 2 weeks Intelligent Fabrication / énsa-v & Bollinger+Grohmann, Versailles</p> <p>2020 Internship - 1 month Bollinger+Grohmann, Paris</p> <p>Competition .120 Hours / ocean's plastic pollution Honorable mention</p> <p>Exhibition Concrete Printing / énsa-v</p> <p>2019 Internship - 2 months BRUTHER, Paris</p> <p>Competitions Archi'Bois / wooden architecture Laureate 3rd price</p> <p>.120 Hours / Svalbard</p> <p>2017 Internship on construction site - 2 weeks Quillet-Duquesne SARL</p> <p>2015 Waiter - 1 year on week-ends</p> <p>Voltaire Program - half a year Linguistic and cultural exchange in Lörrach, Germany</p> <p>Internship - 2 weeks DUCA Architecte in Lille, Nord France</p> <p>Voluntary work - 4 years Volunteer in humanitarian and social association</p>	<p>french english german spanish chinese</p>	<p>Mother tongue TOEIC 955 Voltaire Program - half a year Beginner</p> <p>Rhinoceros3D Grasshopper / Kangaroo / Karamba AdobeCC (Ps, Id, Ai) AutoCAD</p> <p>Blender3D V-Ray QGIS DepthmapX ArchiCAD</p> <p>Laser cutting 3D printing Photogrammetry HTML, CSS, AR/VR Python</p>	<p>Music 1st violin in Symphony Orchestra, 15 years of practice</p> <p>Art architecture, design, museums, theatre</p> <p>Reading</p> <p>Informatic & new technology</p> <p>Cultural trips Iceland, Ireland, England, Belgium, Netherlands, Denmark, Germany, Swiss, Italy, Spain</p>



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Recommandation Letter

BRUTHER

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LETRE DE RECOMMANDATION

Paris, 30 aout 2019

Nous soussignons Stéphanie Bru et Alexandre Theriot, architectes co-gérants de l'agence BRUTHER certifions que Monsieur Aymeric Brouez a collaboré en tant que stagiaire du 1er juillet 2019 au 30 aout 2019, dans notre agence d'architecture.

Aymeric a participé à l'élaboration et au suivi de deux chantiers de logements :

- Résidence étudiantes et parking réversible à Palaiseau
- Logements collectifs à Lille

Il a été en mesure de produire des dessins graphiques de haute qualité, de concevoir des détails et de participé au réunion de chantier.

Aymeric a intégré l'agence très naturellement et a trouvé sa place au sein de l'agence. Assidu et compétent, il a démontré une très bonne synthèse. Motivé et concentré, il a mené à bien les différentes missions dont il était responsable avec beaucoup de professionnalisme et de sérieux.

Aymeric nous laisse aujourd'hui pour d'autres aventures, cho gées de nos meilleures recommandations.

Nous lui souhaitons du succès et de la chance.

Stéphanie bru

Alexandre Theriot



Photography on the building delivery day
on October 2020

/
Équerre d'Argent 2020

BOLLINGER—GROHMAN

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Gérants
Prof. Dr.-Ing. Klaus Bollinger
I. Arch. Klaus De Rycke
+33 320 328 900 S. Paris
Numéro de gestion : 2007 8 CS425

Date : Paris, le 22 09 2020

Objet : Lettre de recommandation

Madame, Monsieur,

C'est avec plaisir que nous avons accueilli Aymeric Brouez pour travailler durant le mois de juillet 2020 dans notre bureau d'ingénierie Bollinger + Grohmann Paris.

Aymeric est un jeune homme motivé qui s'est très bien adapté aux projets variés sur lesquels il a travaillé, quelle qu'en soit la complexité, notamment avec des outils paramétriques. En effet il a un esprit de synthèse qui lui permet d'apporter une critique constructive sur les éléments qu'il connaît et dessine, que ce soit en terme de géométrie, de détails de construction ou de la conception structurelle.

Aymeric a été apprécié par toute l'équipe pour son ouverture d'esprit et sa sympathie et nous serons heureux de continuer à travailler avec lui que ce soit au sein du groupe Bollinger + Grohmann ou pour collaborer dans les futurs projets d'architecture qu'il sera amené à réaliser.

N'hésitez pas à nous contacter pour échanger,

Sincères salutations,

Bollinger + Grohmann Sarl au capital social de 43 900 000,- S. e.s.c.a. 15 rue Eugène Varlin 75010 Paris

5

120 Hours Competition - Through the looking glass

Softwares:

Rhinoceros3D, Illustrator, Photoshop, Blender, InDesign

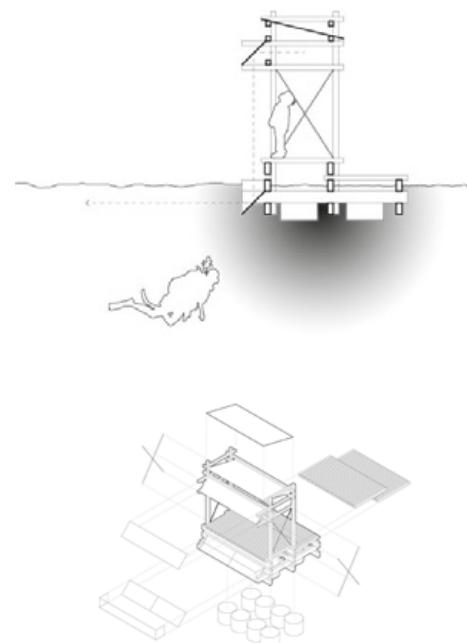
This is not one story but the story of everyone. Because it relies on all of us, this installation addresses everyone and finds a place everywhere; inside a fjord of Norway, in one of Denmark's harbor, or even on a beach in the south of France. You come to enjoy the landscape, you are maybe used to it for years now, and gaze at this extraordinary gift nature offers you. It probably looks like granted and everlasting. But it is not.

This time, rather than just enjoying the place, at first sight, you can find out what lies under this natural mirror of water. Just a few steps on this floating spot. First, you see nothing but the sea. Then, one step further, and suddenly, you can see through the looking glass. Thanks to the reflection of two mirrors, you are now able to take a look at the seafloor. Discovering the influence of humans on nature, the awareness rise in our mind, and we are, more than ever, determined to use ourselves to leave the world a better place.

Competition for awarness of plastic pollution in ocean

Personal work in 1st year Master

Honorable Mention



6

Archi'bois Competition - Cité Montsouris

Softwares:

Rhinoceros3D, Grasshopper, Illustrator, Photoshop, Blender, InDesign



1

Concerned about the construction materials, I wanted to participate in this wooden building competition along with two of my classmates.

We chose a place with a forgotten railway. Indeed we thought it was interesting to dynamise this place with dwelling and all the facilities in a way it will give a second life to the railway.

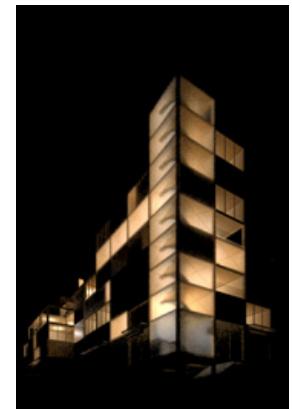


2

As the jury decided, in the Pavillon de l'Arsenal, we were granted with the 3rd place for our first competition.

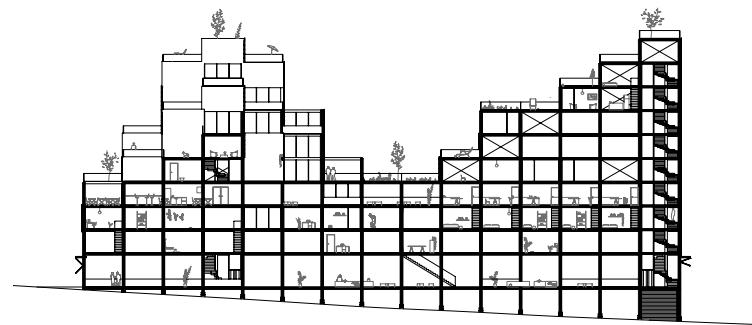
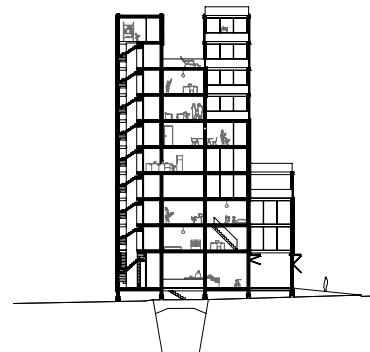


3



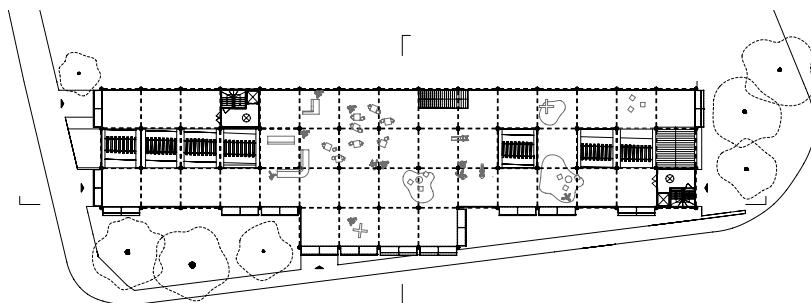
4

Competition to highlight wood in building
Personal work in 2nd year - With Baptiste Chauvin & Valentin Boinet
Laureate 3rd price



« an electroshock within architecture schools »
Forestopic.com

1. Site model
2. 1:200 model
3. Dwelling model
4. Night perspective



7

TWIST - Tongji competition

Softwares:

Rhinoceros3D, Grasshopper, InDesign, Illustrator

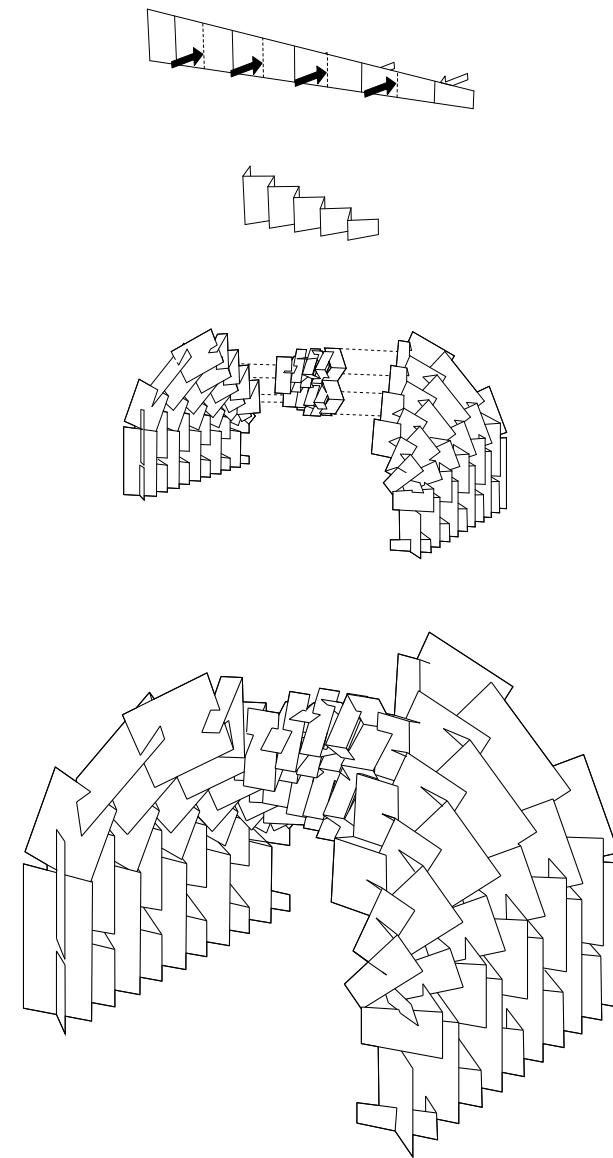
Within the context of an international competition held by CAUP in Tongji, we designed a cardboard shelter as a team.

A shelter is often seen as an enclosed place. The international aspect of this competition inspired us to open, that is why the shelter is opened outwards through its 2 alcoves.

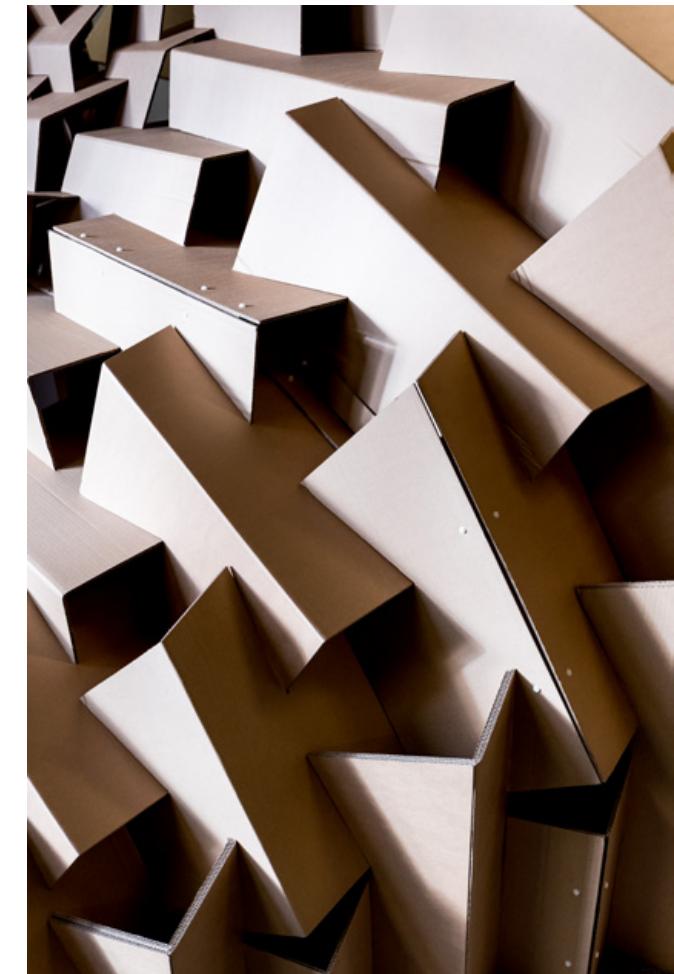
To allow the connection between both alcoves, we created a portico on the whole length, i.e. 6 m. This portico results from a « twist » of the structure on itself allowed thanks to the accordion shaped module and providing a good rigidity to the whole structure.

My real involvement in developing this project with an original design coupled with my ability to mobilize my team earned this project to be pre-selected as the 2nd place by the jury.

Group : Baptiste Chauvin, Valentin Boinet, Loris Blanc, Victoria Duchet, Aymeric Brouez



Designing cardboard shelter 1:1 scale
Project studio semester 1, 1st year

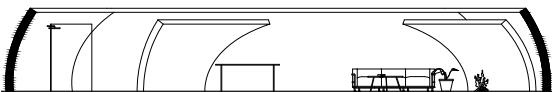
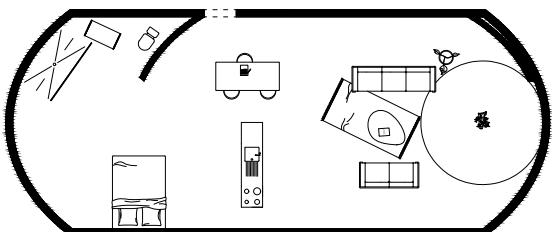


3D model and 1:1 scale final production

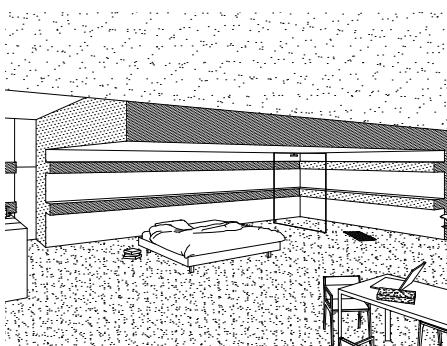
Softwares:
Rhinoceros3D, Illustrator, Grasshopper

Around the thermal phenomenon, I conceived 3 projects shaped and determined by one thermal phenomenon : elliptical radiance, inertia and radiant ceiling.

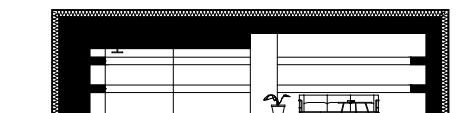
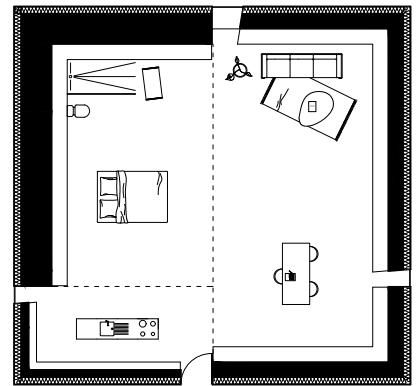
Radiance is released by any kind of body and diffuses itself as rays working in vacuum too.
Ellipses features two synchronized focus. Therefore, emitted heat in each focus spreads towards the other one.



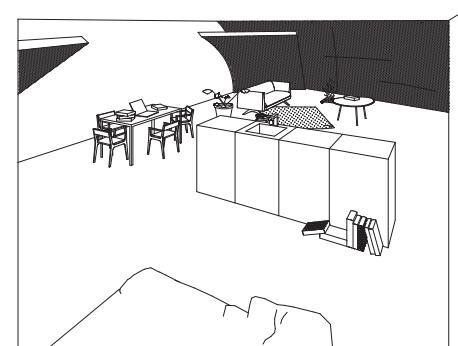
A second ellipse is included inside the first one, pairing focuses, to create 3 spaces.
This trick allows me to warm the living room, the kitchen and bedroom / bathroom with a single heat source.



Inertia is a crucial notion in thermic. It allows the building restore free heat later on.



I calculated the concrete walls thickness depending on dephasing time of 2, 9 and 20 hours, respecting usage schedules of different areas.
Ideal temperature is reached when needed.



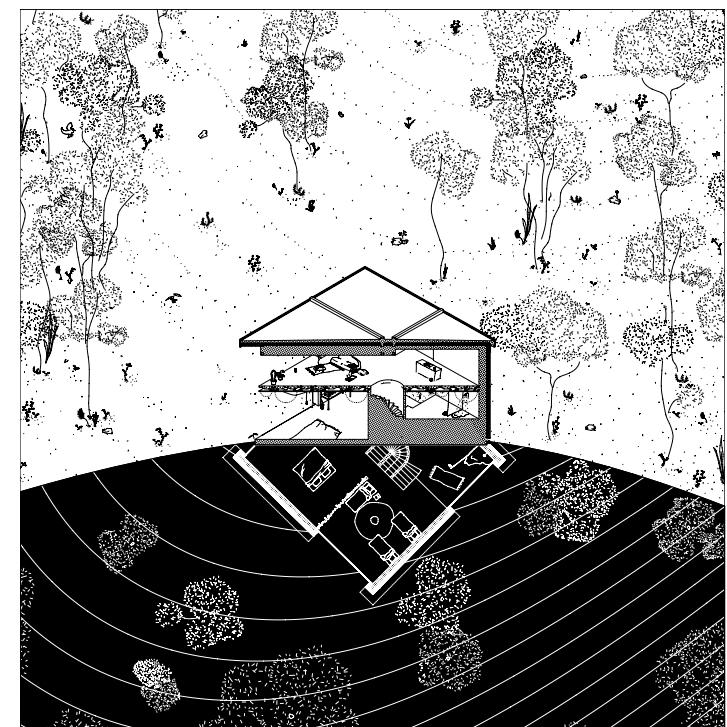
Physical phenomena shaping the project
Project semester 3, 2nd year - Teacher : Nicolas Dorval-Bory

Merging 2 phenomena:

First floor ceiling accumulates heat and restore it through inertia, depending on the walls thickness especially computed to be implemented on the dephasing time.

Ground floor ceiling gives out heat equally. Temperature variation comes from floor's topography. It means getting us closer to the ceiling.

Temperature warms up from 1,8 °C each step (17 cm).



Final document 80 x 80 cm

9 Popular Palace

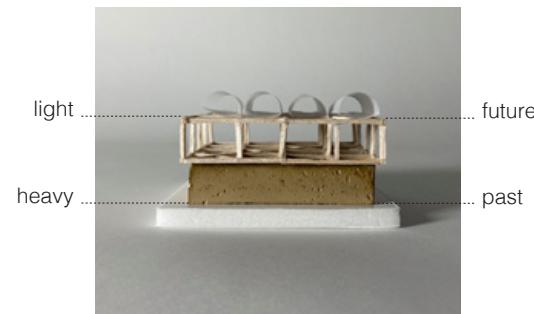
Softwares:

Rhinoceros3D, Grasshopper, Illustrator, Photoshop, V-Ray, InDesign

The project started with an interpretation of the « Popular Palace ».

We first had to create a structure and then get the program that will shape the final building.

Starting with the structure, I conceived a 3 layers building; from heavy to light / from past (library) to future (resources).



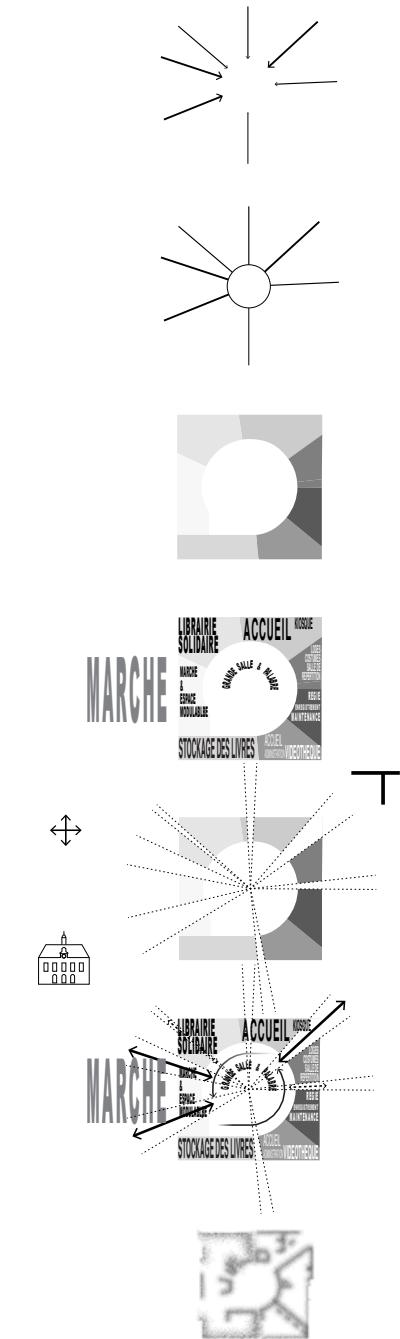
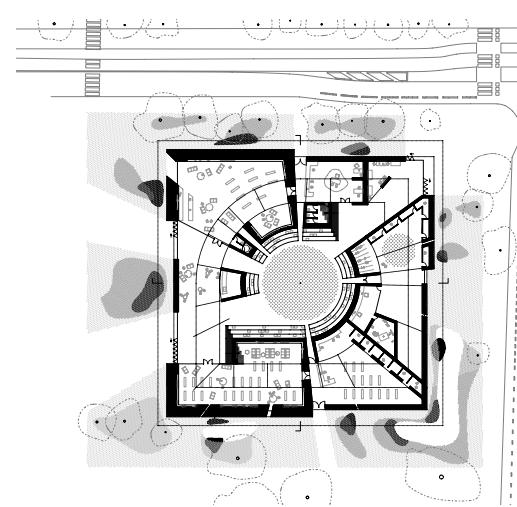
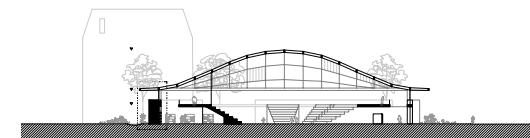
My definition of what could a « Popular Palace » implies a meeting point, an intersection in the city.

From this central place, the program distributes itself around the forum. The roof inflates to host special events like open stage, sport hall, ... Then, openings are drilled to create views from the building to the city and vice versa. This allows the building to catch flows and create a place for sharing both activities and moments.



Dynamic shape with Grasshopper

First large scale program for a public place
Project semester 5, 3rd year - Teacher : Erwan Bonduelle & Cyrille Véran



10 (re)connection

Softwares:

Rhinoceros3D, Grasshopper, Illustrator, Photoshop, Blender, InDesign

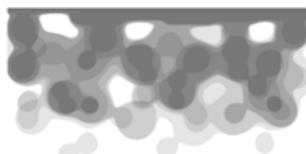
Located in an abandonned land, partly used by locals as vegetable garden, the topic was to create tomorrow's housing.

As the land is in a really good state both regarding permeability and for farming, I logically decided to reduce the footprint of the building. In fact, the unique built area is the one hosting and gathering networks such as water pipes, electricity and gaz.

Therefore, this slab of networks is meant for distributing both resources and the access for every storey.

Once in the apartment, the more you move away from the slab full of networks, the more you come closer to nature. This graduation is explained in diagrams beside.

The concrete floor disappear alongside the (re)connection to nature ; holes brings light to below storeys and ground.

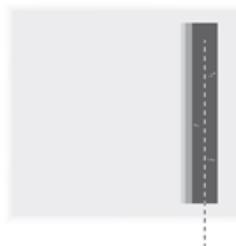


- entrances and facilities
- enclose, heated / acces to networks
- enclosed, not heated
- covered

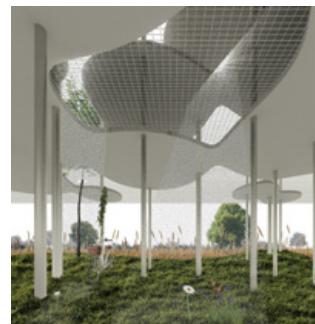
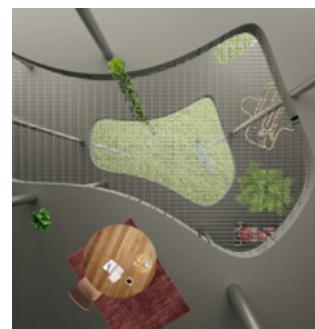


- Urban
- Rural

- - electromagnetic wave
- - - facilities network (water, gaz, electricity, ...)



- Urban
- In between space
- Garden
- Rural



Housing project
Project semester 6, 3rd year - Teacher : François Chochon



floor plan



1st floor

11 In Between

Softwares:

Archicad, Twinmotion, InDesign

From the N House by Fujimoto, we worked and reinterpreted the concept of physical and formal diffuse limits.

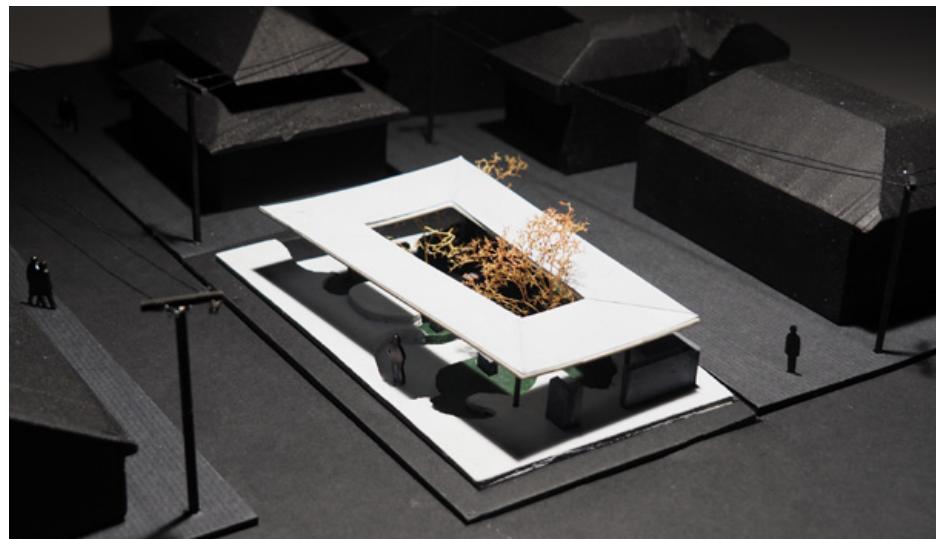
Our utopian project is articulated on the ambiguity between inside and outside as well as public and private ; invisible boundaries at first sight.

Mixing topography to vegetation permits emerging interfaces materializing non real limits to areas.

In this way, limits only exist using and practicing areas.

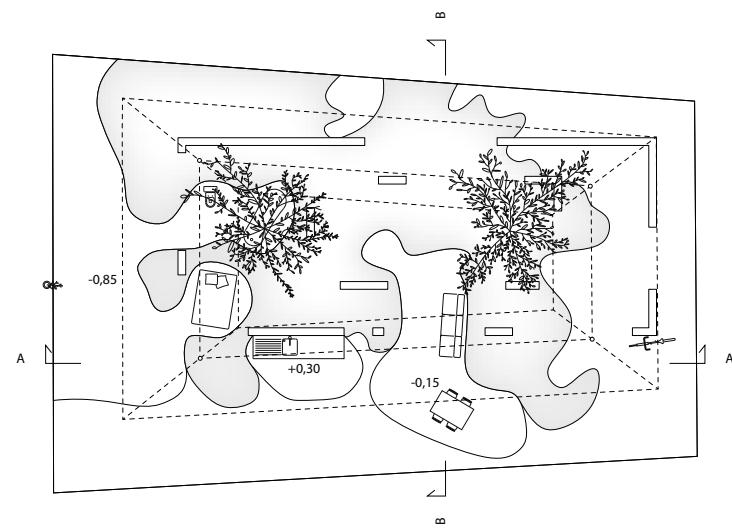
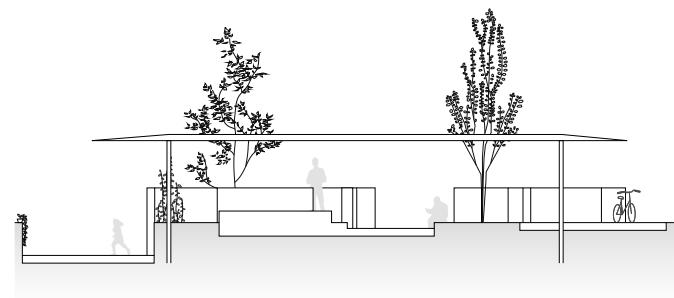
Topography can be both a staircase step and seat base depending the room you are in. We may be sitting in the kitchen but participating to the living room.

Group : Boinet Valentin, Chauvin Baptiste,
Brouez Aymeric



Final model 1:100

Work on « remarkable Japanese Houses »
Project studio semester 3, 2nd year



Video rendering with Twinmotion

12 Sport hall

Softwares:

Rhinoceros3D, Grasshopper, Illustrator, Photoshop, InDesign, Blender

Some of the quai de Seine are now pedestrian only. As part of the course of construction, the team had to imagine a sport hall.

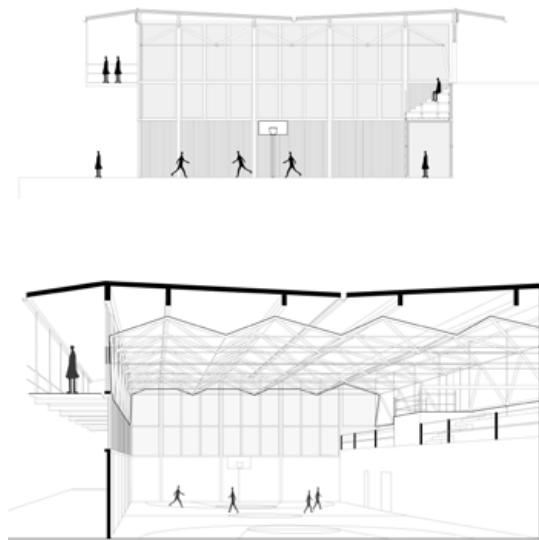
We opted for a building improving the view to the Seine thanks to walkway around the basketball field. As a continuity of the street, people can both watch the game or enjoy the view.

The ground floor can be opened to the Seine enabling a large hall for concert or any other social events.

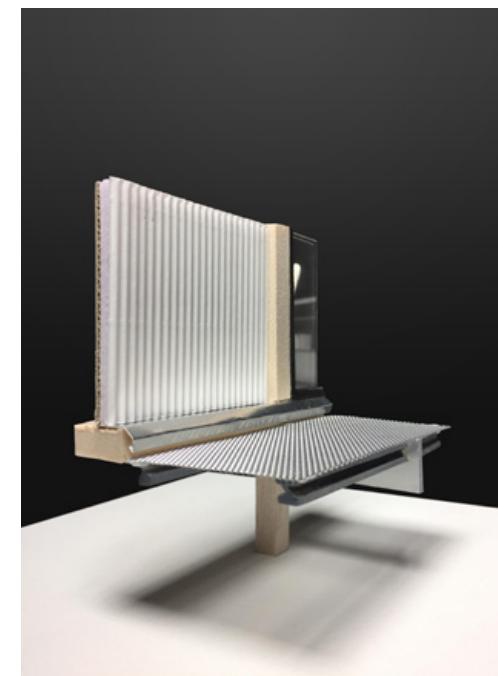
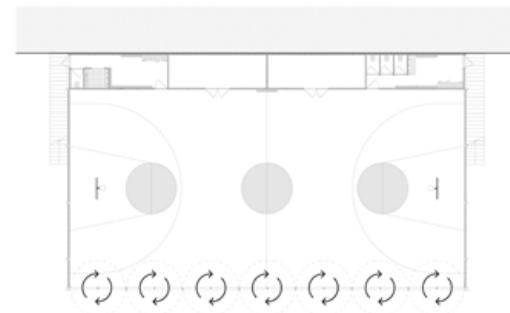
Group : Baptiste Chauvin, Valentin Boinet, Sonia Babour, Aymeric Brouez



Render



Sport hall on the quai de Seine near Pavillon de l'Arsenal
Structure course semester 4, 2nd year - Teacher : Rémi Souleau



Construction detail model

13 Concrete Printing

Softwares:

Rhinoceros3D, Grasshopper, Python

3D printing concrete with SIKA
Construction semester 6, 3nd year



The statement was to create an organic looking column for a parking.

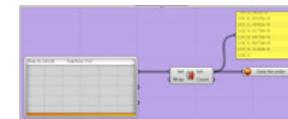
Working in pair, we looked deeper into two ideas :

In the first hand, we worked on sound shaping the column in a 3 dimensions.

Duo with Yunxiang Guo



Column exhibited during the Concrete Printing exposition



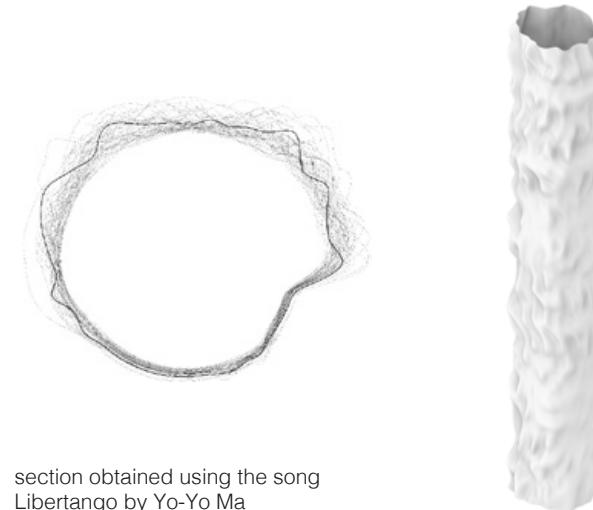
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Inputs:
    x: The x script variable
    y: The y script variable
Output:
    a: The a output variable"""

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__version__ = "2020.03.14"

import rhinoscriptsyntax as rs

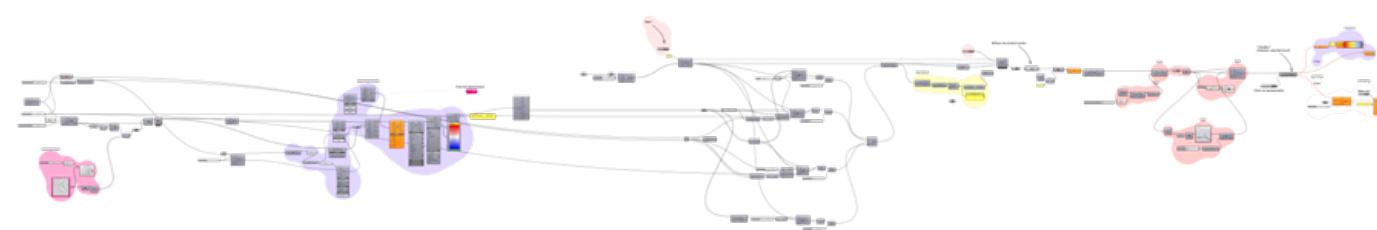
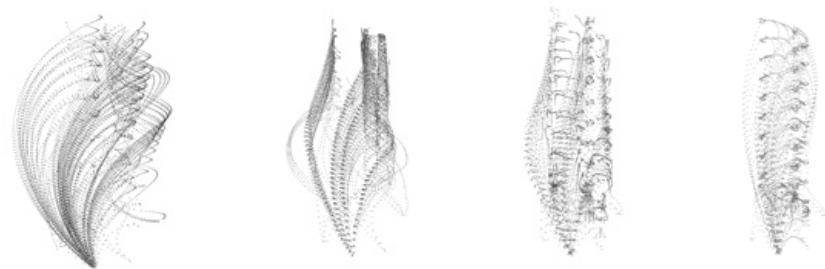
h = height_of_colonne
step = h/count

if sum > count * count :
    bake = "false"
    z = "colonne finished"
    a = "true"
elif sum % count == 0 :
    bake = "true"
    z = step * (sum // count)
    a = "false"
```



section obtained using the song
Libertango by Yo-Yo Ma

Then, we had the idea of prey showing the perfect path and predators building the final shape, a kind of stygmeric design.



14 Invisible Metropolis: Fallowland

Softwares:

Rhinoceros3D, QGIS, Illustrator, Photoshop, Blender, InDesign, html / css

Collecting data to implement Luxembourg region
Project semester 1, 1st year Master - Teacher : Matthias Armengaud

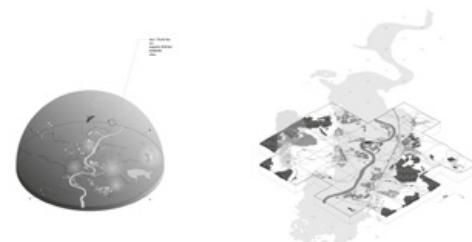
During this 100% online semester, due to the pandemic crisis, the project aims first to analyze a site near Luxembourg through its «invisble» data. Then, propose a project which would enhance life and reduce carbon dioxide emission.

The site here described is Cattenom, 7km away from Luxembourg's border. It host the 7th more powerful nuclear power plant on Earth. Besides, the vast flooding area leads to natural marshes, also used as a water tank for the power plant, thus creating a migratory place for birds and attracting loads of other animals.

Furthermore, this city is one of the 30% of Europe able to see the Milky Way at night; also useful for birds migration to reach this place.



initial data



.1



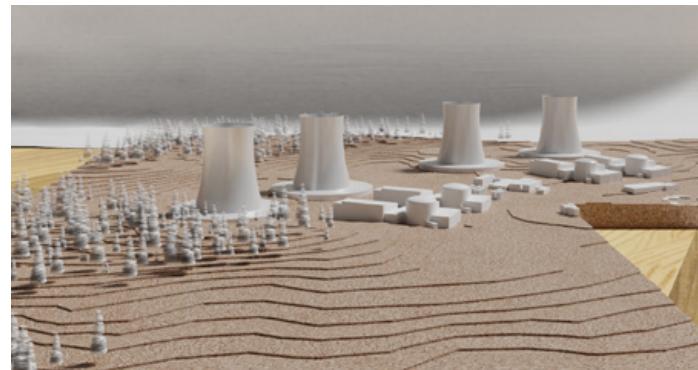
.2



.3



.4



model of the present state

The previous data emphasize links between birds, nuclear, and marshes. These elements will become the basement to revitalize the region starting in 2040, when the power plant will be shut down.

Through different stages, sections of a 6km long ring path will take place. First, it will open the nuclear block as a nuclear museum and link the remaining concrete monument, the cooling tower, turning it into a bird observatory during the day and a Milky Way viewpoint at night. Other parts will connect, with different materiality, the history of Cattenom, the Maginot Line, its workers with a farm.

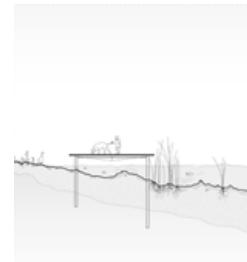
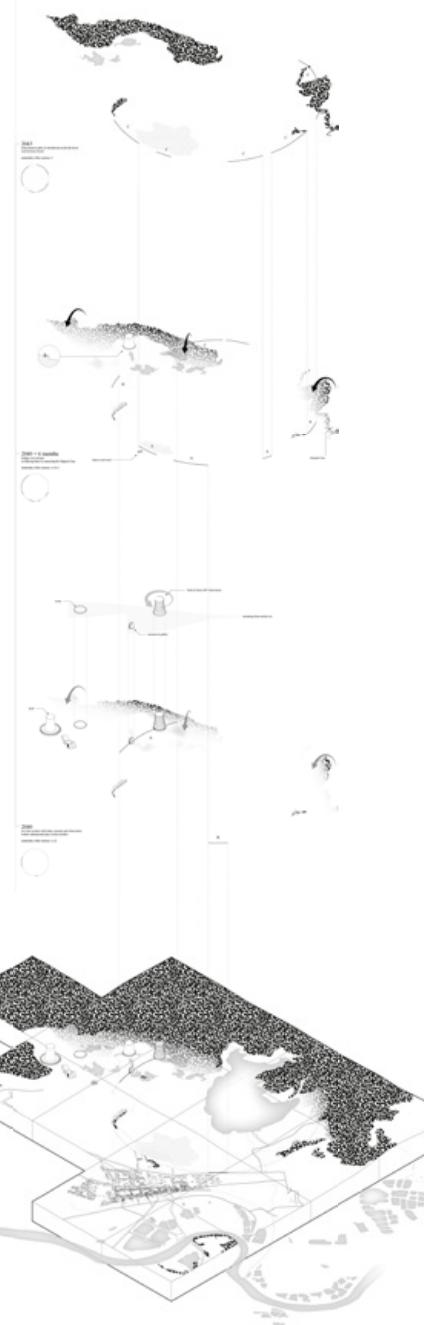
- .1 birds migration tools
- .2 axonomety of Cattenom
- .3 algae data
- .4 data impacted
- .5 website & AR model
- .6 marshes' path
- .7 Maginot inspired path
- .8 forest's path
- .9 view inside (remaining) cooling tower



.6

https://aymrc.github.io/InvisibleMetropolis_AR/

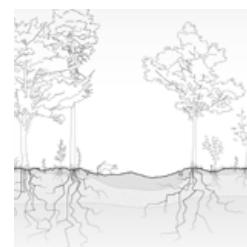
axonomety of stages of the project



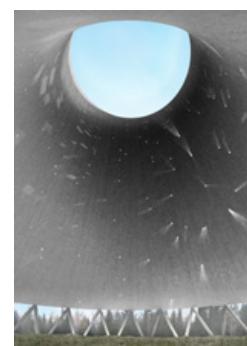
.1



.2



.3



.4



[www.linkedin.com/in/
aymeric-brouez](https://www.linkedin.com/in/aymeric-brouez)

Thank you for
your time!