



PROJET DE RECHERCHE ARC 6801 H Hiver 2024
SEMINAIRE DE RECHERCHE ARC 6803 H Hiver 2024
PROJET THÈSE ARC 6802 H Automne 2024

Artisanat robotique pour des
structures architecturales légères

Conception paramétrique ou paramétrisme?



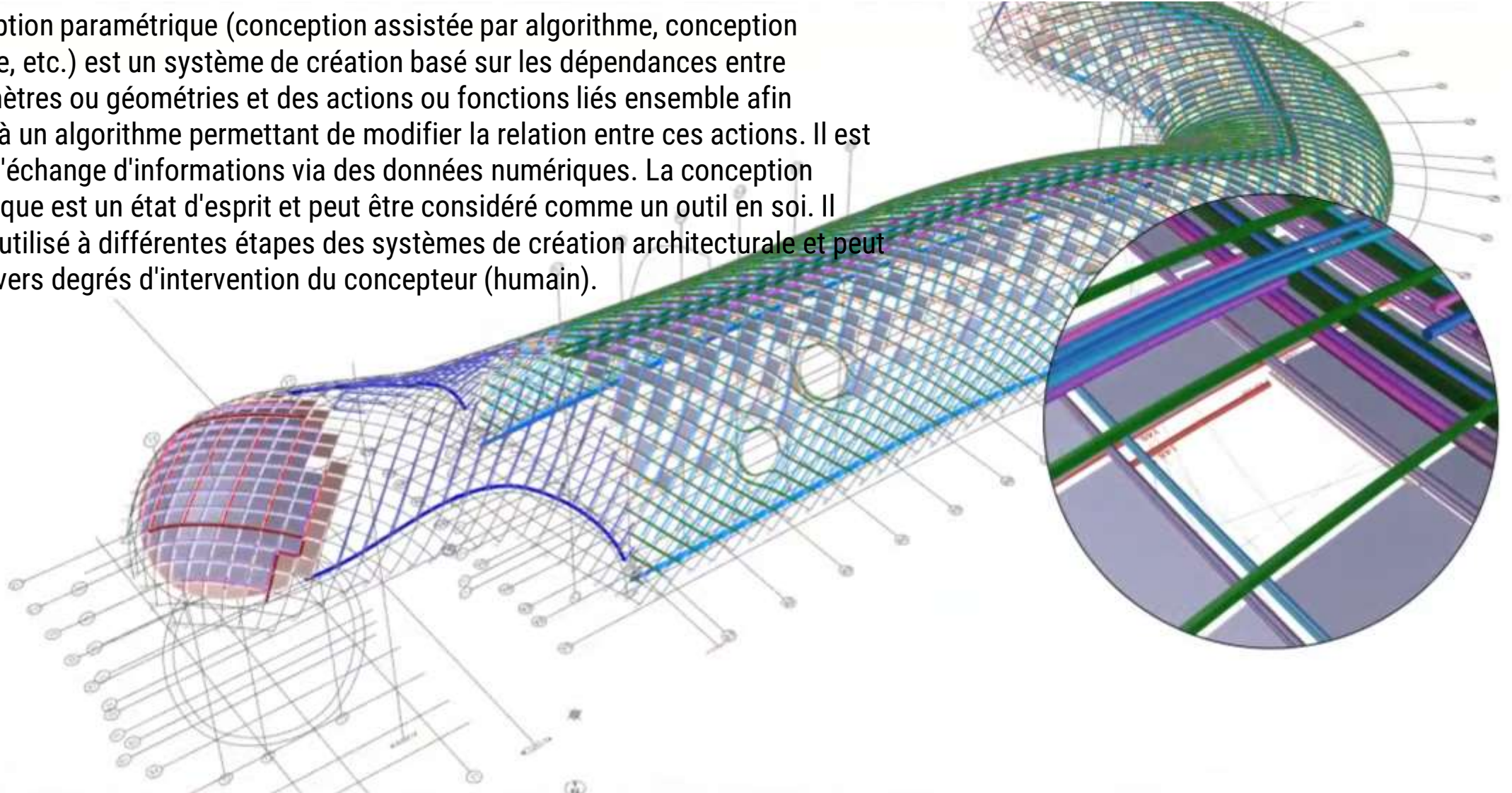
Que voyez-vous?

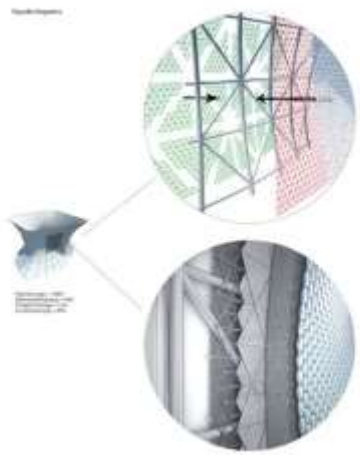
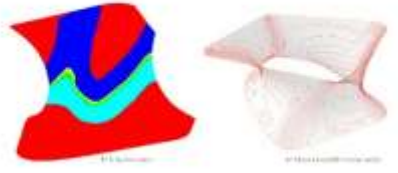
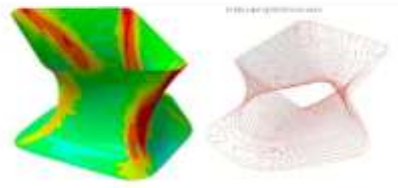
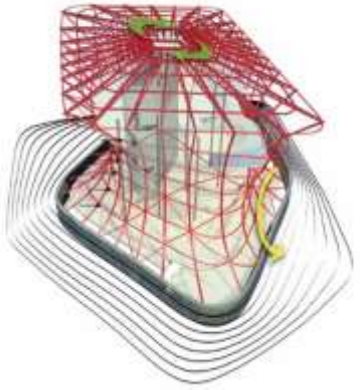
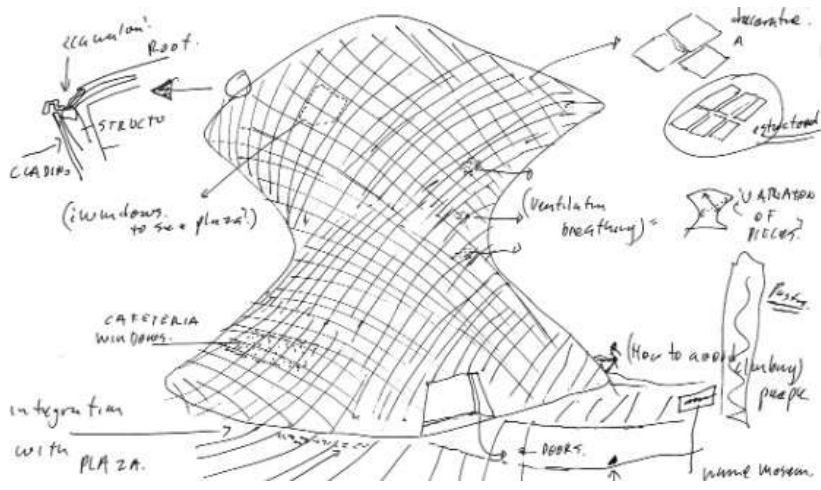


Campus Swatch Omega (2019), Architecte: Shigeru Ban Architects, Bienne Suisse

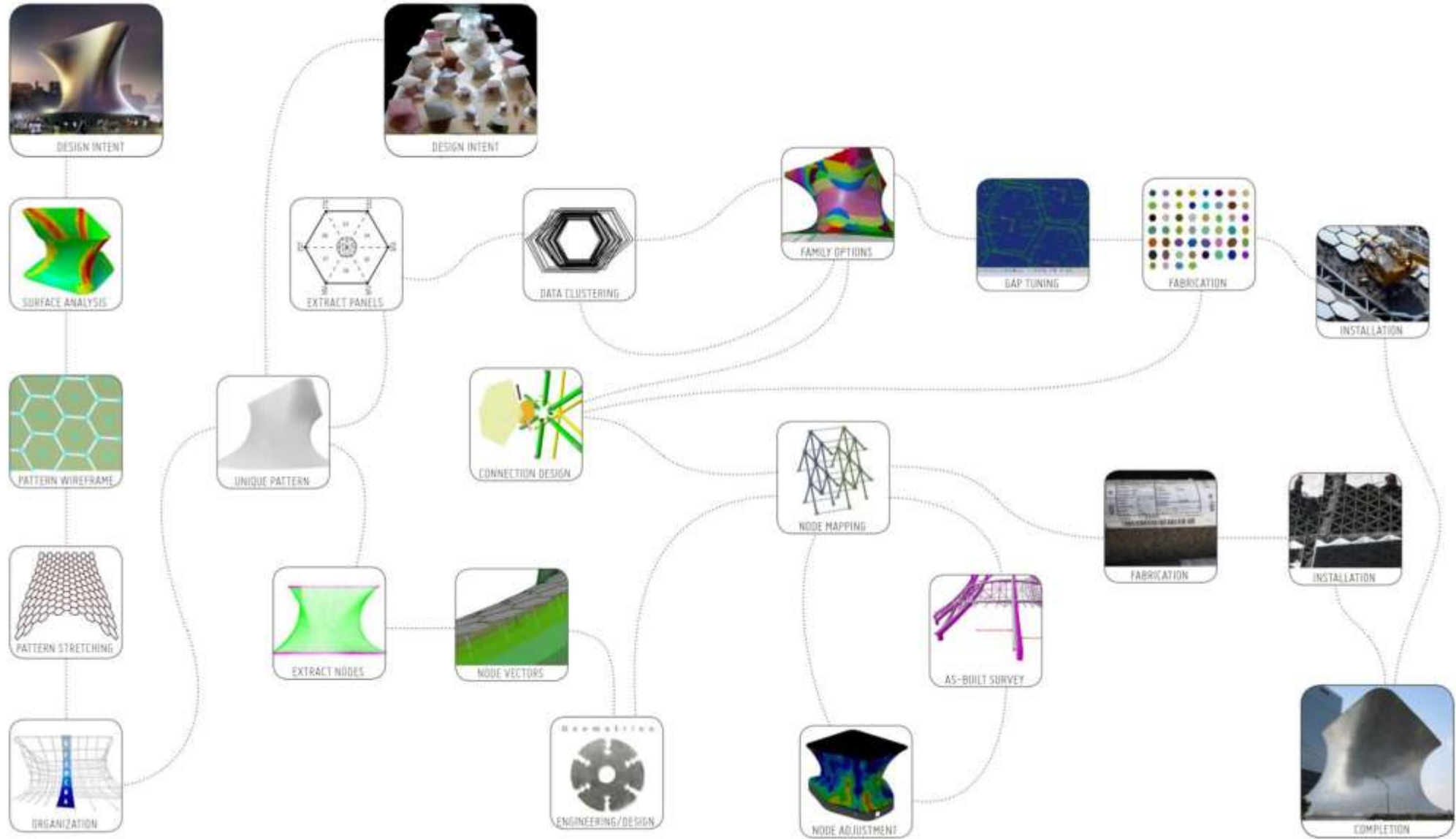
Certains de ce que vous devriez voir.

La conception paramétrique (conception assistée par algorithme, conception générative, etc.) est un système de création basé sur les dépendances entre les paramètres ou géométries et des actions ou fonctions liés ensemble afin d'aboutir à un algorithme permettant de modifier la relation entre ces actions. Il est basé sur l'échange d'informations via des données numériques. La conception paramétrique est un état d'esprit et peut être considéré comme un outil en soi. Il peut être utilisé à différentes étapes des systèmes de création architecturale et peut inclure divers degrés d'intervention du concepteur (humain).

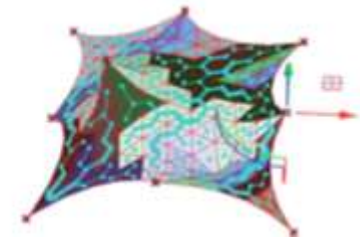
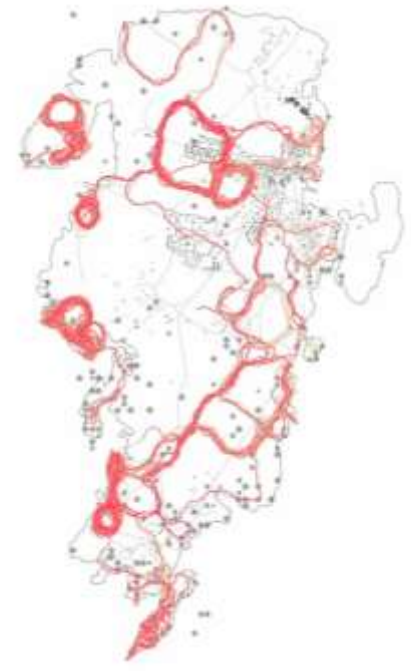
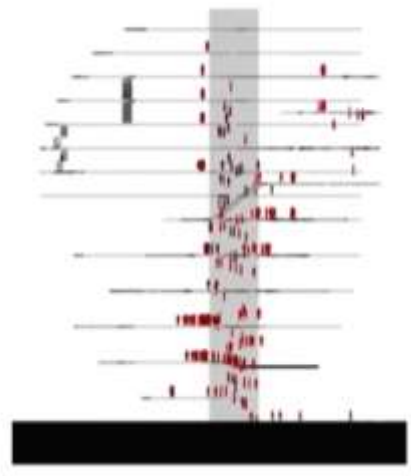
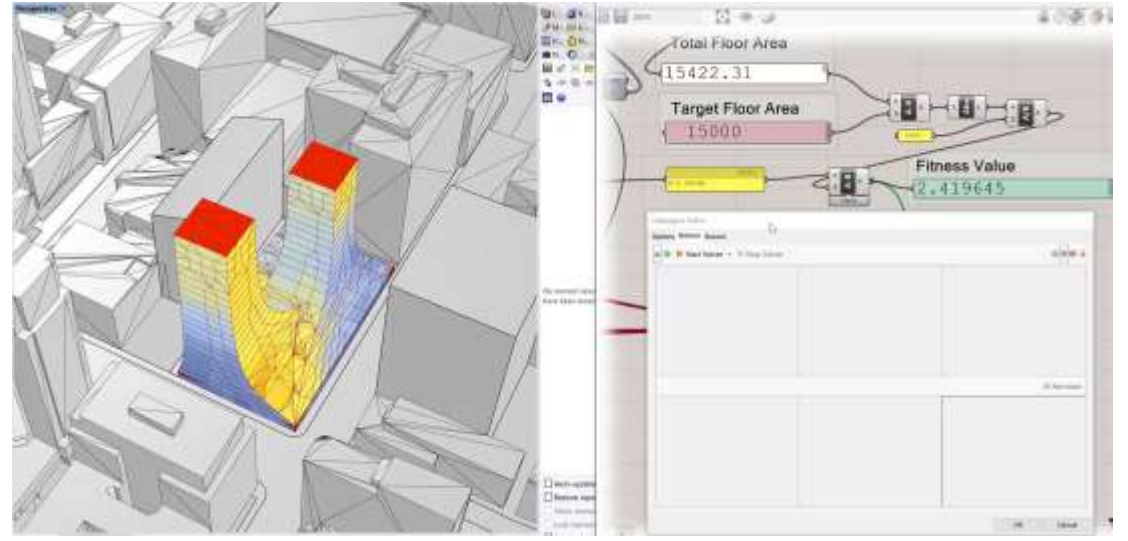
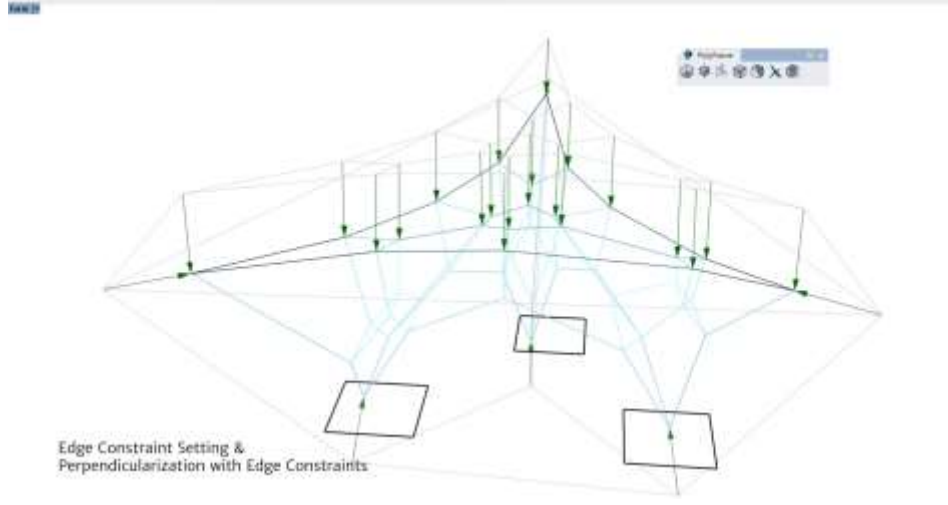




Museo Soumaya (2011) | Architecte: Fernando Romero Enterprise | Mexico City, Mexico

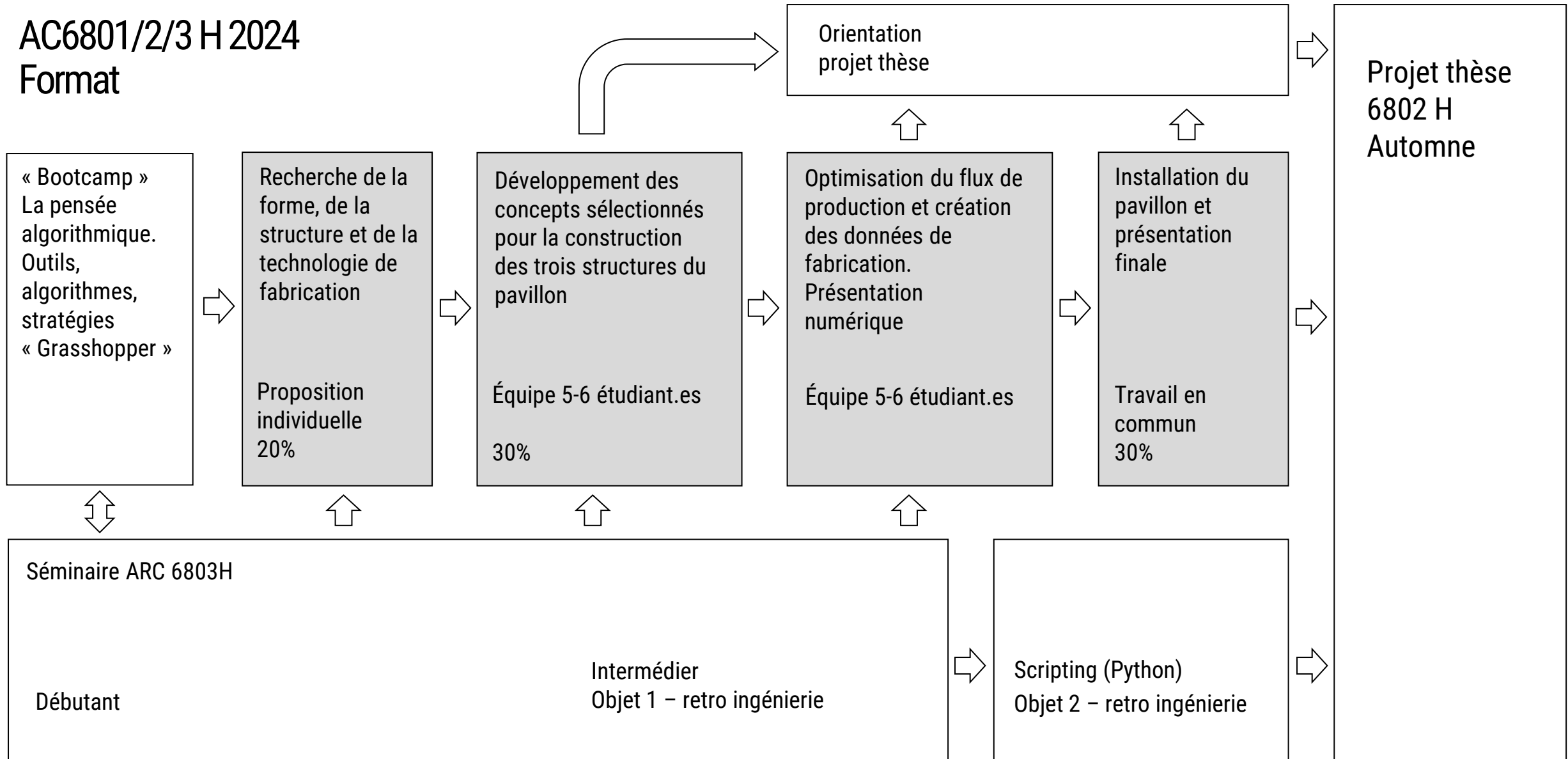


Two (2) in one
Maximum resolution: 1024 pixels and 1024 pixels. View rotation is 1.5 degrees. Press enter to proceed.
Command



AC6801/2/3 H 2024

Format



Outils/modelés virtuels



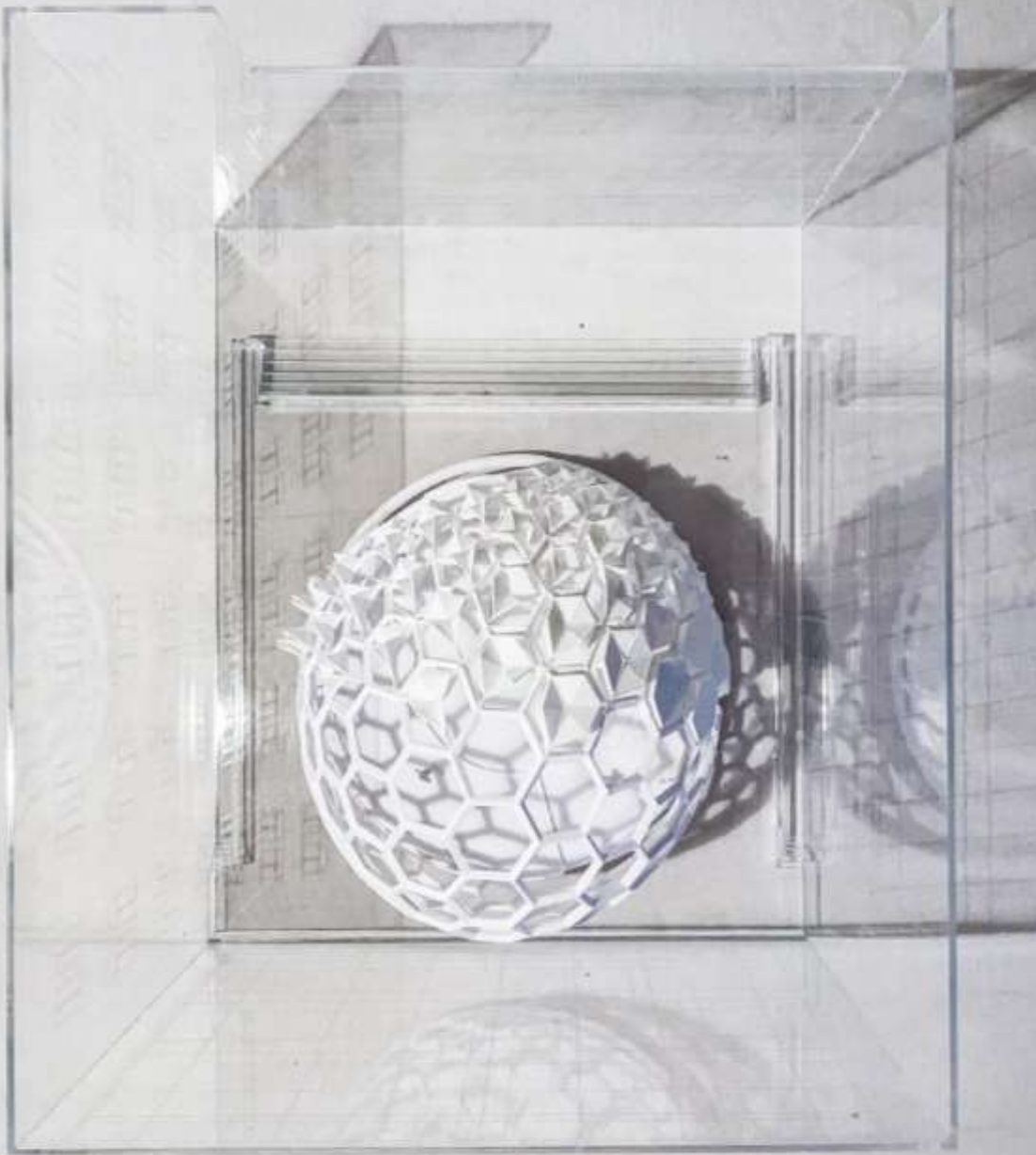
Maquettes, échelle réduite



Pavillon, grande échelle



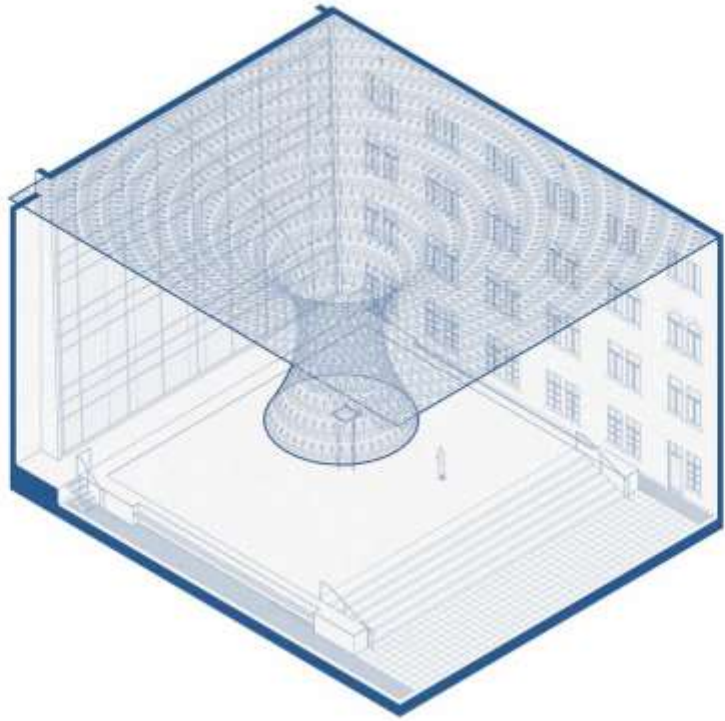
Bâtiment



Francis Alphonso + Marc Antoine Langelier 2021



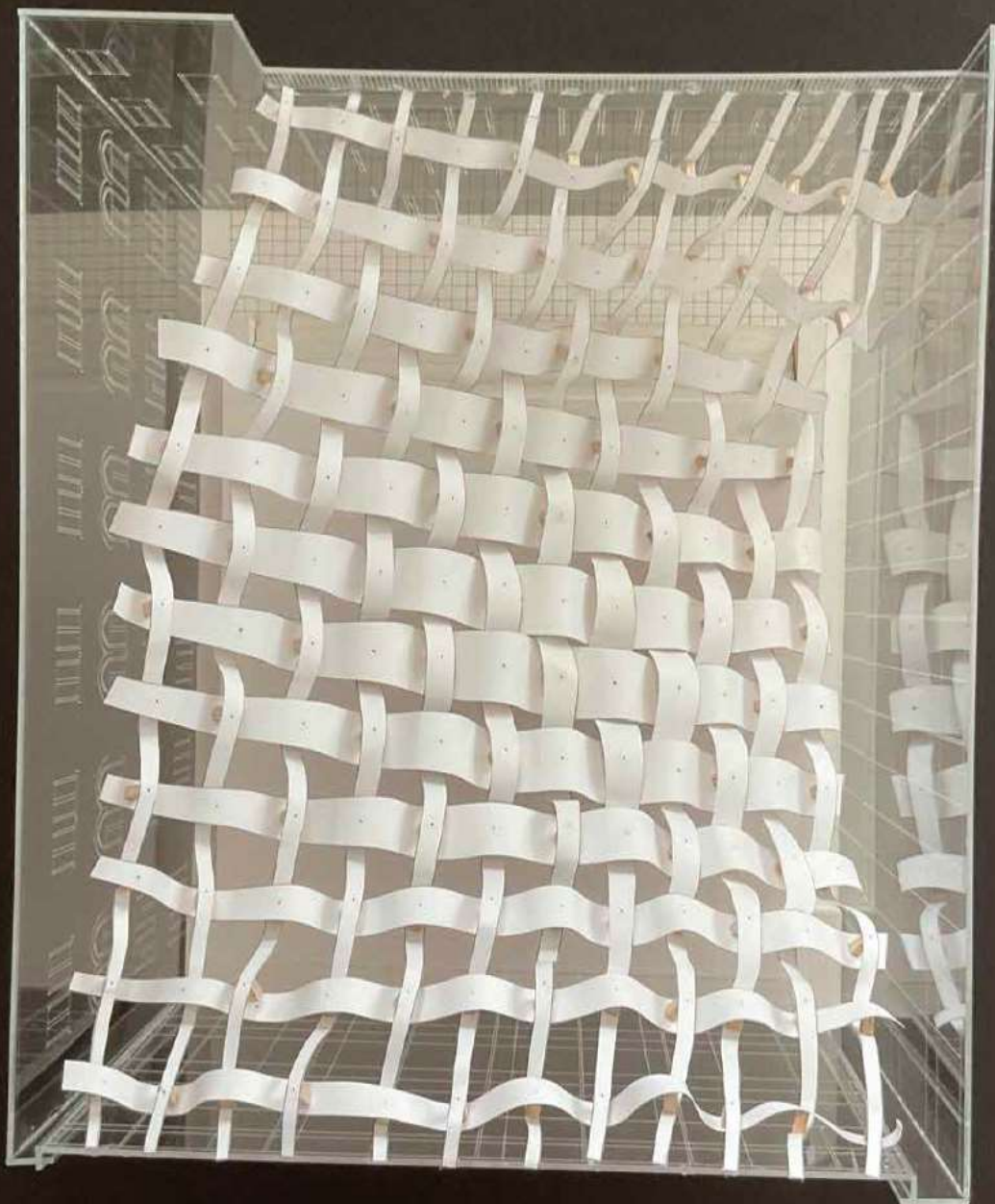
Pierre-Alexandre Mireault + Nicolas Bélanger 2021



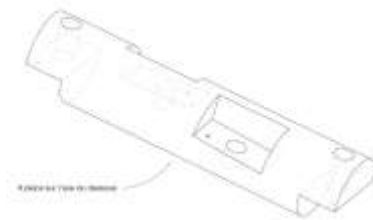
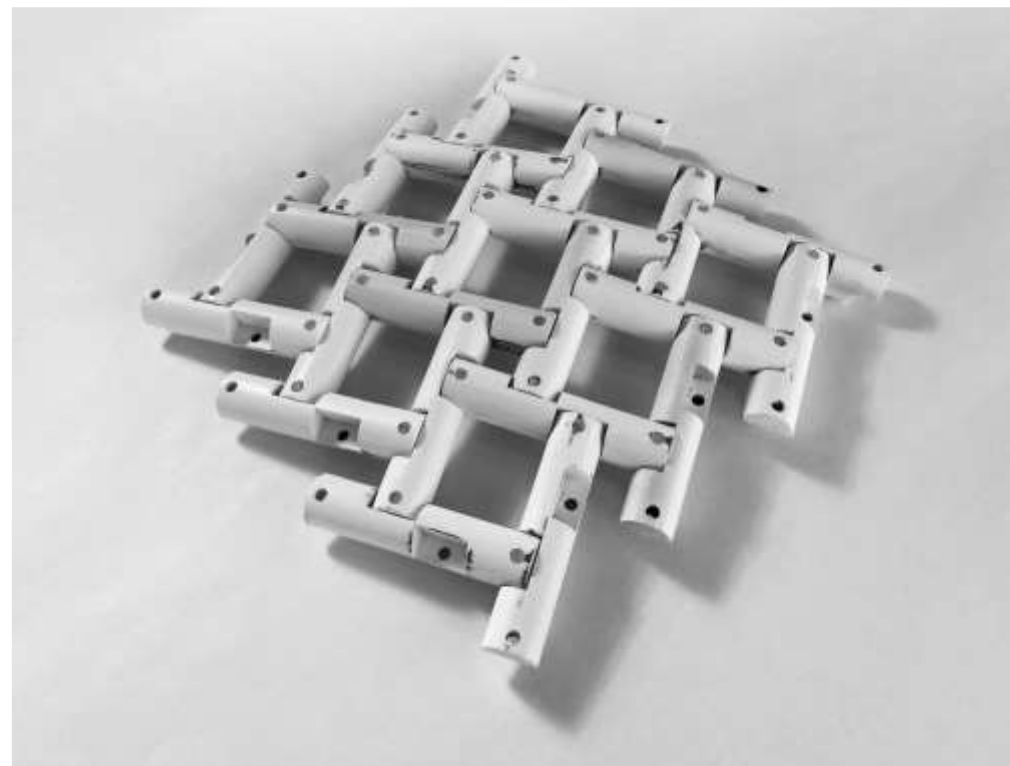
Grégoire Gaudreault et Christian Molina 2022



Anais Duclos 2022



Caroline St-Hilaire et Delphie Poulin 2021



Juliette Mezey et Sarah Murray 2022

2021 – Pavillon A(fin)ne

L'équipe du projet.
Atelier de recherche ARC 6801 H

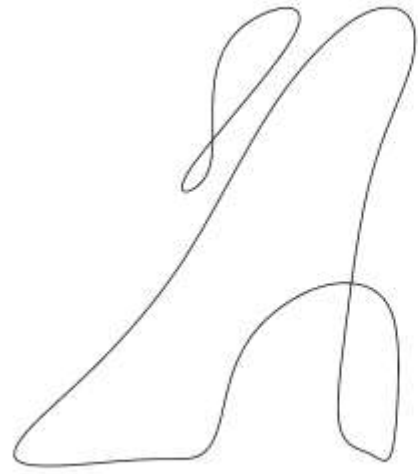
Étudiants :

Francis Alphonso
Nicolas Bélanger
Camille Bérubé
Youstina Magdy Faltas
Eva Gamacchio
Marc-Antoine Langelier
Kevin Larouche-Wilson
Maryam Mansy
Pierre-Alexandre Mireault
Olivier Morissette
Elie Naha
Delphie Poulin
Caroline St-Hilaire

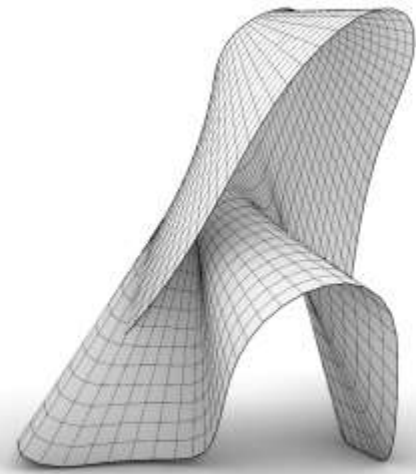
Tuteurs :

Thomas Balaban
Andrei Nejur





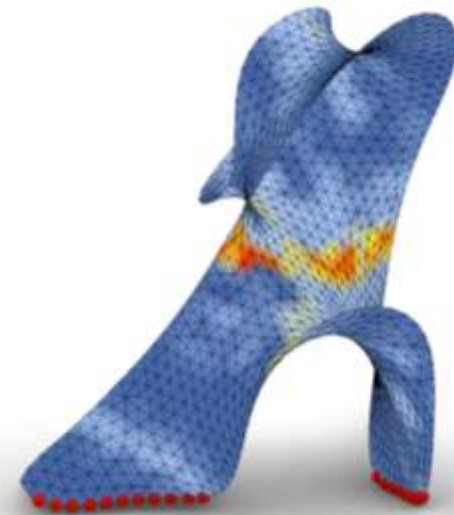
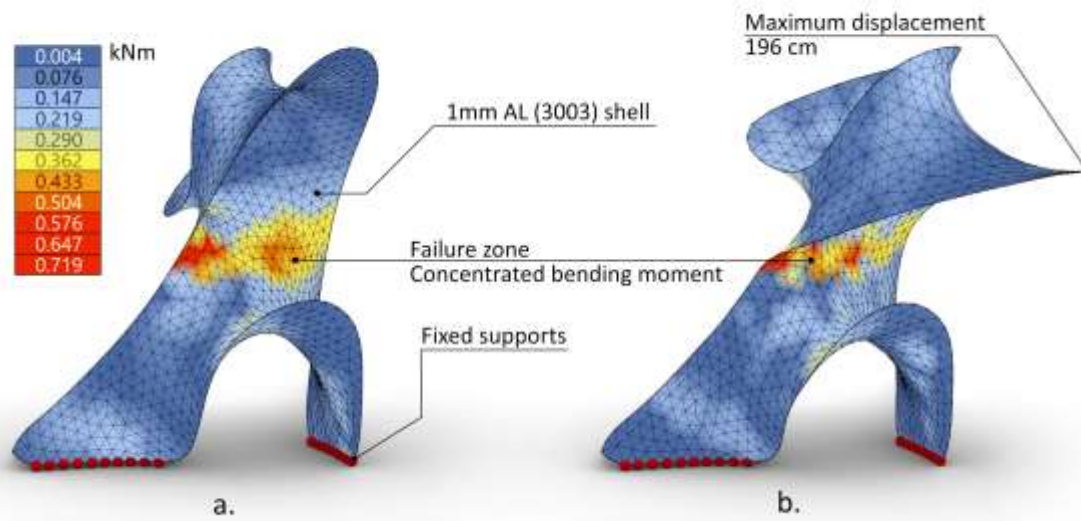
a.

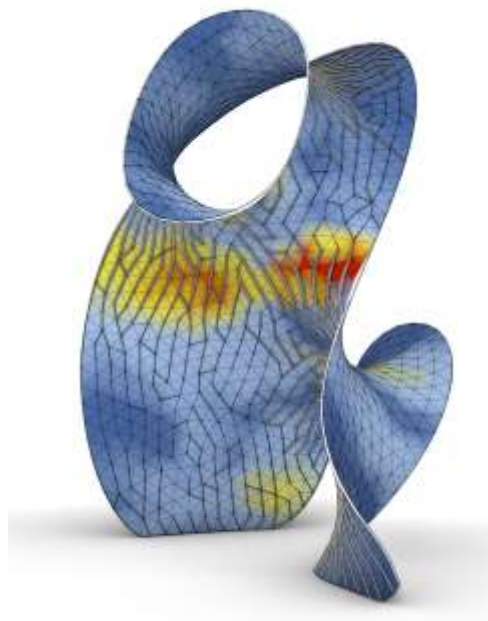
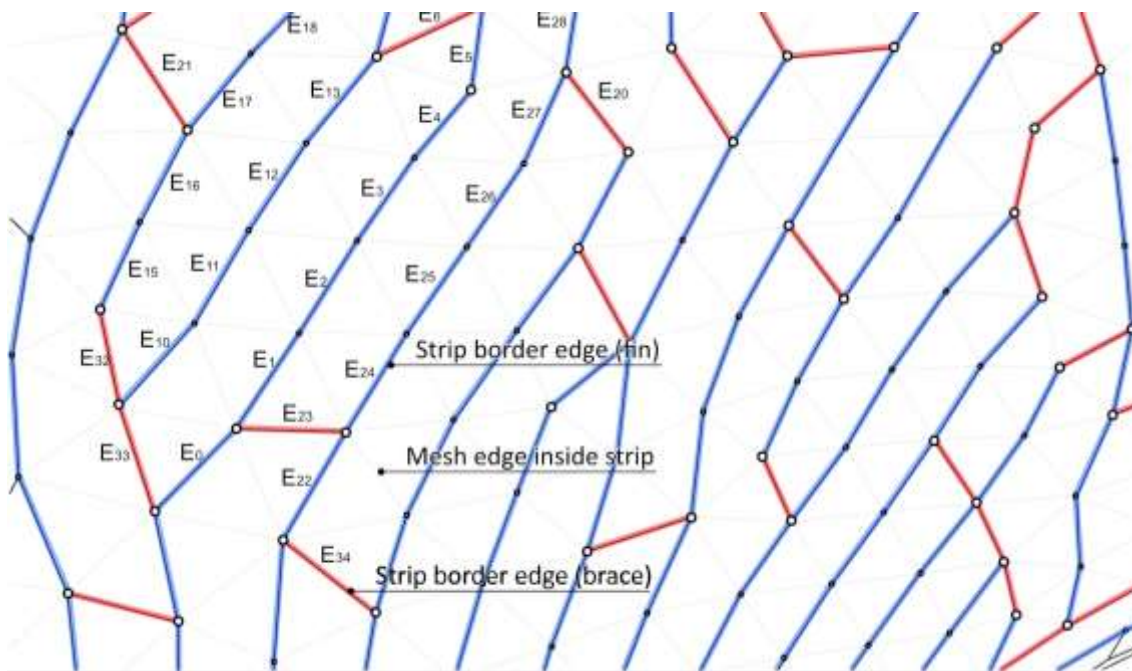
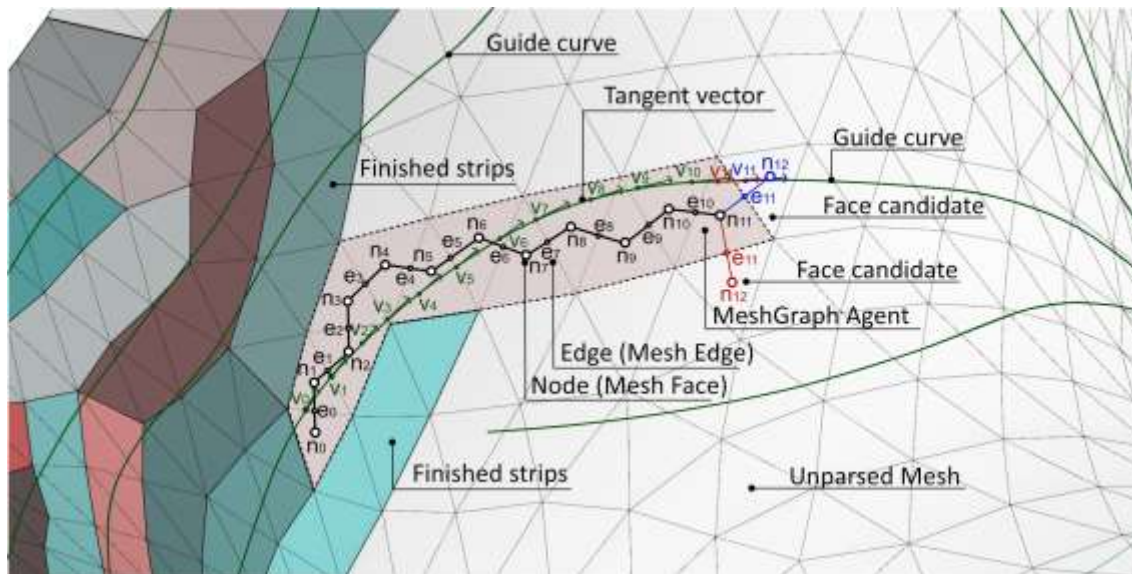


b.



c.











Pavillon NœudAL 2022

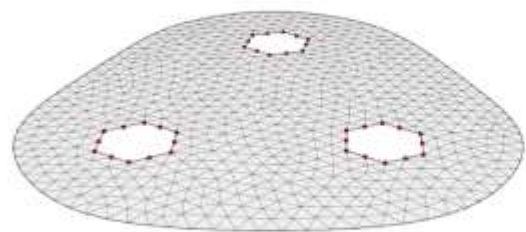
L'équipe de développement et de
construction
Tuteurs et chercheurs de l'atelier

Andrei Nejur
Thomas Balaban

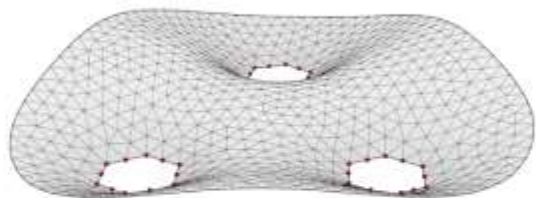
Étudiants de maîtrise

Marc-Antoine Boulé
Christian Gonzalez
Charles Cauchon
Anaïs Duclos
Grégoire Gaudreault
Kévin Larouche-Wilson
Juliette Mezey
Sarah Murray
Lucas Ouellet

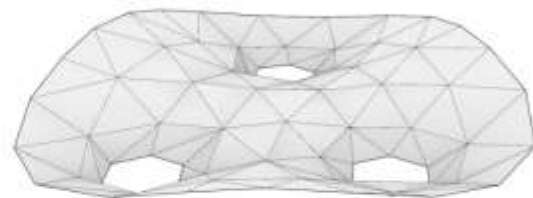




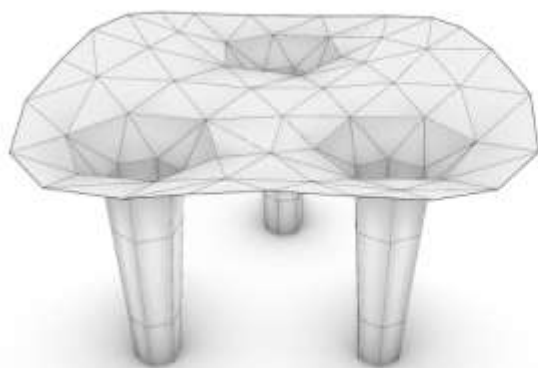
(a)



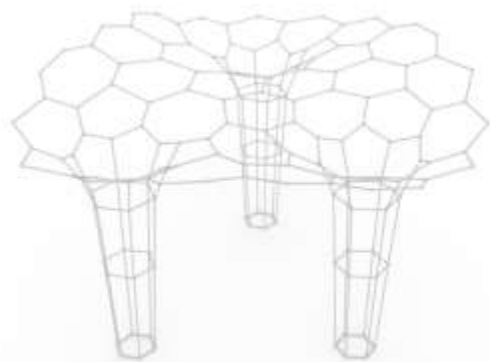
(b)



(c)



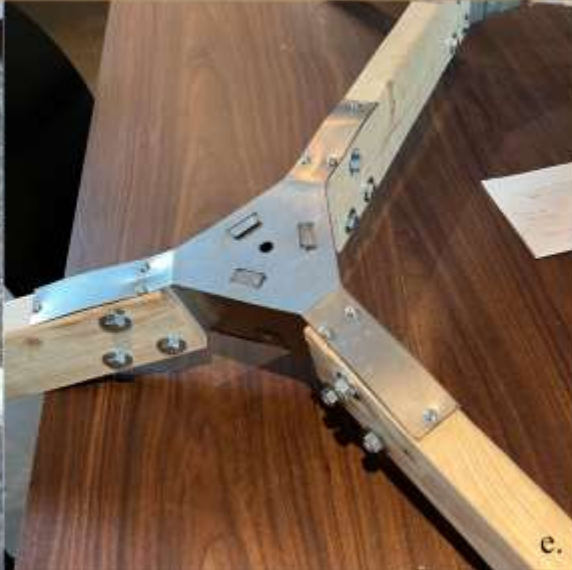
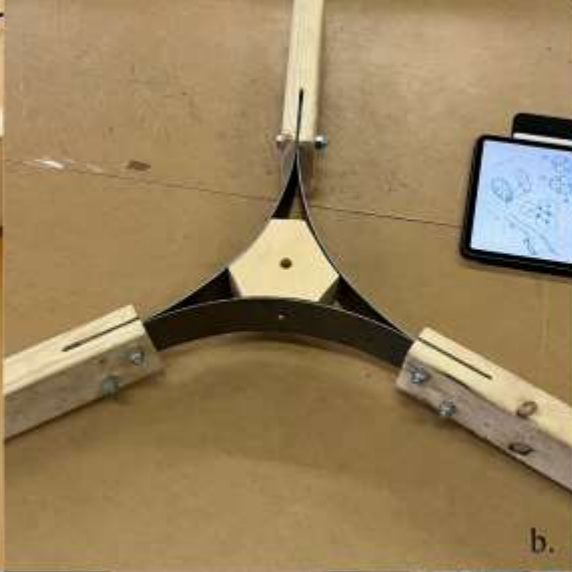
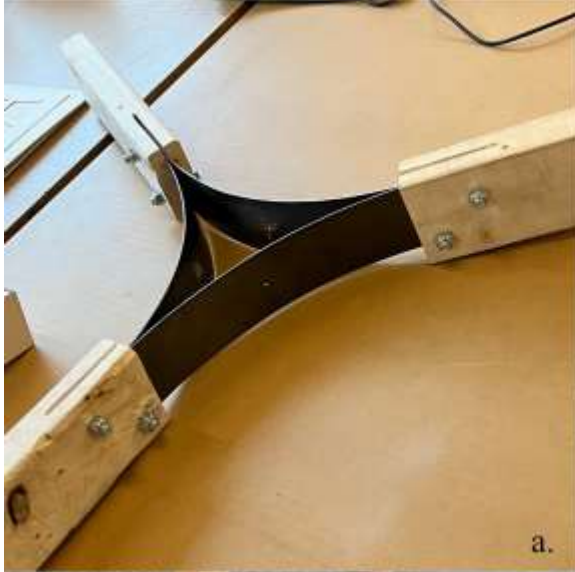
(d)

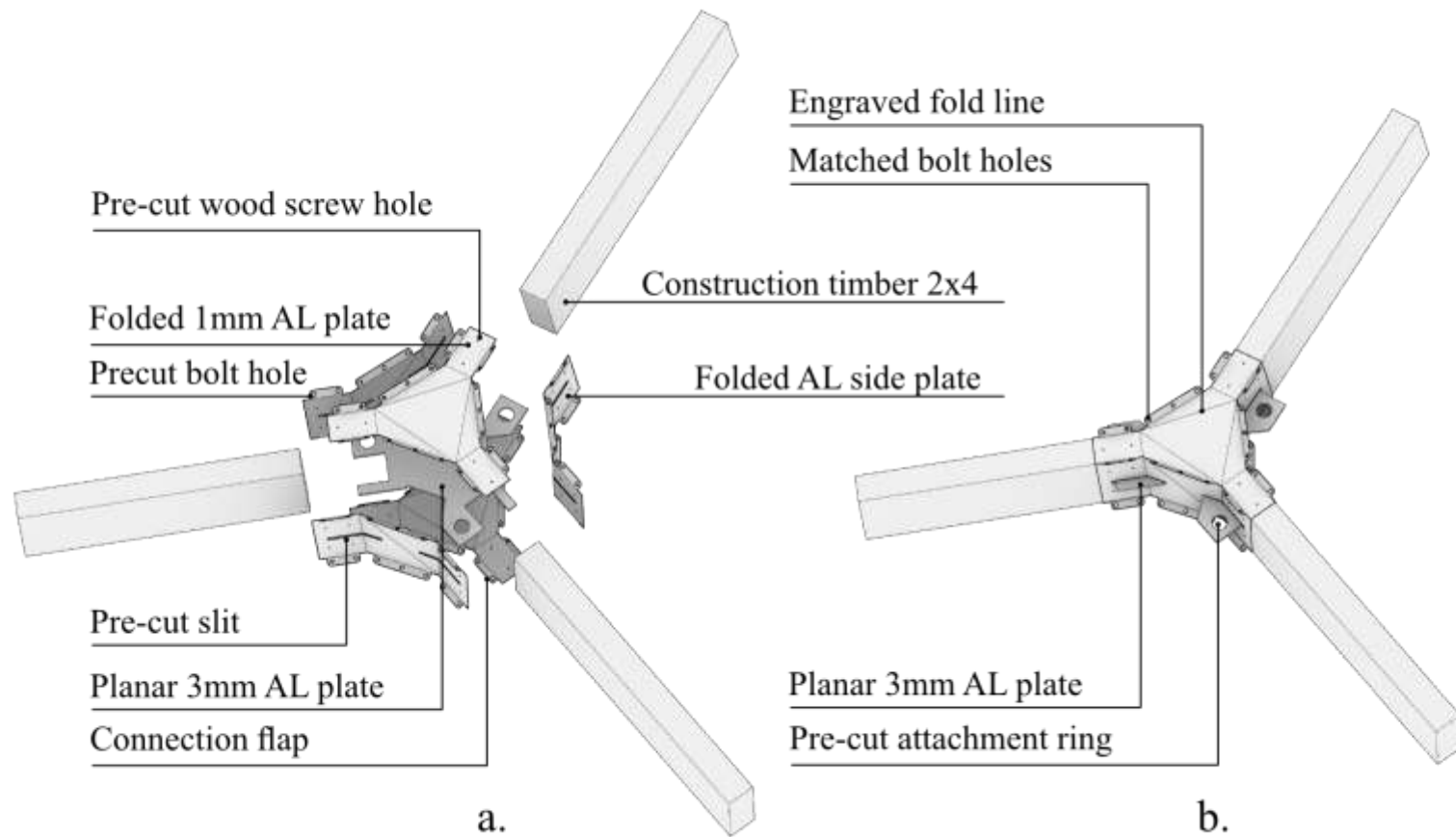


(e)



(f)



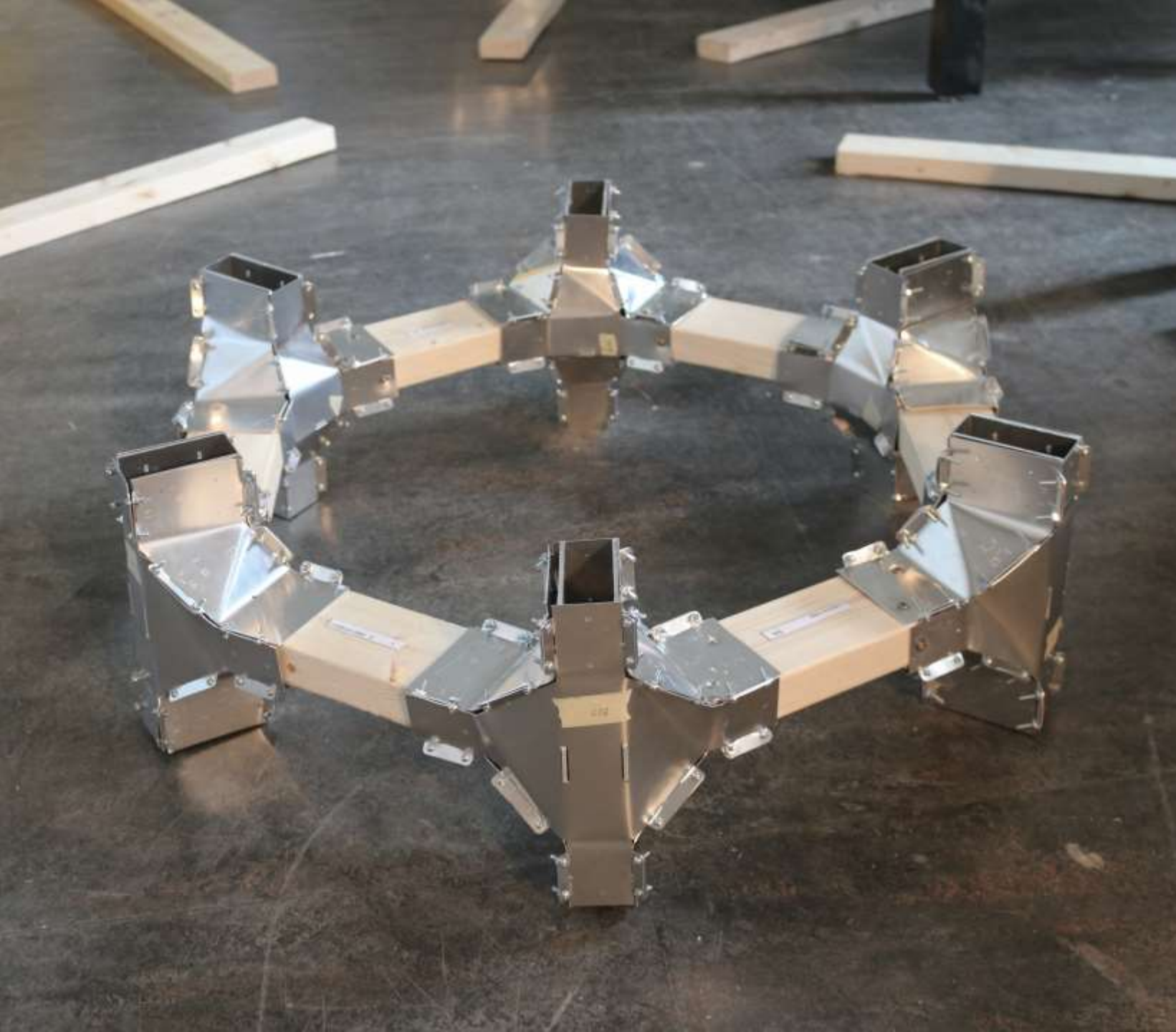


c.

Le nœud n'est que de 300 grammes et est compatible avec n'importe quel profil de bois d'œuvre dimensionnel. Les 3 directions spatiales peuvent être accommodées par la conception du nœud.



Les nœuds peuvent être assemblés manuellement, seuls les outils à main sont nécessaires.



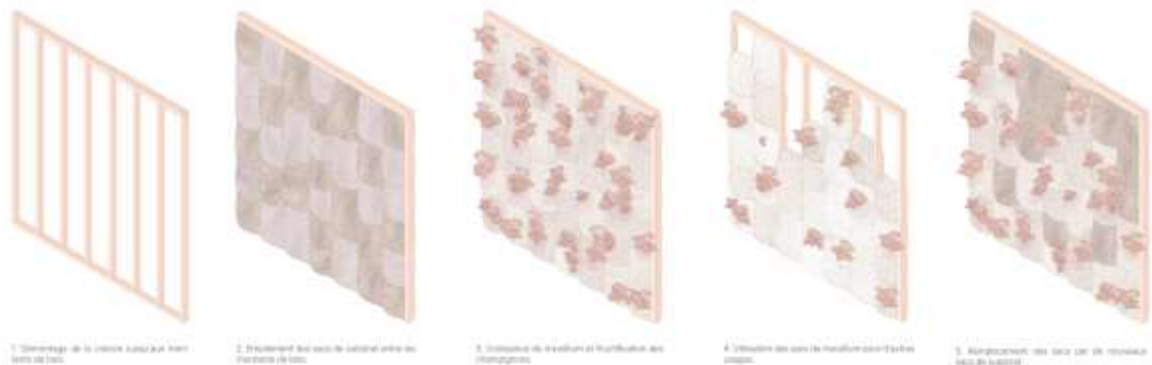




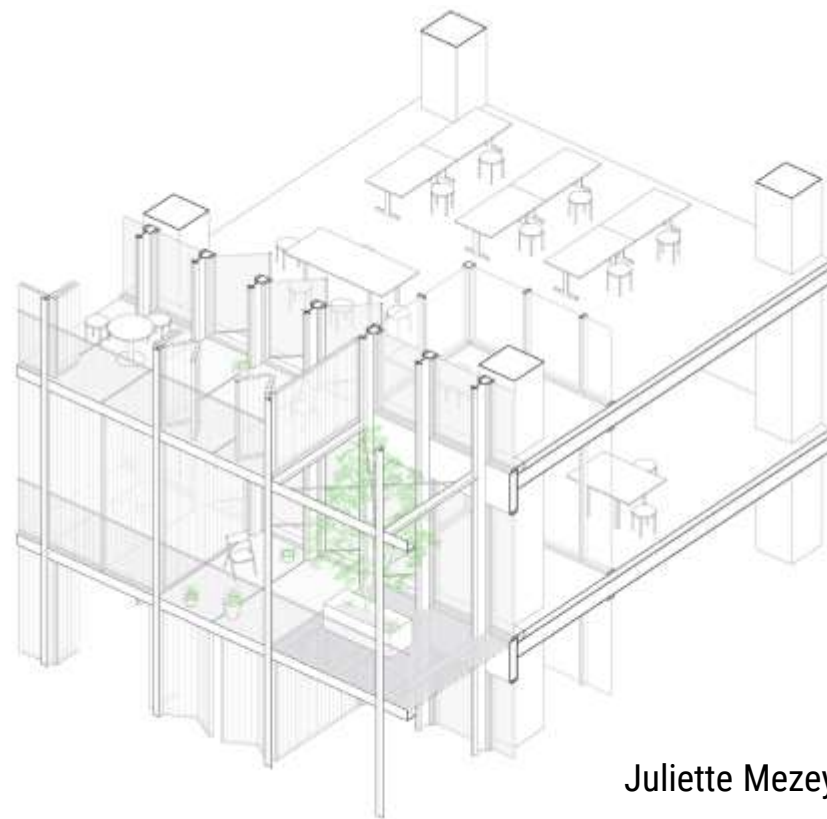
[Timelapse video](https://youtu.be/hEyBHxypd1s)

<https://youtu.be/hEyBHxypd1s>

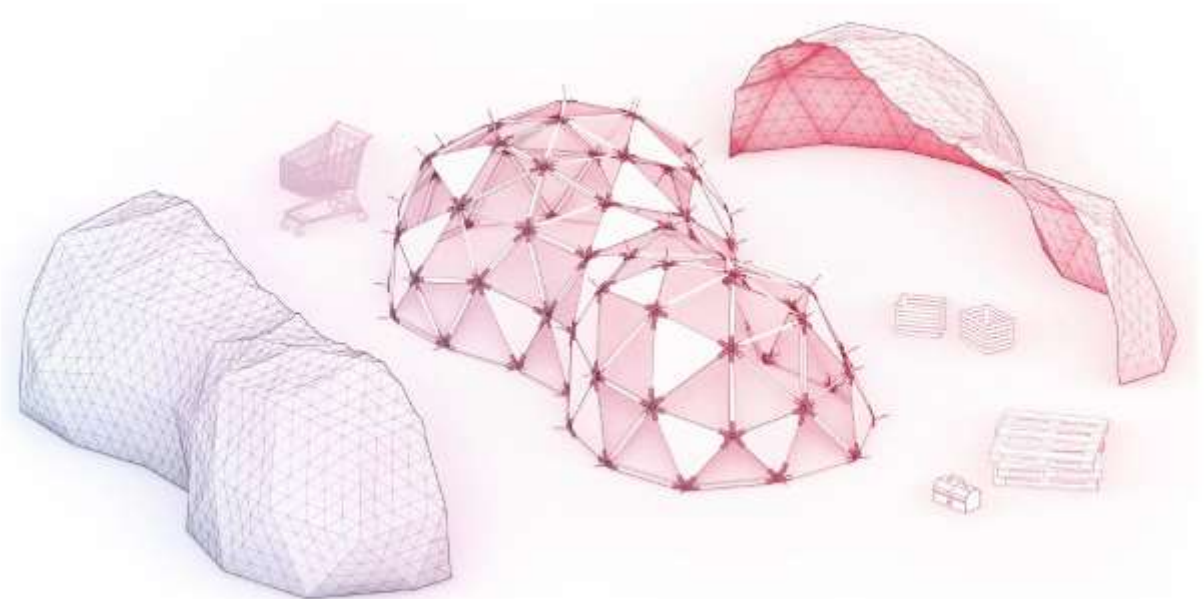
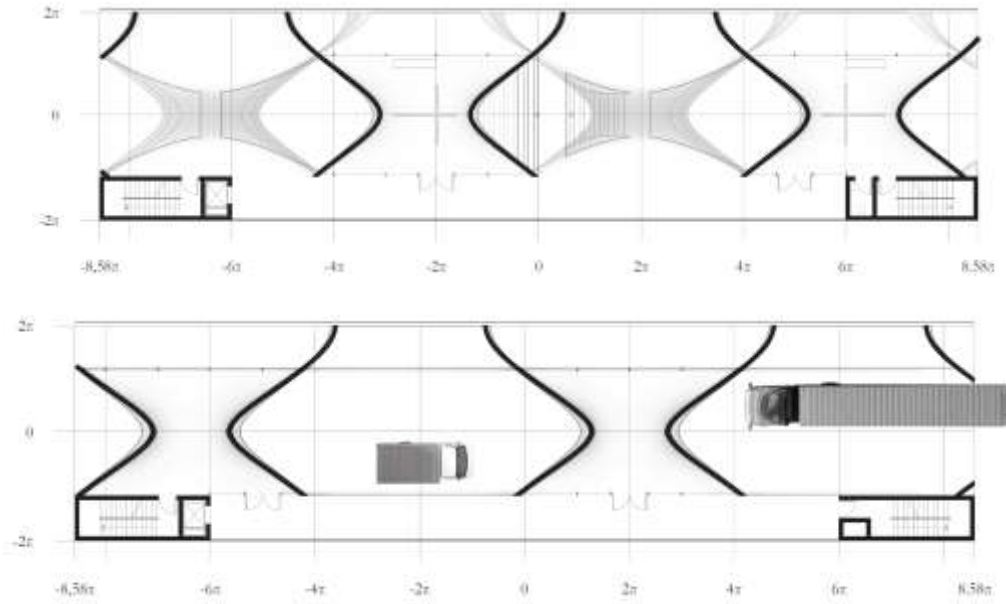
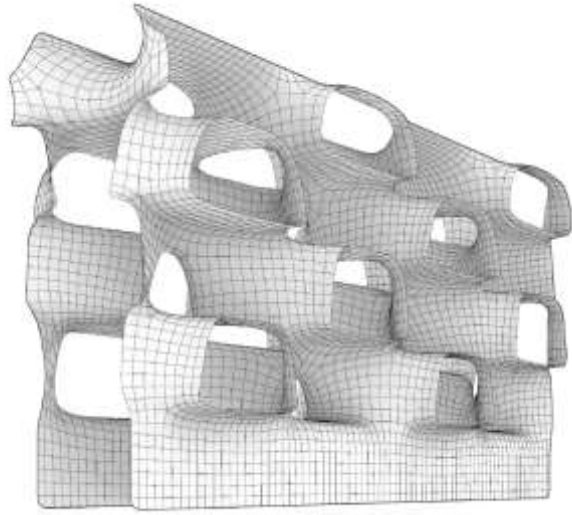




Anaïs Duclos 2022

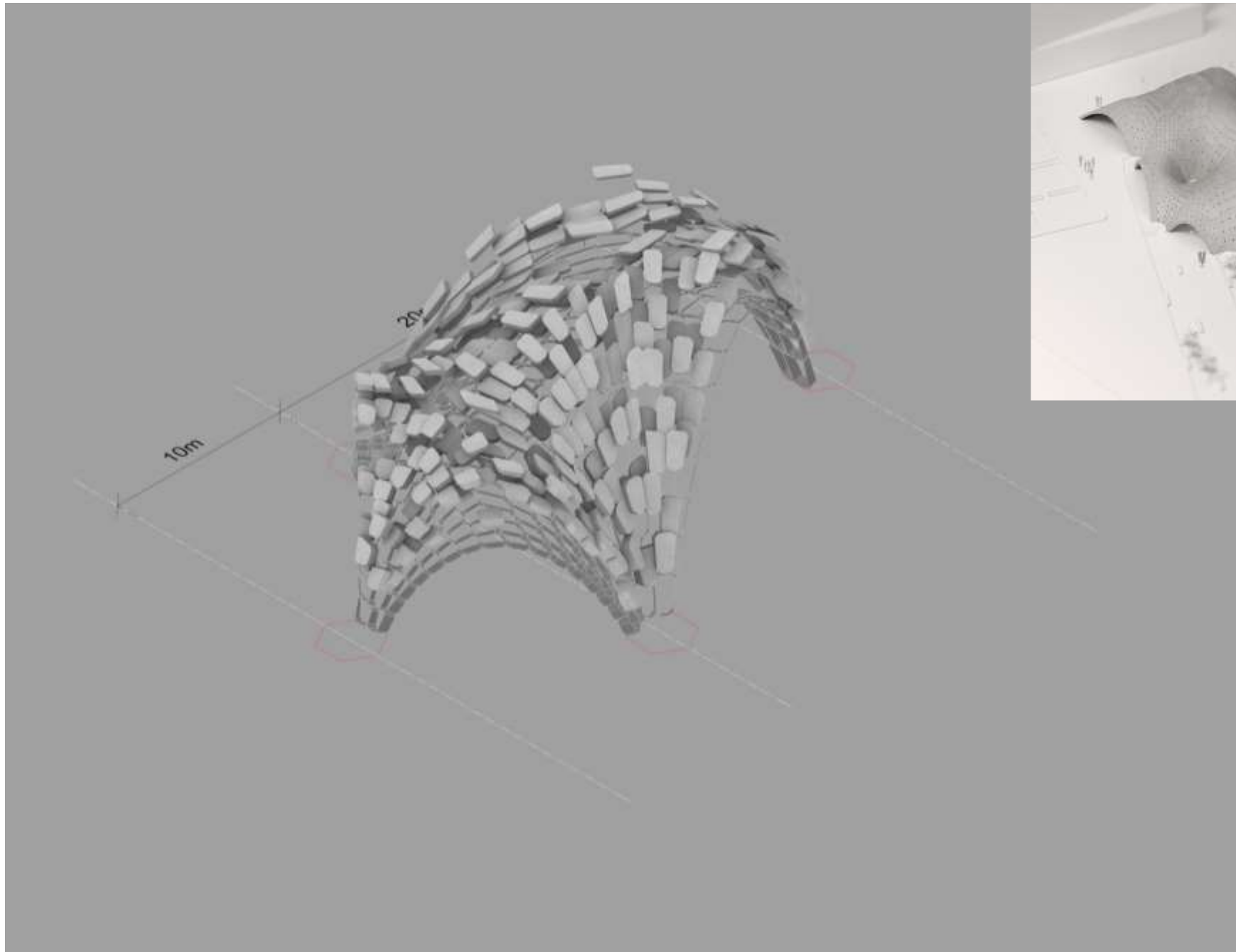


Juliette Mezey 2022



Charles Cauchon 2022

Grégoire Gaudreault 2022



Francis Alphonso 2021



<https://youtu.be/vhTE42ux8G8?si=n5hqZk05kT2XyDID>