Le Groupe RE08 présente,

RECHERCHE NUMÉRIQUE

Modélisation et représentation de l'espace
Modélisation paramétrique

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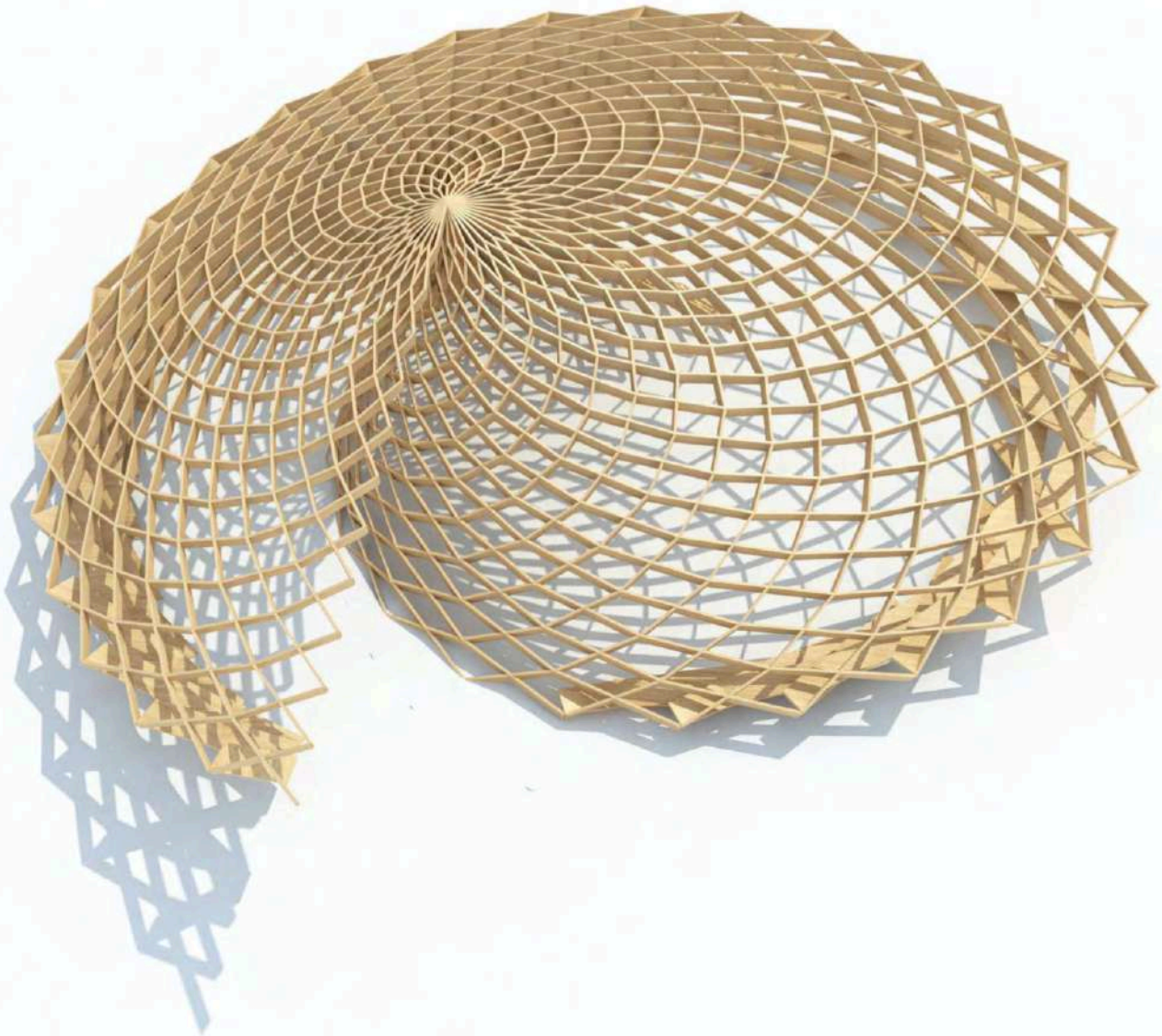
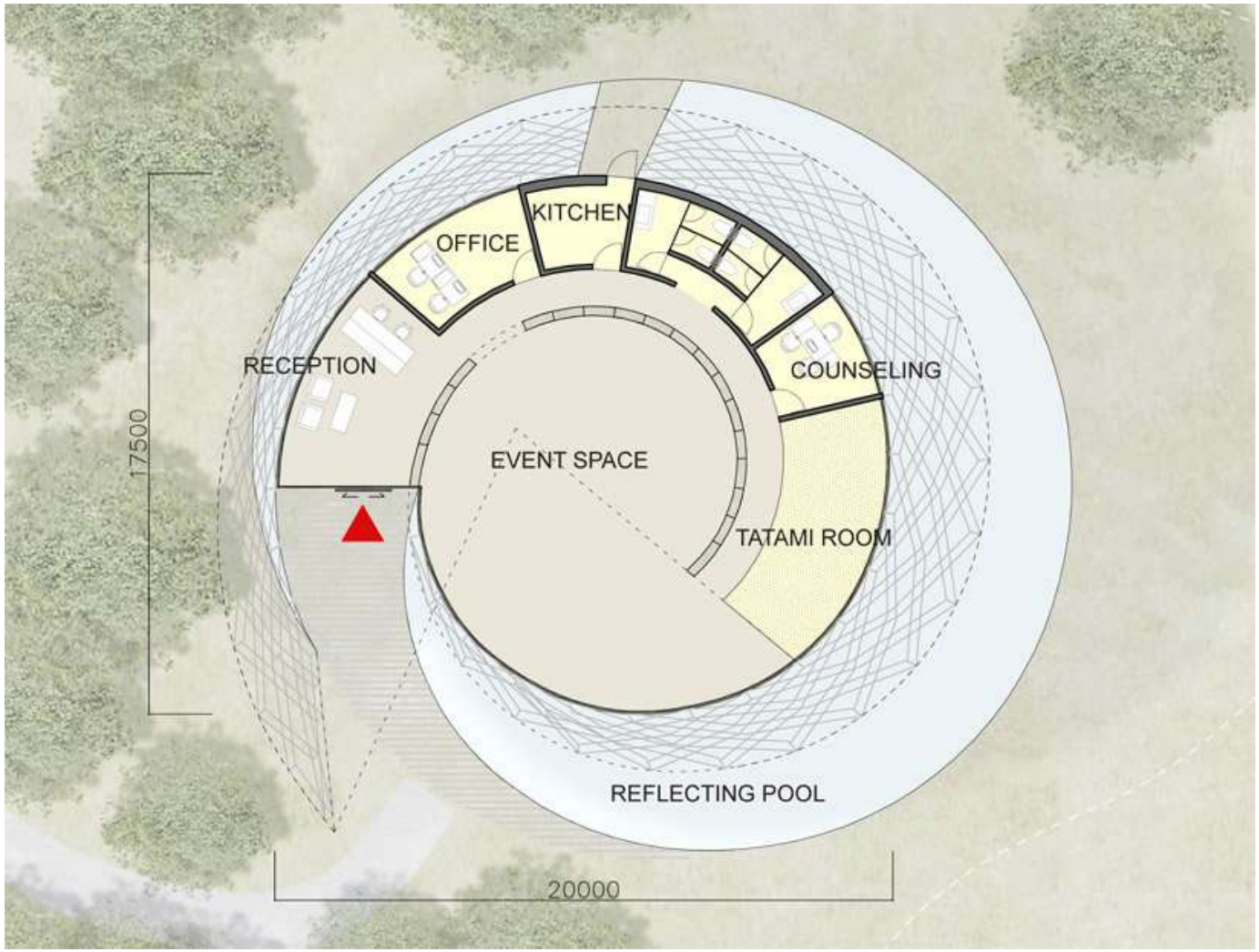
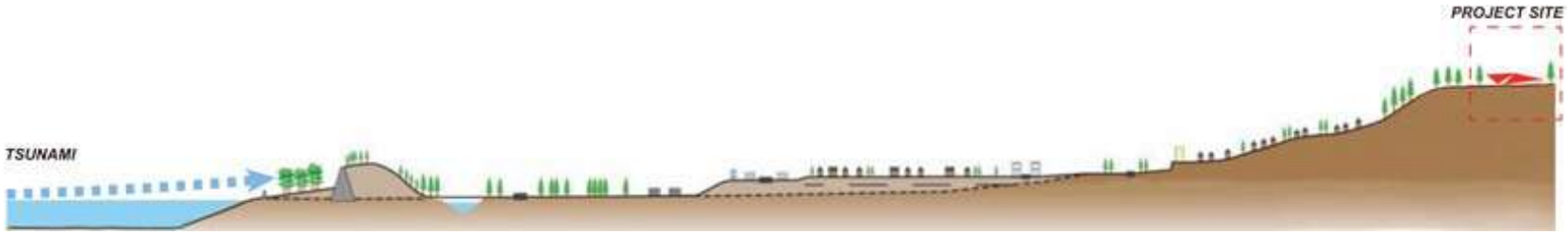
TIBI Noam	*000408745*	*CHARINET Guillaume*	*000426190*

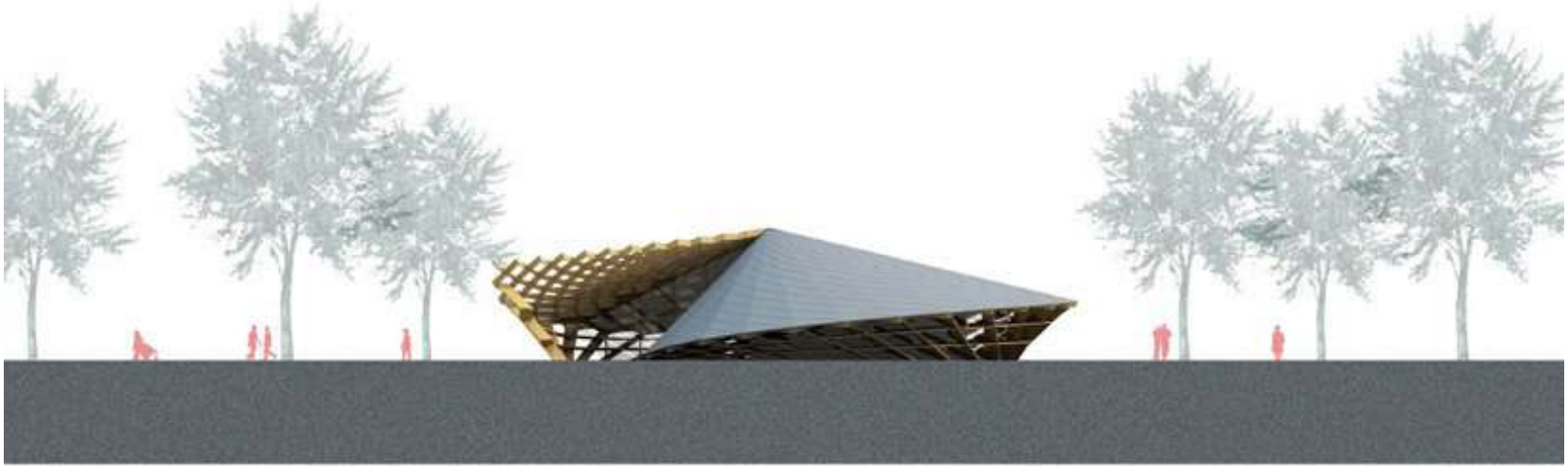
Centre pour personnes âgées de Rikuzentakata,

Arch. Kengo Kuma

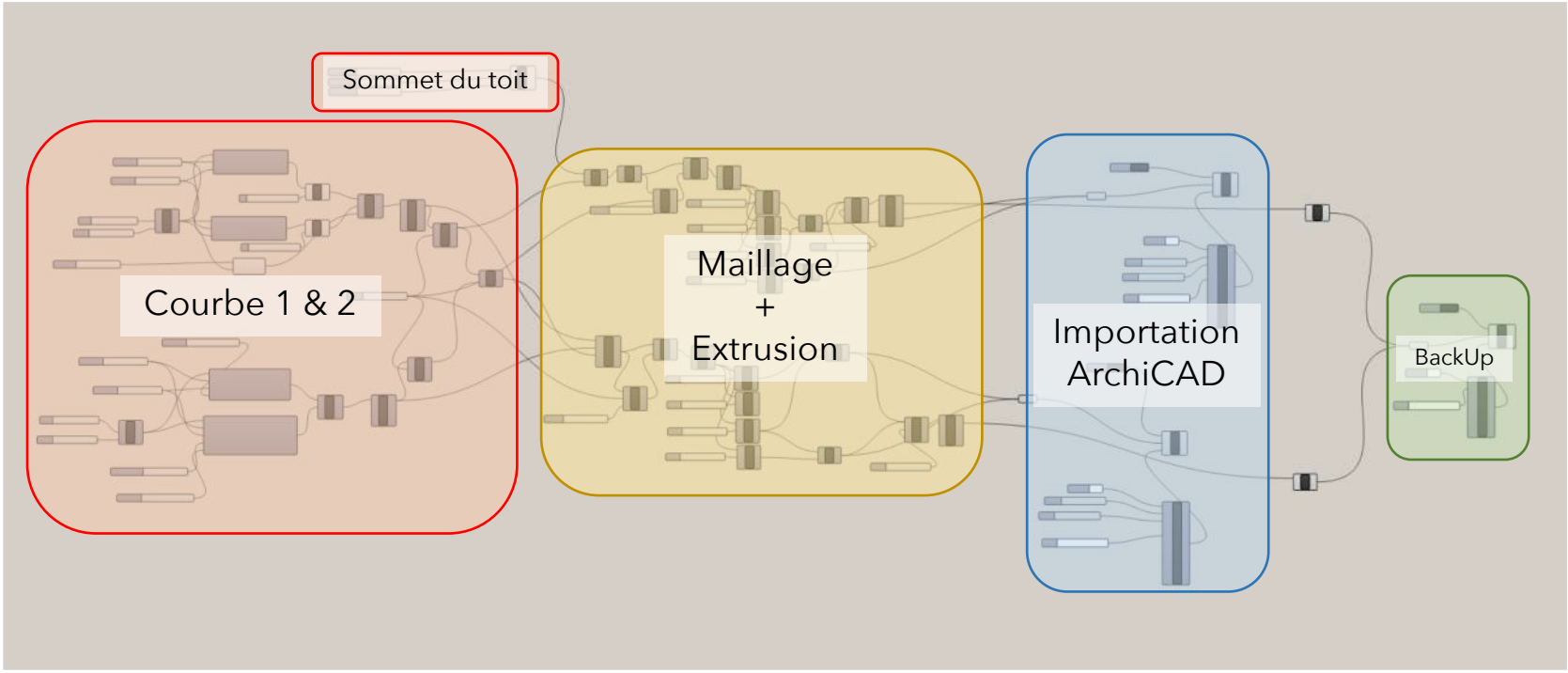



OFFICE
KITCHEN
RECEPTION
COUNSELING
EVENT SPACE
TATAMI ROOM
REFLECTING POOL
17500
20000


PROJECT SITE
TSUNAMI

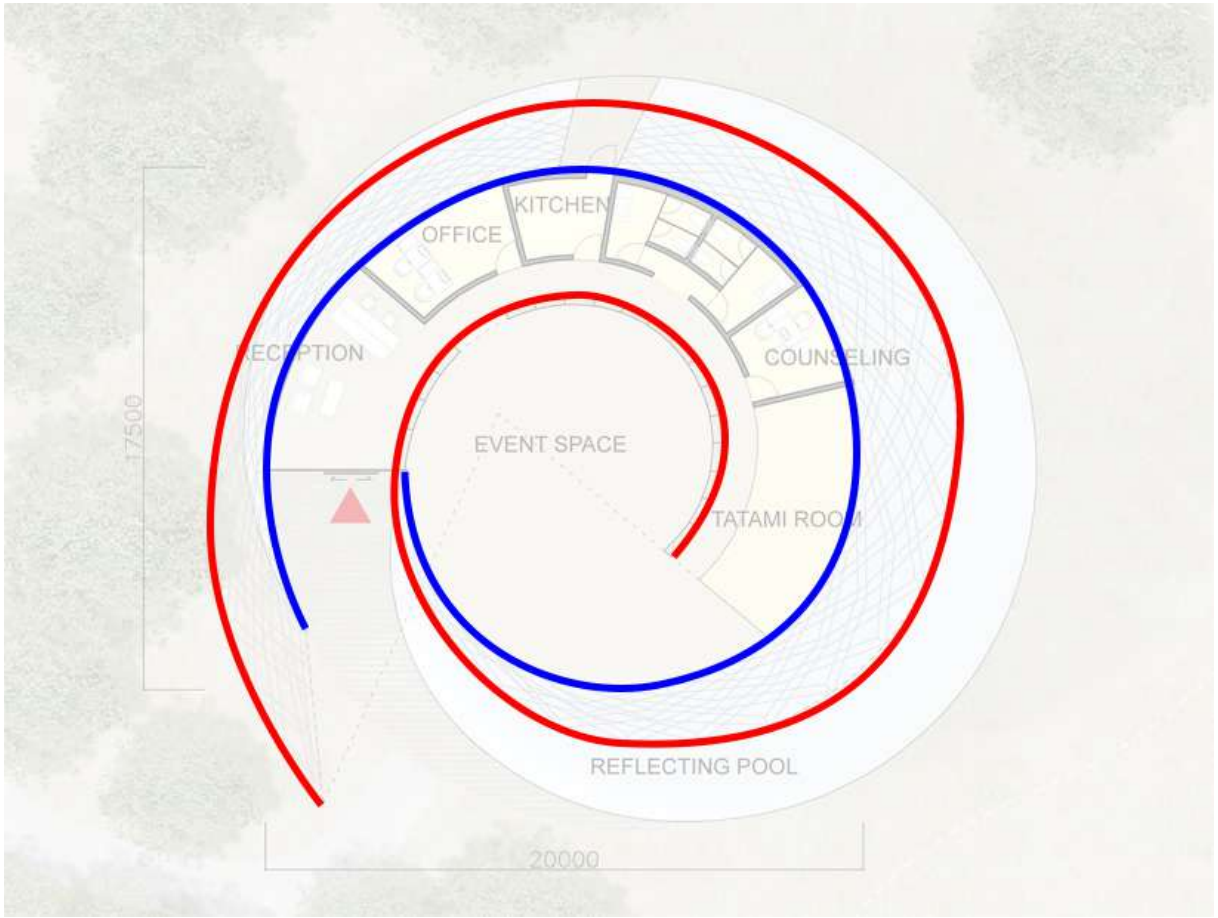


Organisation finale du Grasshoper



1. Création de la forme du projet

Décomposition du plan en 2 spirales

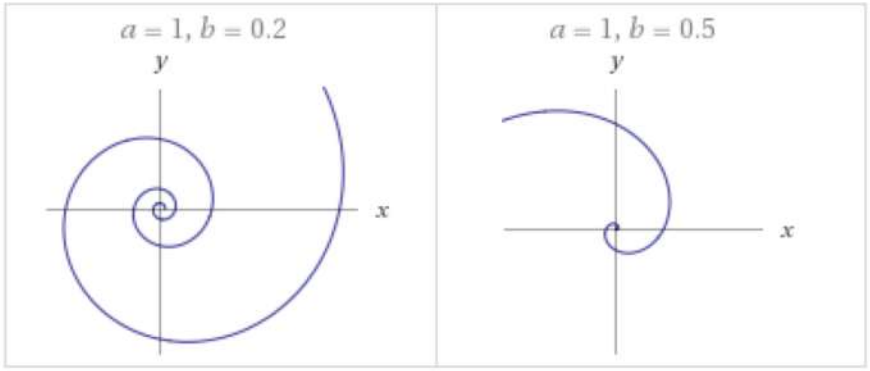


Fonction mathématique d'une spirale

Input interpretation:

logarithmic spiral (plane curve)

Example plots:



(plotted for t from 0 to 20)

Equations:

Parametric equations:

$$x(t) = a\, e^{b\,t} \cos(t)$$

$$y(t) = a\, e^{b\,t} \sin(t)$$

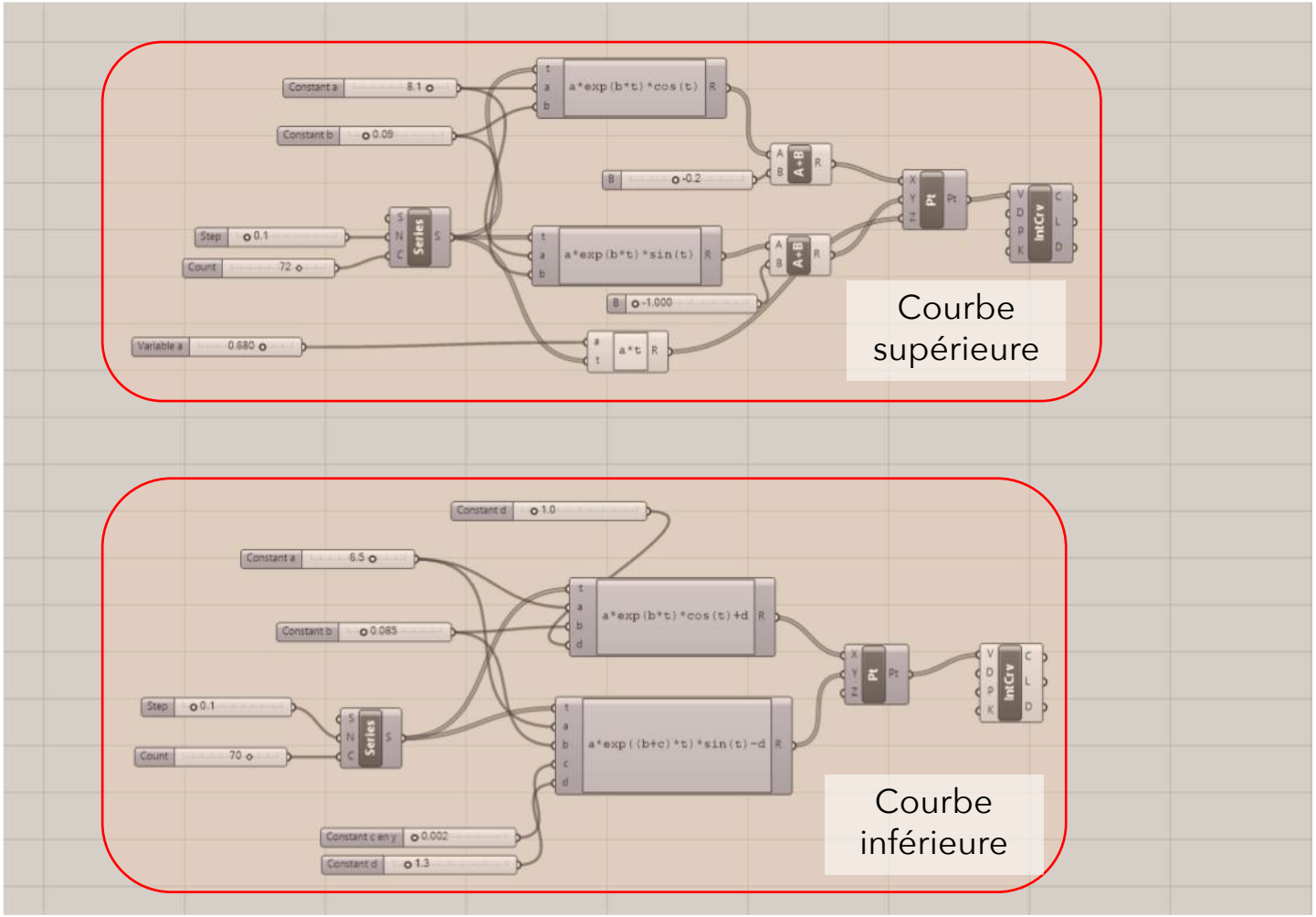
Polar equation:

$$r(\theta) = a\, e^{b\,\theta}$$

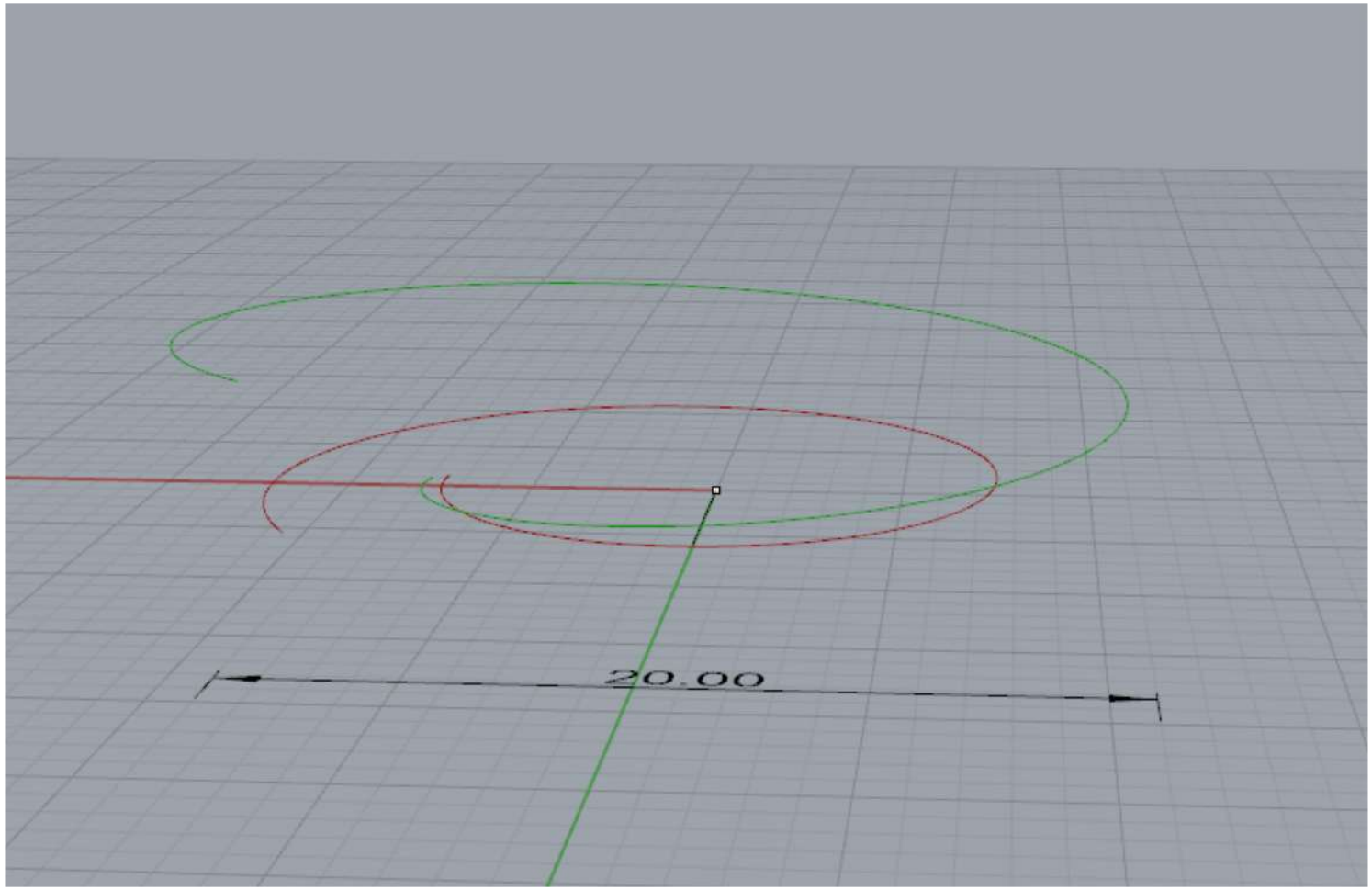
Properties:

parametric | spiral

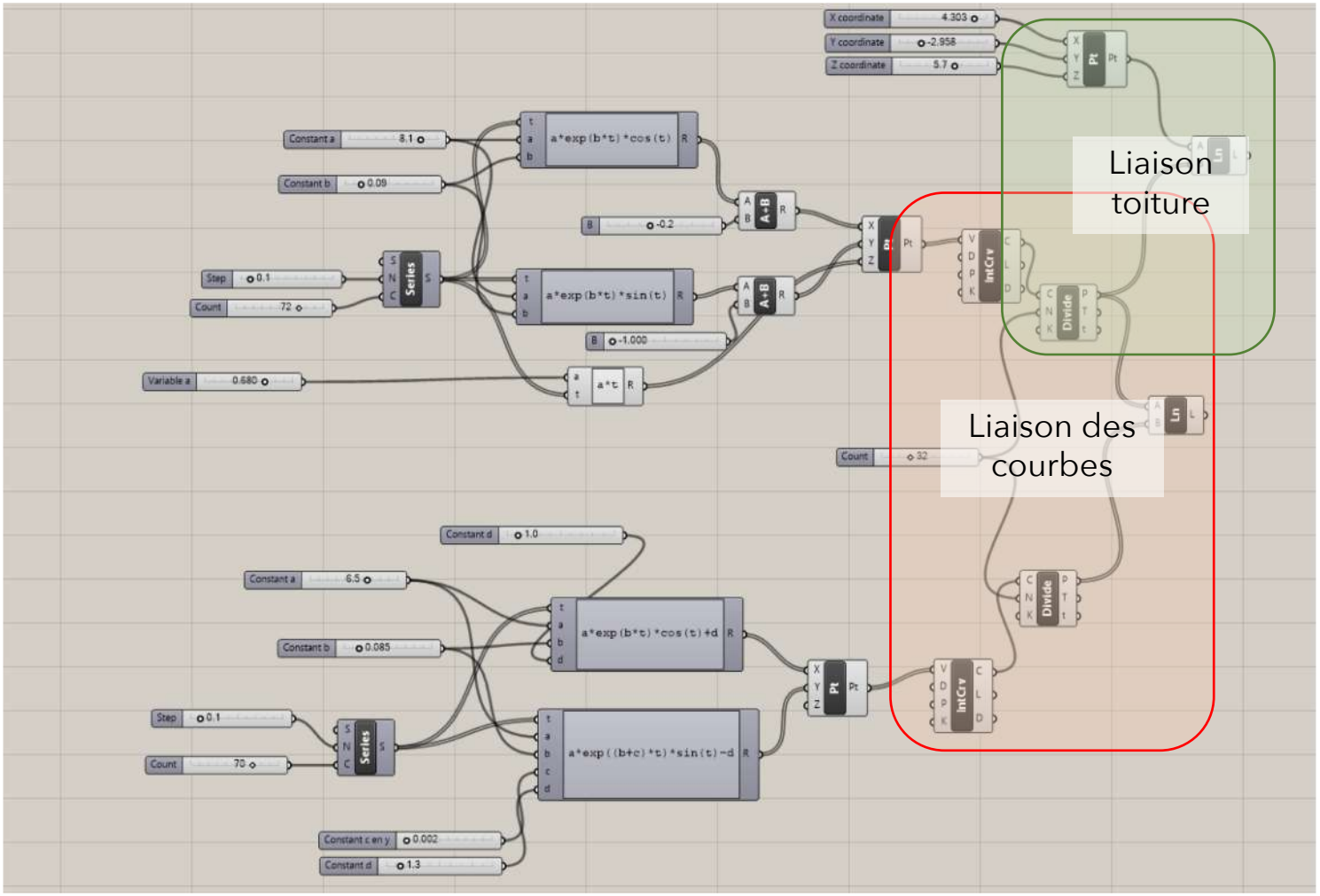
Création des courbes



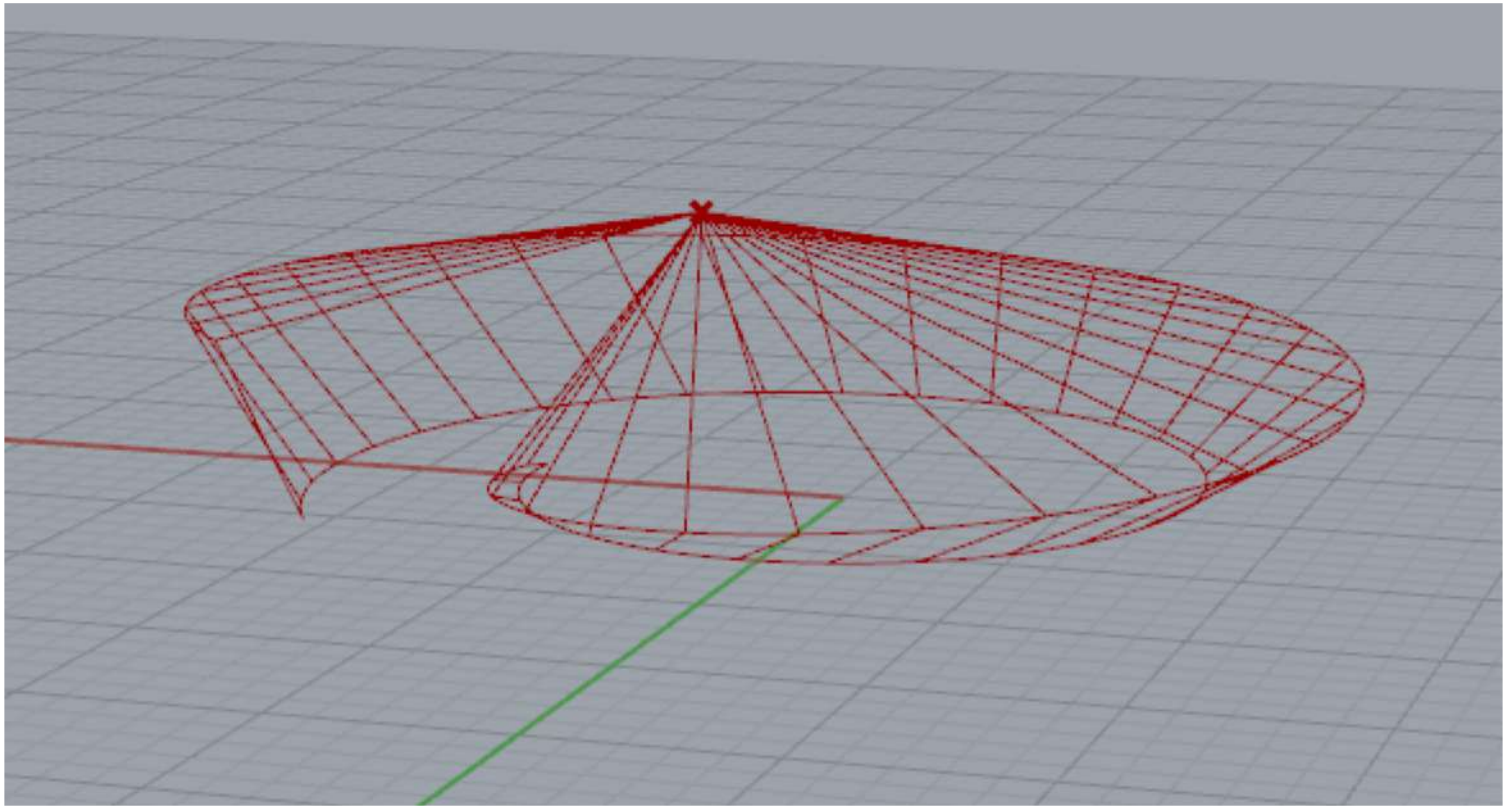
Les 2 courbes



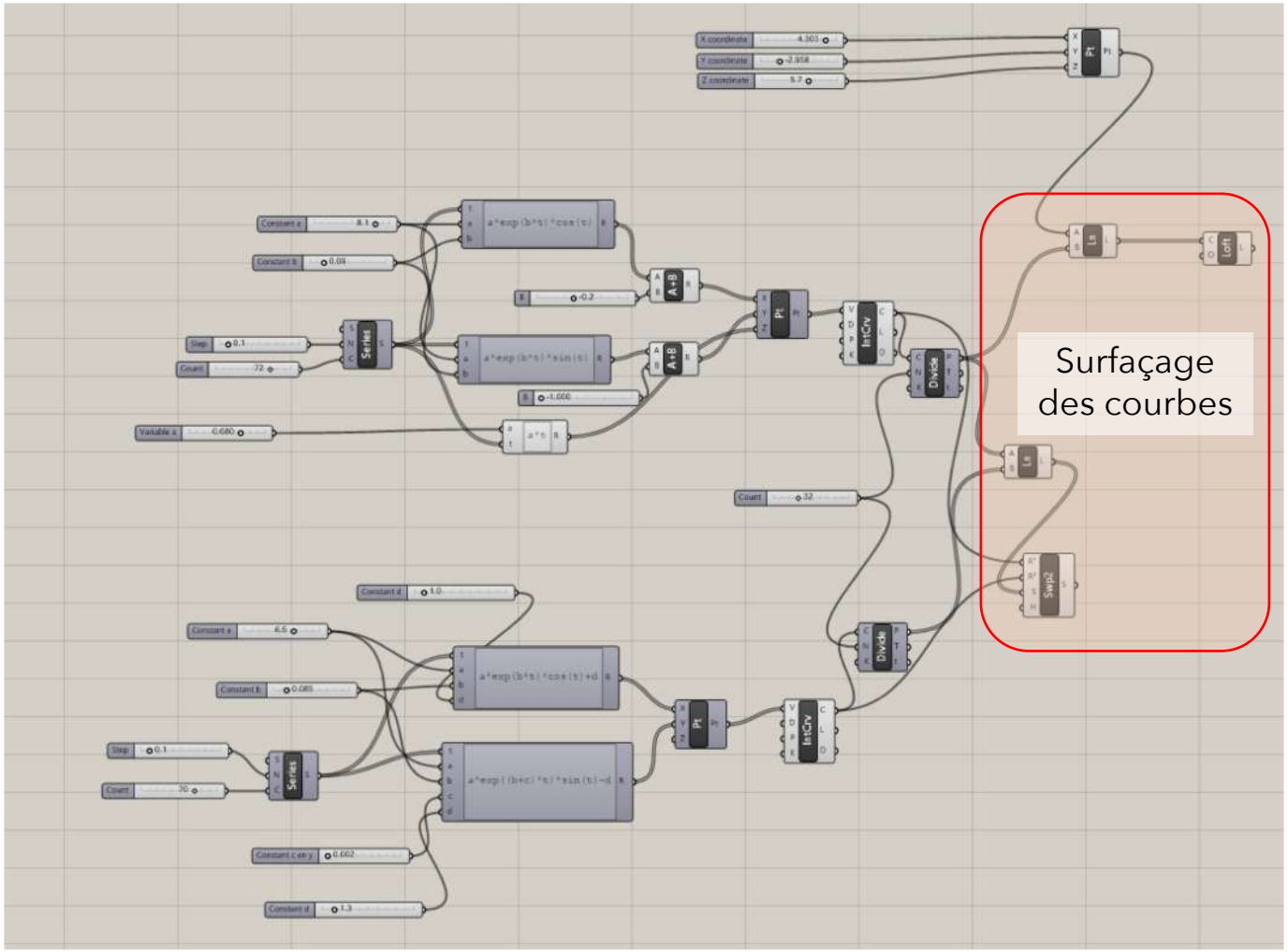
Liaison des courbes



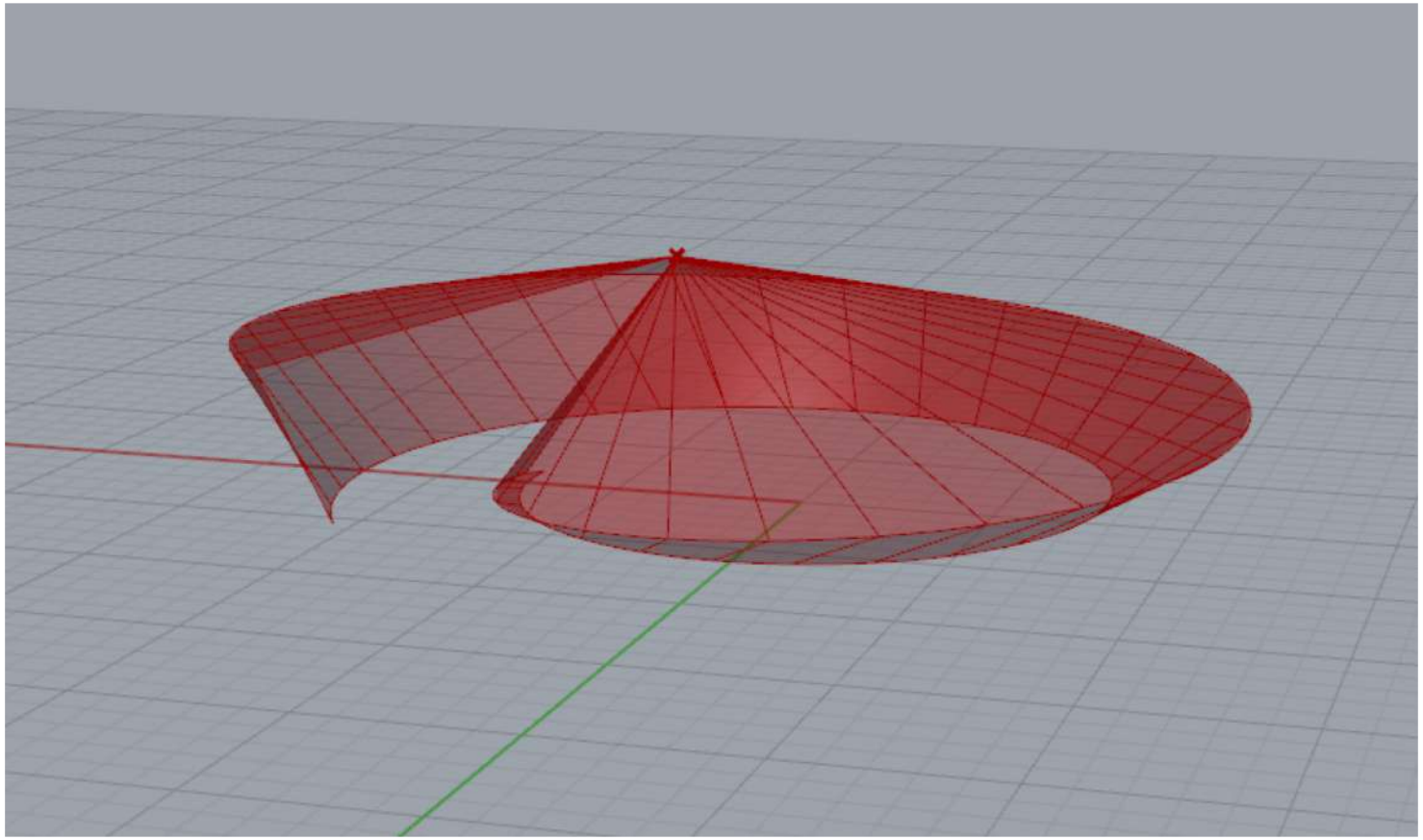
Liaison des courbes



Surfaçage du maillage

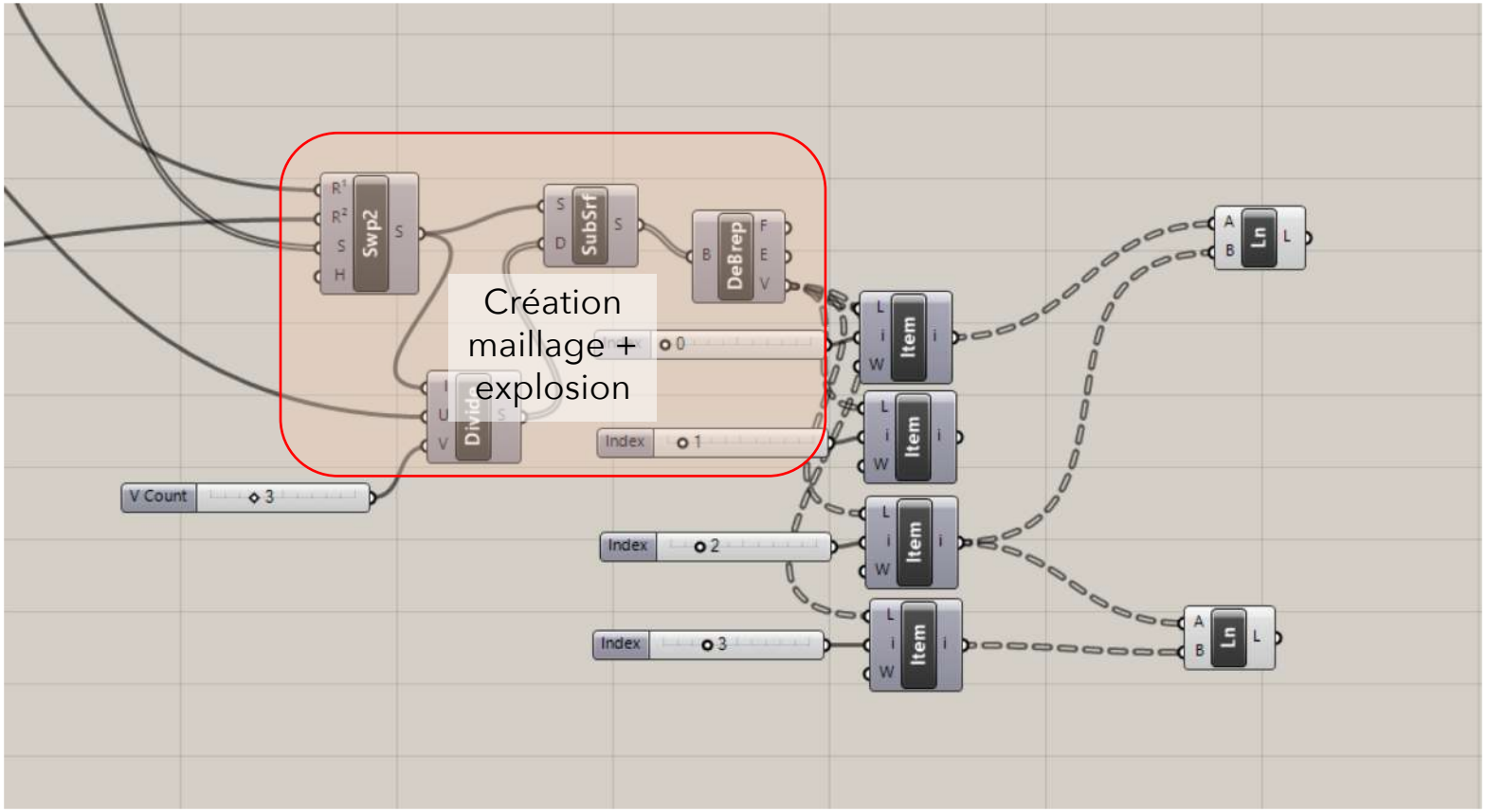


Surfaçage des courbes

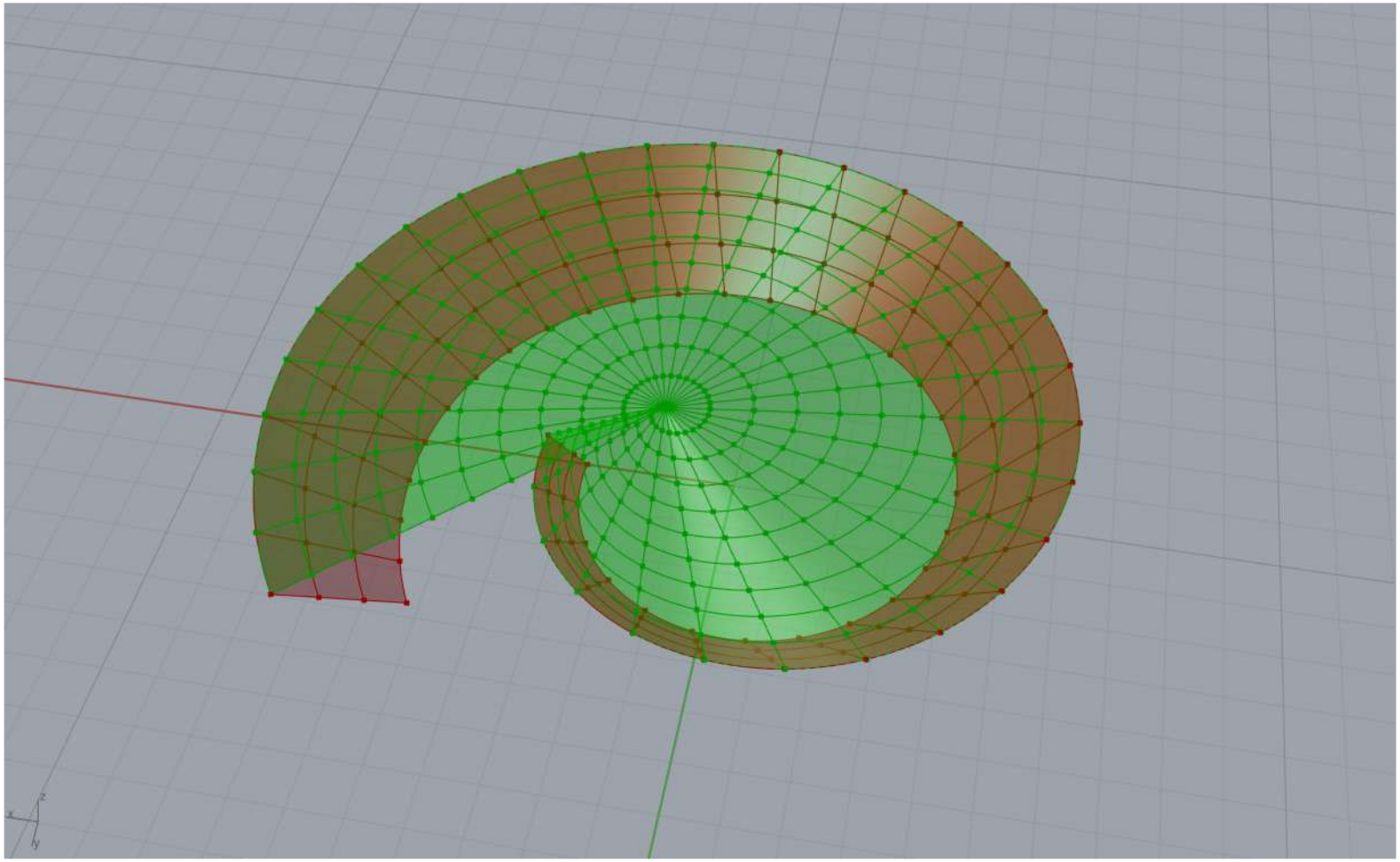


2. Création du maillage

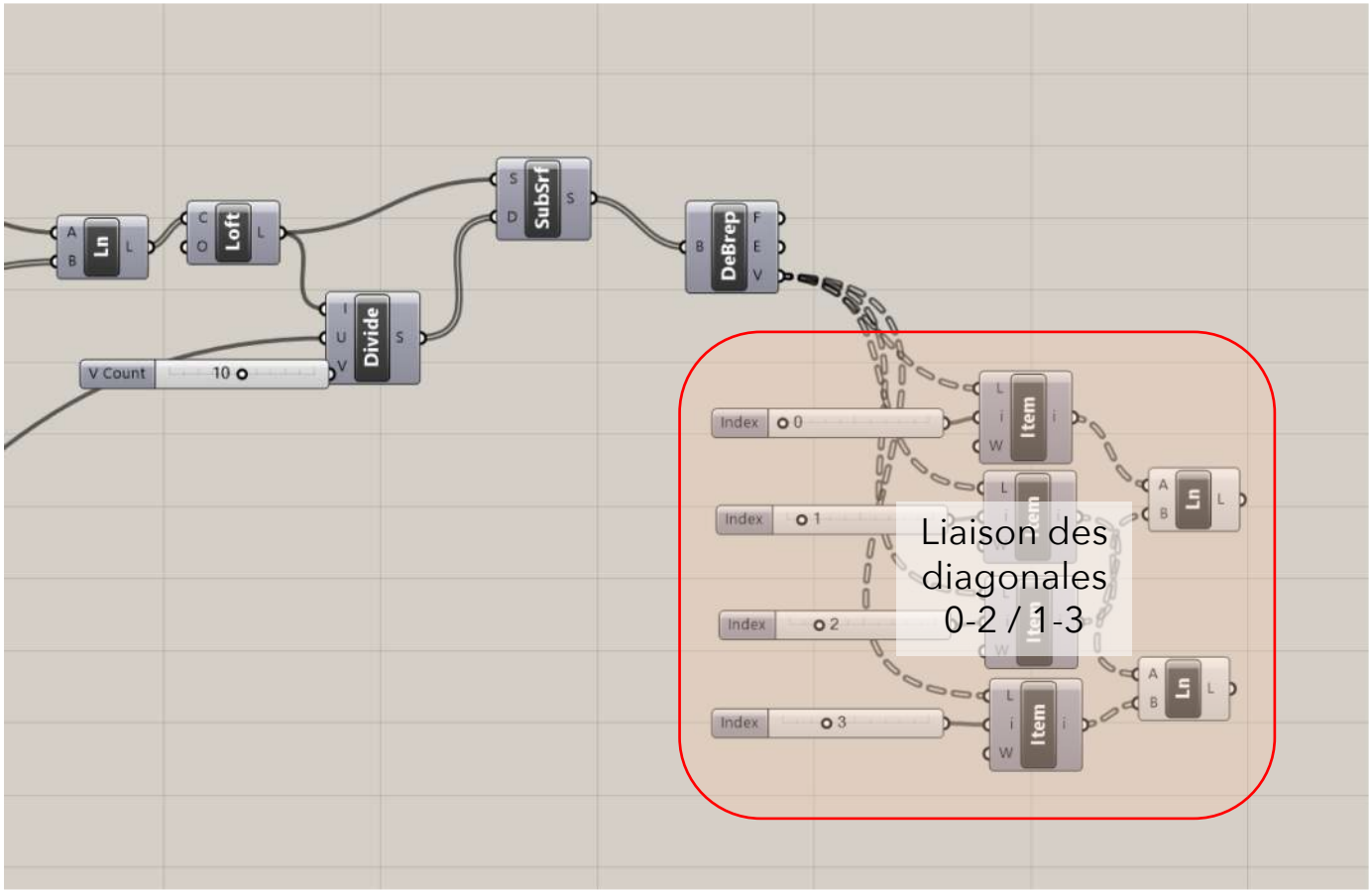
Création du maillage de la structure (détail)

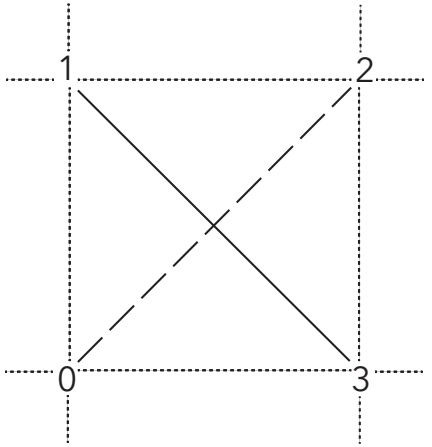


Création du maillage de la structure (détail)



Création du maillage de la structure (détail)





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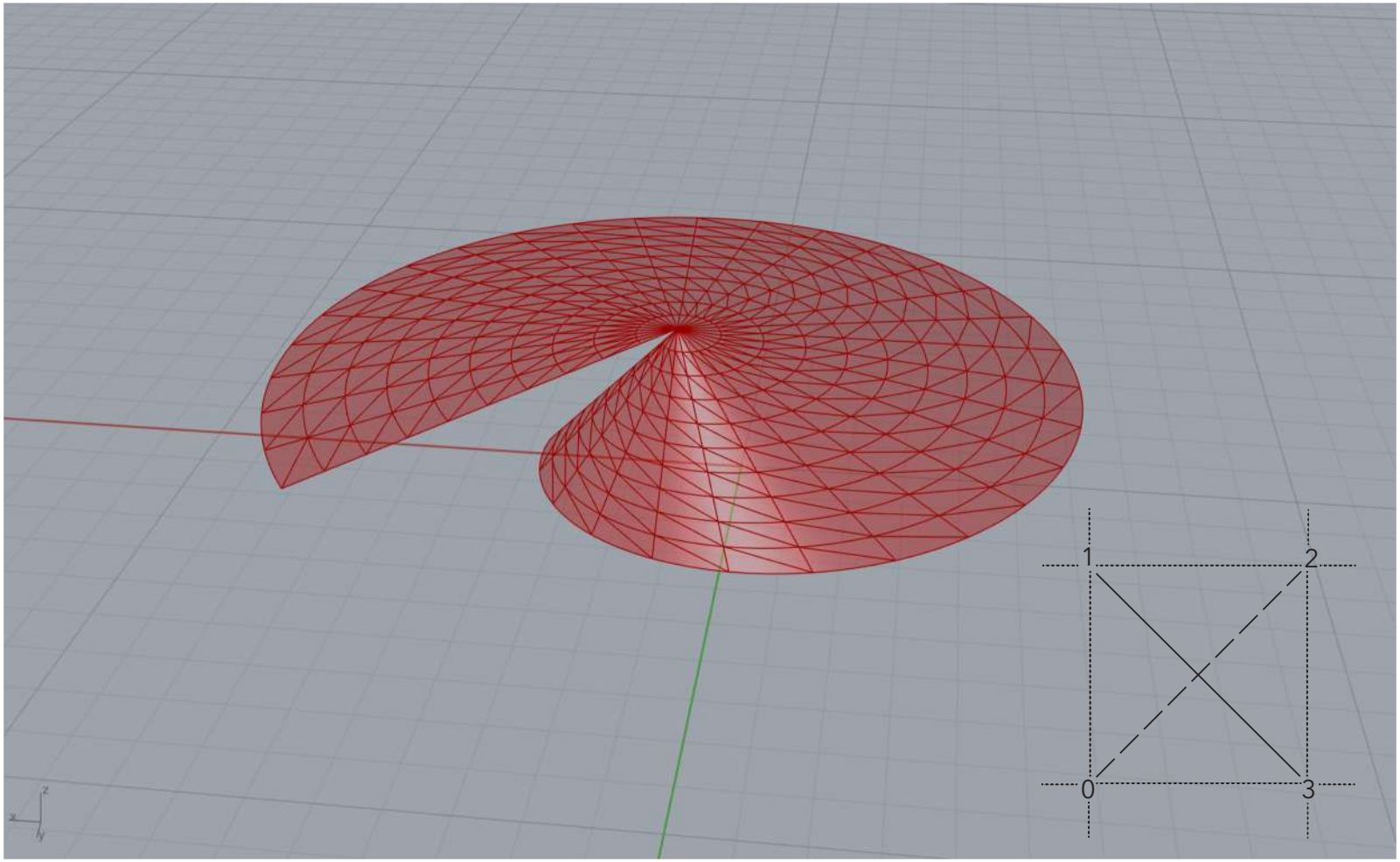
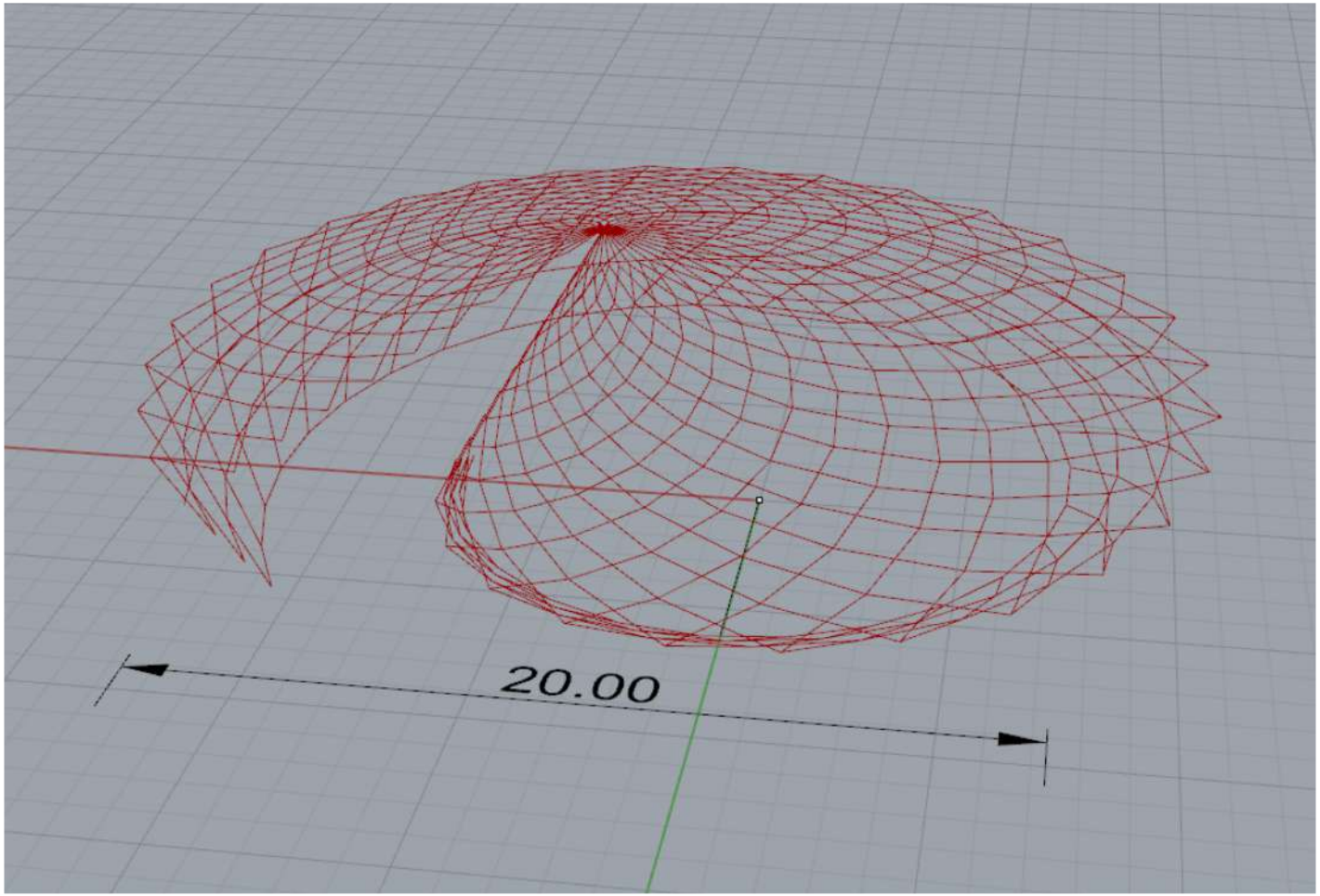
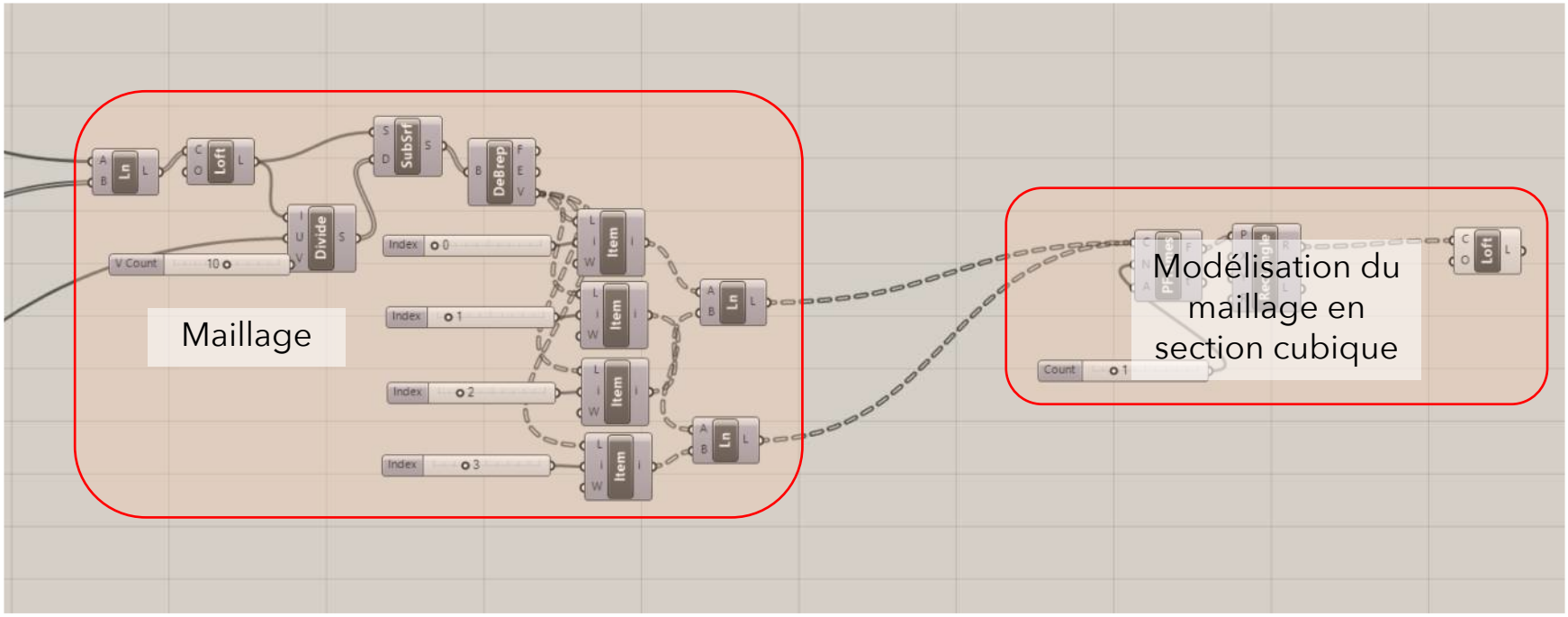


Création du maillage de la structure

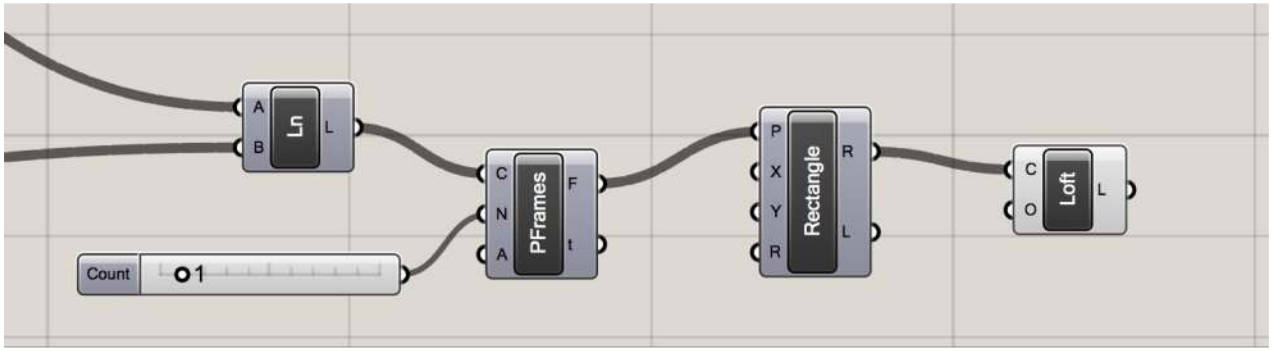


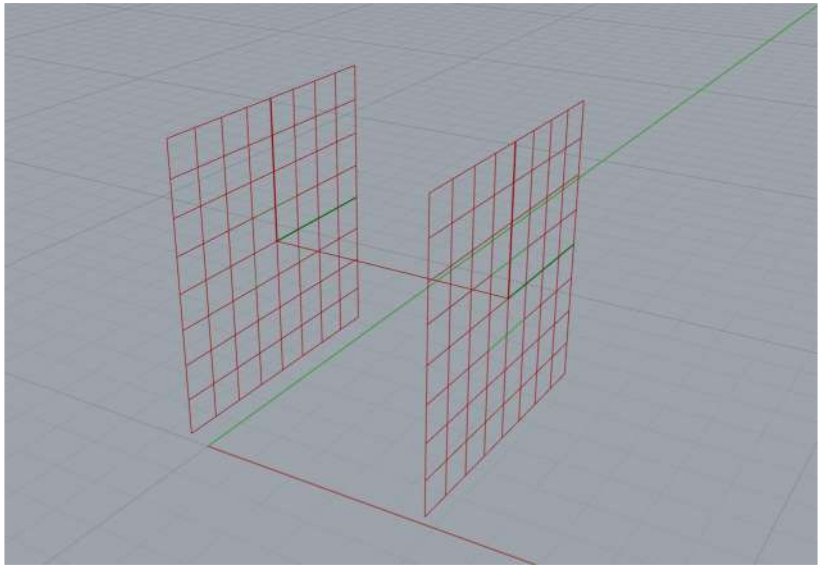
3. Extrusion des montants

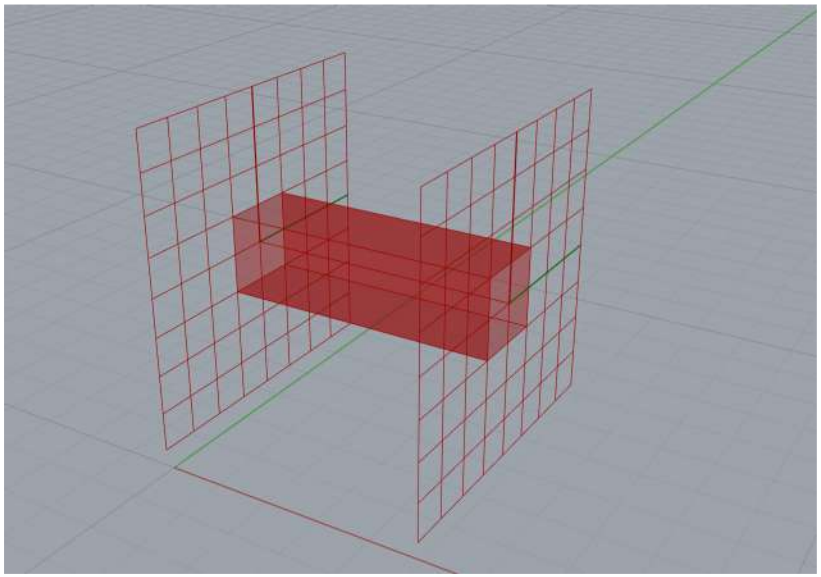
Création du maillage de la structure



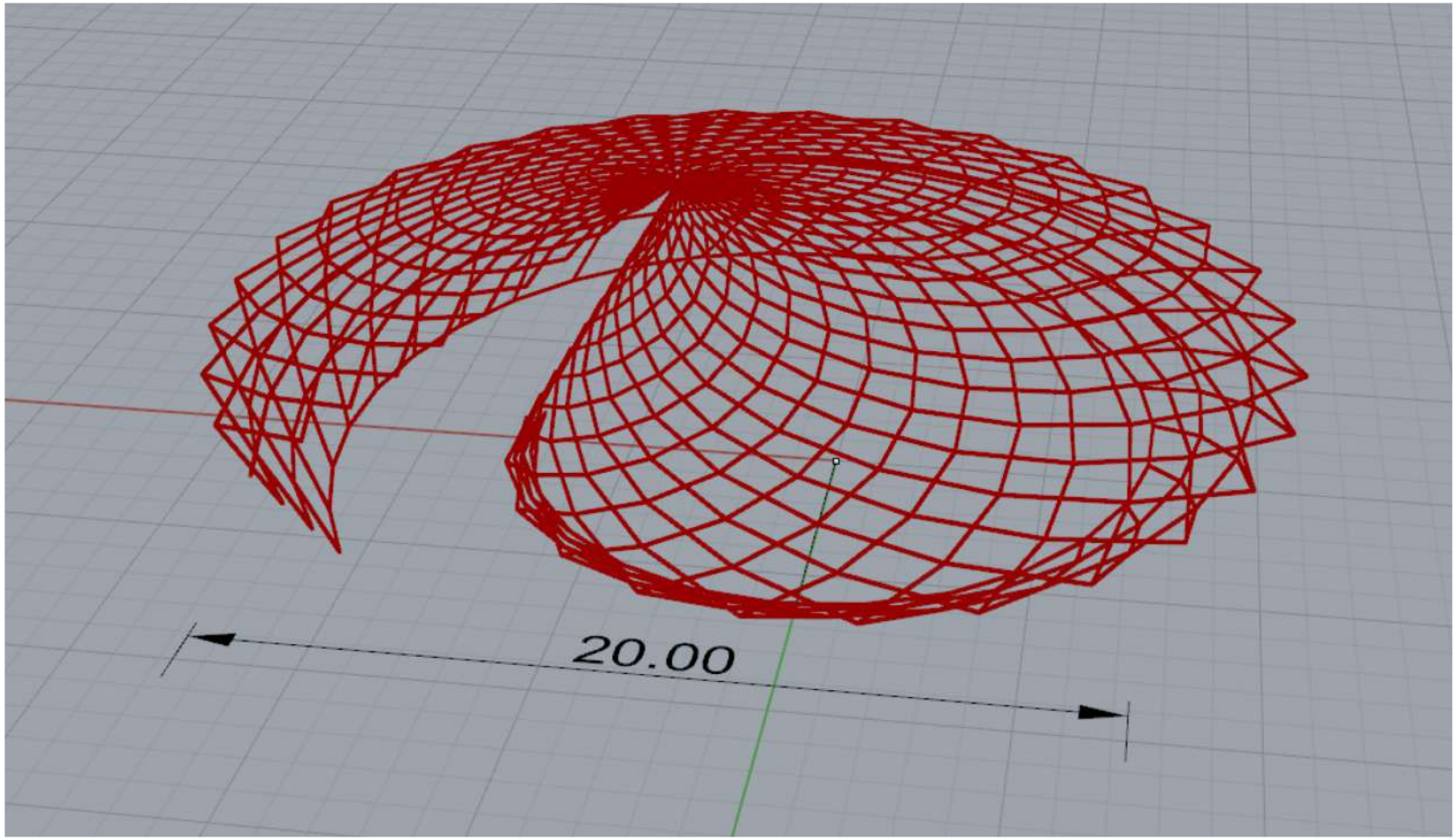
Modélisation du maillage en section cubique







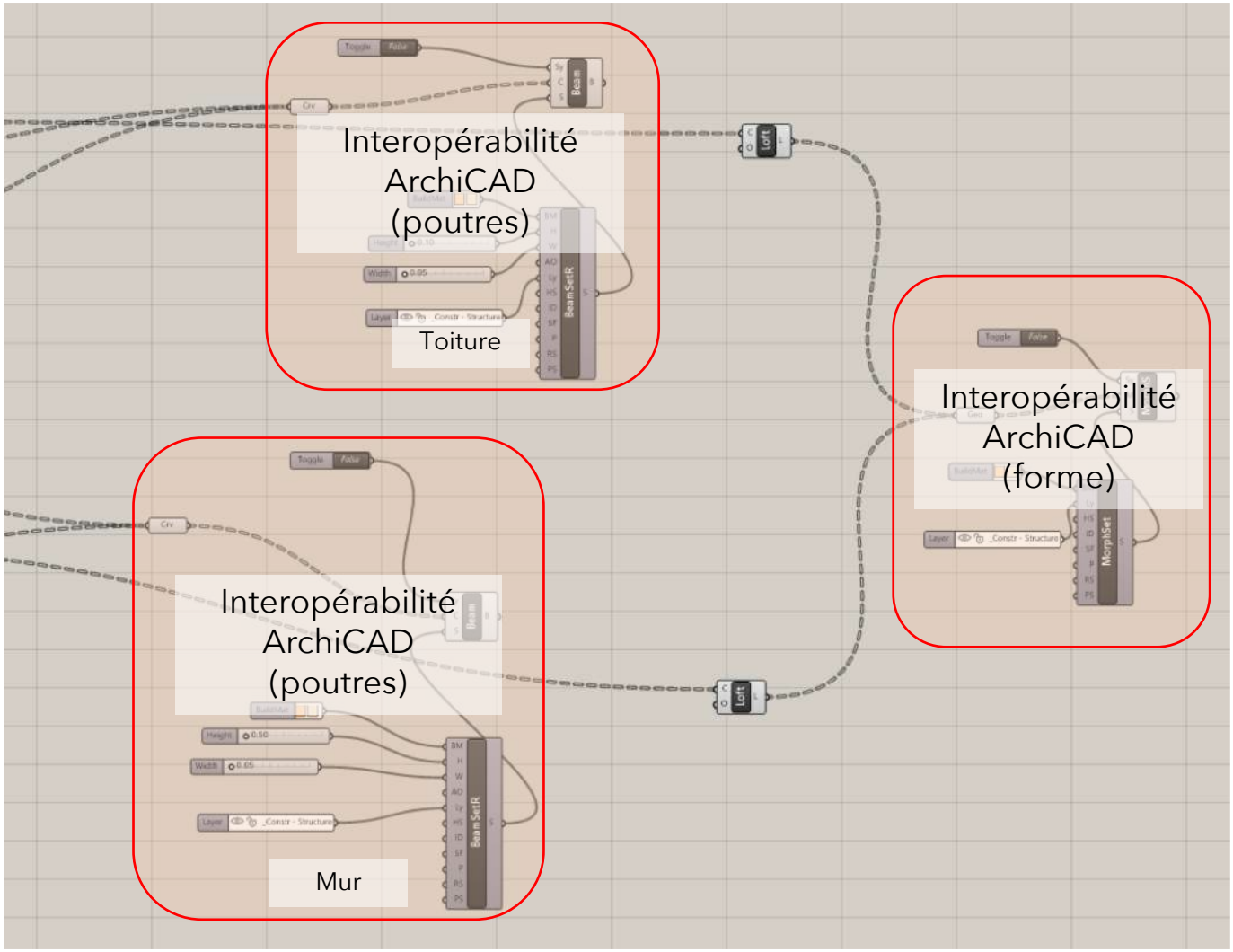
Création du maillage de la structure



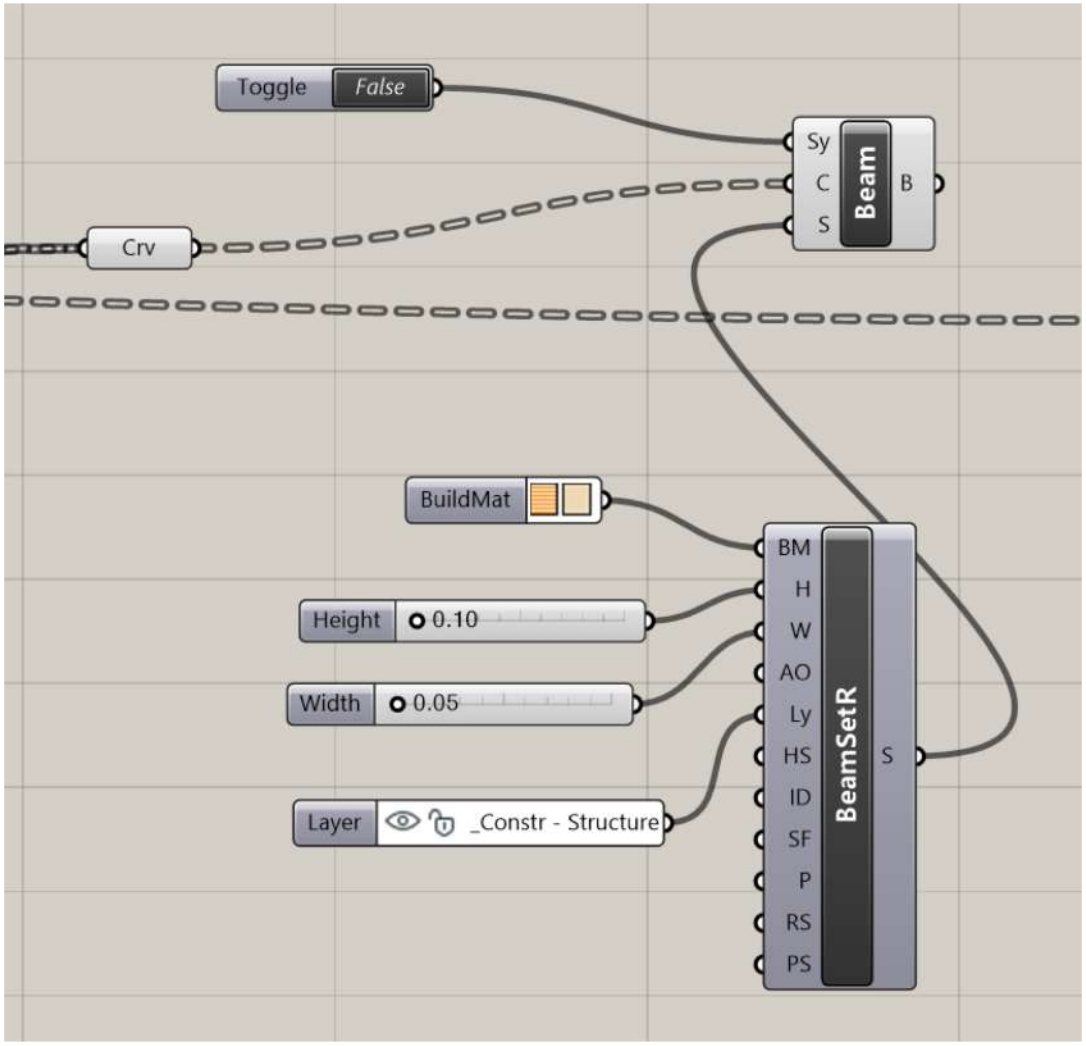
4. Importation du modèle dans ArchiCAD

(Avec Plugins)

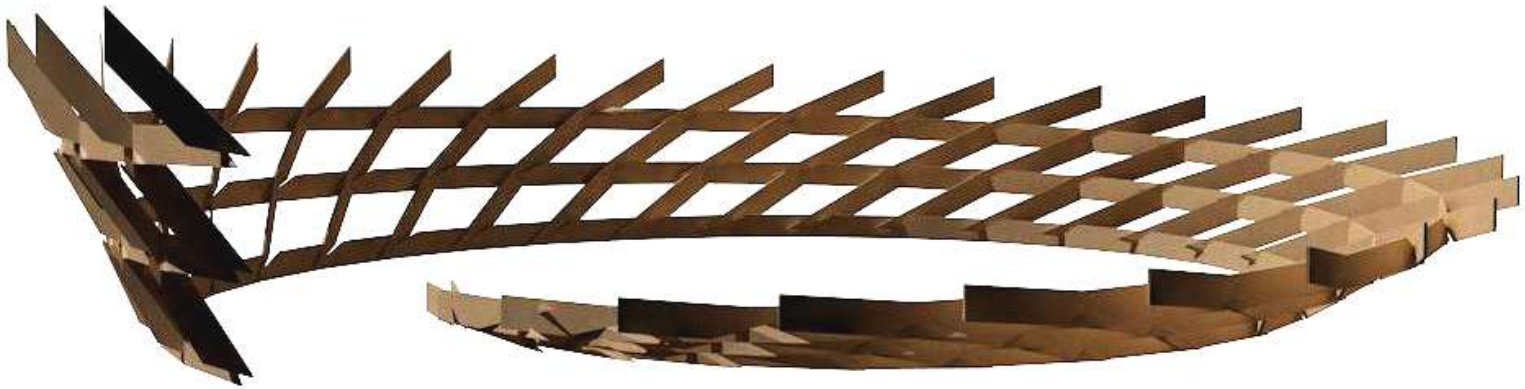
Importation dans ArchiCAD



Interopérabilité avec ArchiCAD (poutres)



Rendu dans ArchiCAD
(Mur sans toiture)



Importation dans ArchiCAD (Forme de Grasshopper)