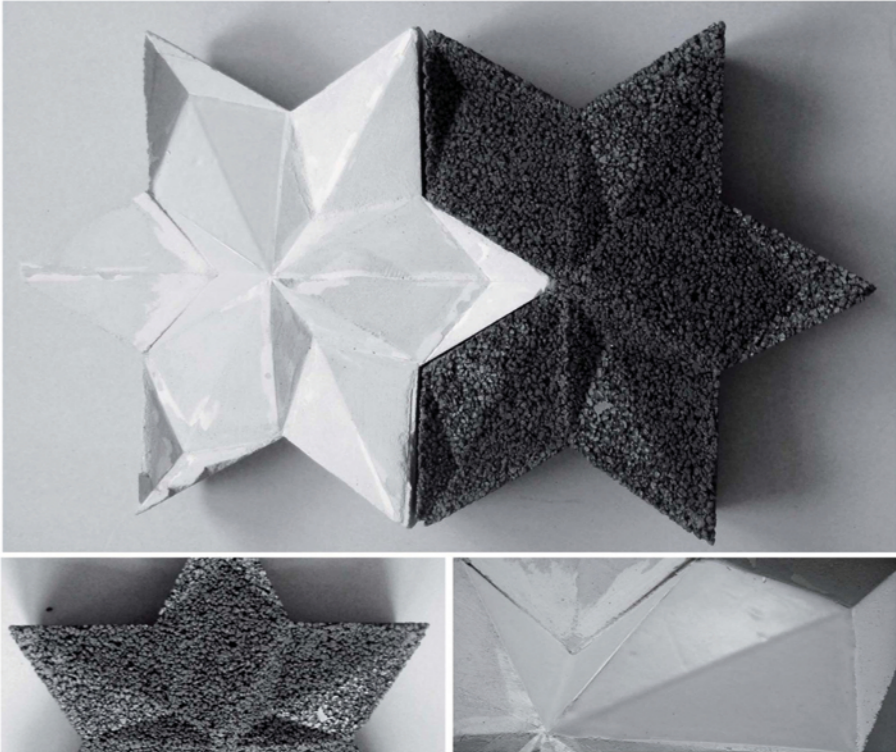
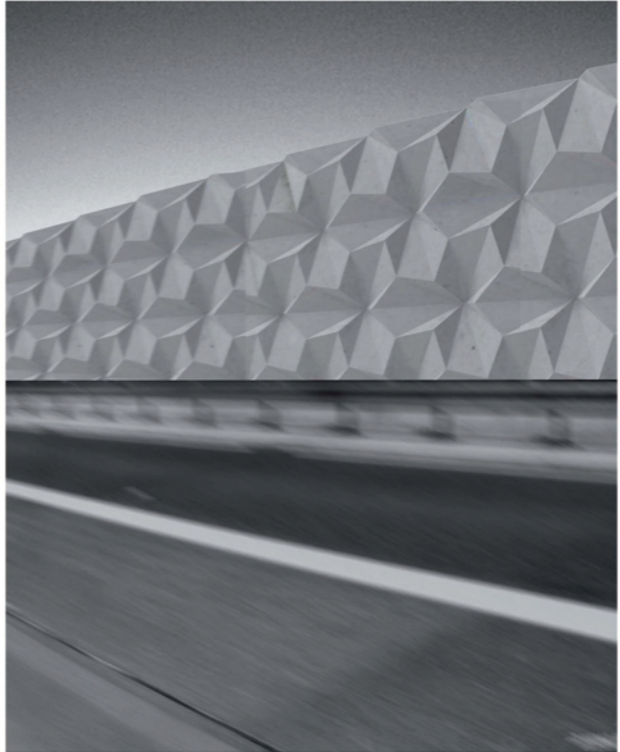
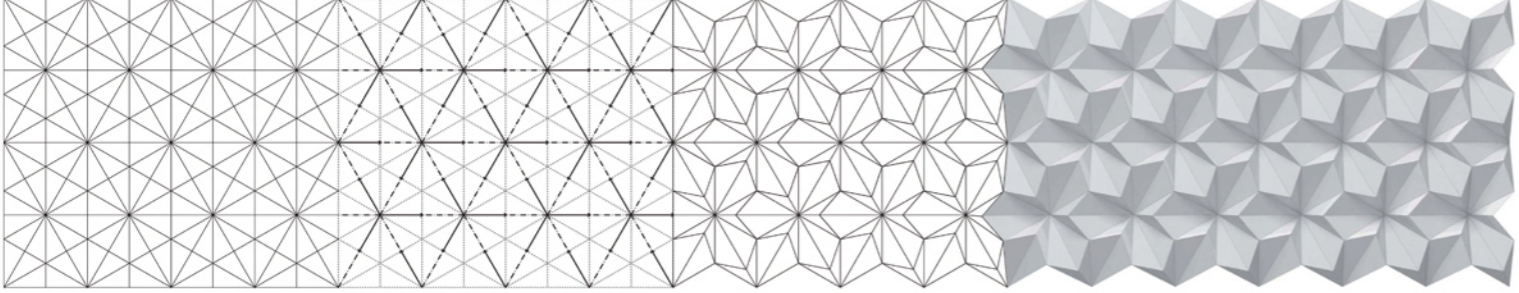




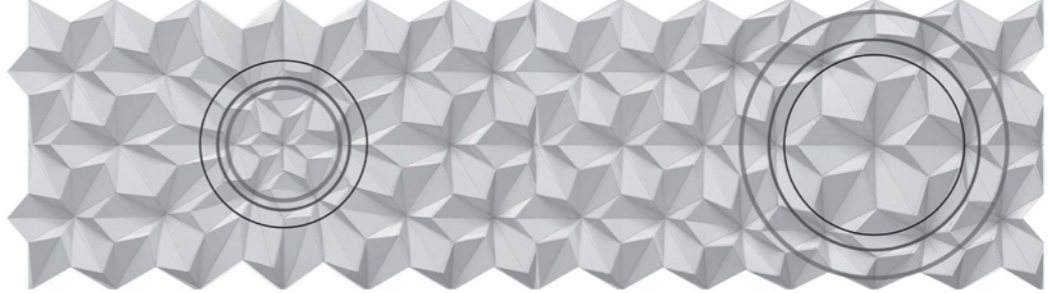
Introduction
Acoustics and noise control are generally not the main criteria for the design of a building. Vice versa is design not the prime parameter when dealing with acoustics. Especially in case of noise control in urban planning or sound insulation. This project intends to research how the main principal of acoustics methods can be implied into a design process of an acoustic barrier. The geometry and the materials are here the main parameters.



folding pattern - regular

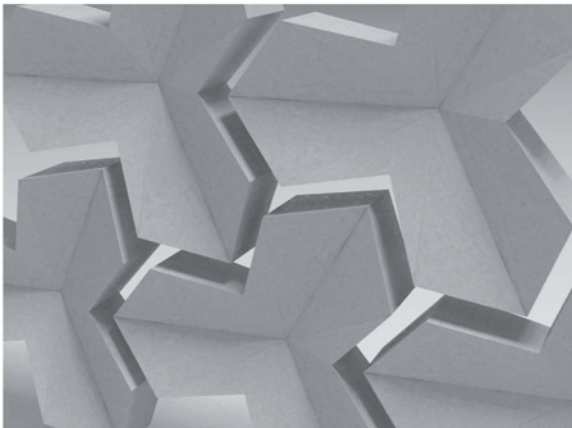


folding pattern - irregular >> for acoustics optimisation

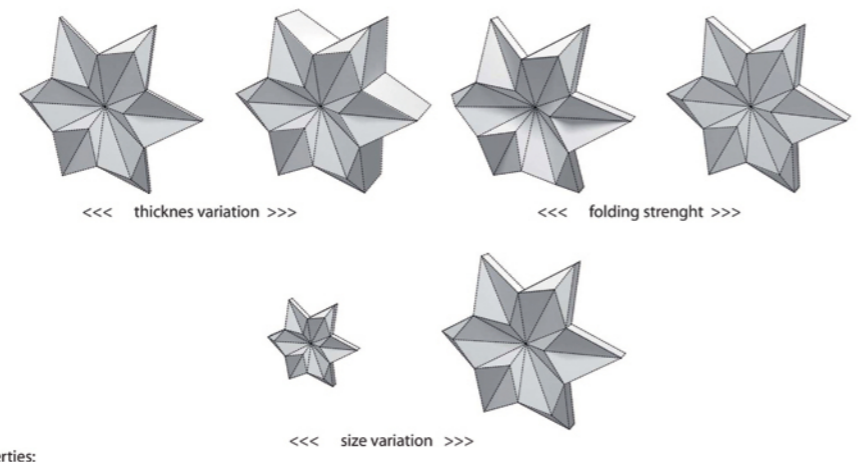


modular system

The folded geometry is developed by equilateral triangles, as the most of the origami patterns and it can be segmented in equal modules. The thickness of the module vary according to the material. The density and the size of the foldings define the surface reflectivity.

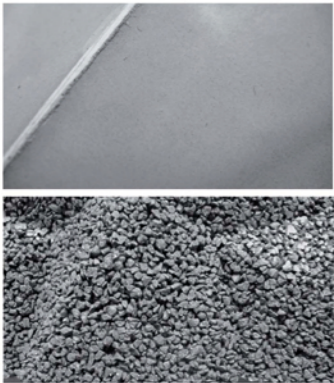


module variations:

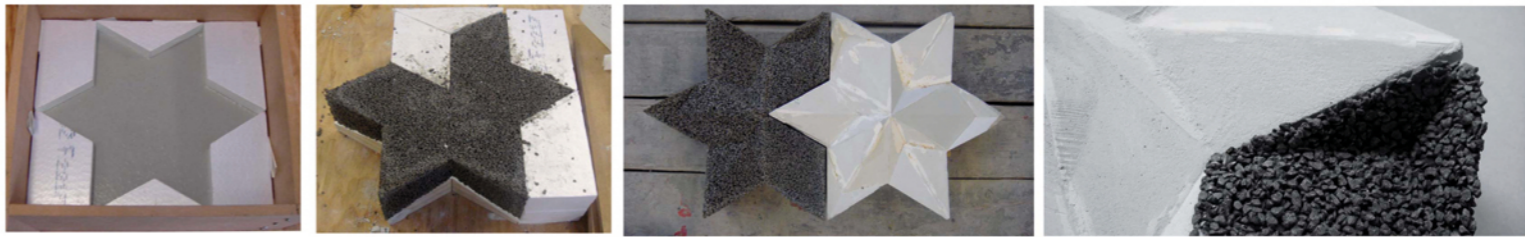
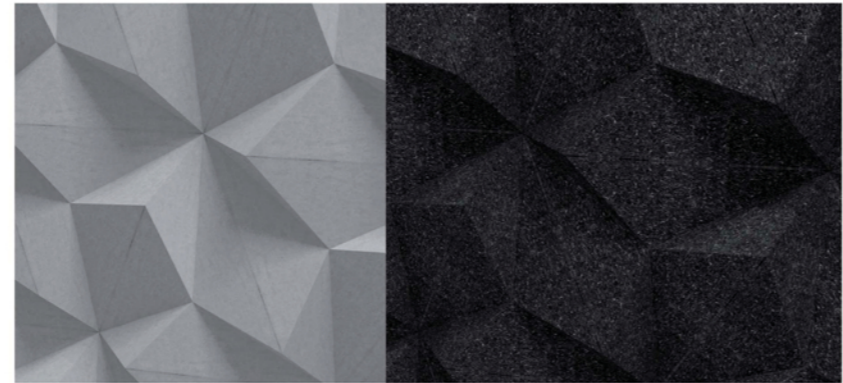


material

Two different types of concrete are used in the project according to their material properties:



UHPC (ultra high performance concrete) - light thin structure and reflective surface
acoustic concrete - sound absorption, acquires high thickness



formwork

