

FLEXIBLE TESSELLATIONS

Digital Fabrication has allowed advances in many different fields, facilitating and speeding the making process while also expanding the design possibilities.

One of the most exciting advances is the way materials can be manipulated with the use of digital fabrication tools, such as laser cutters and 3D printers. With the use of various methods rigid materials can gain levels of flexibility changing its properties and applications.

Given the numerous possible applications for these type of materials and the various methods used to obtain them, this research will study this specific topic.



1ST PART

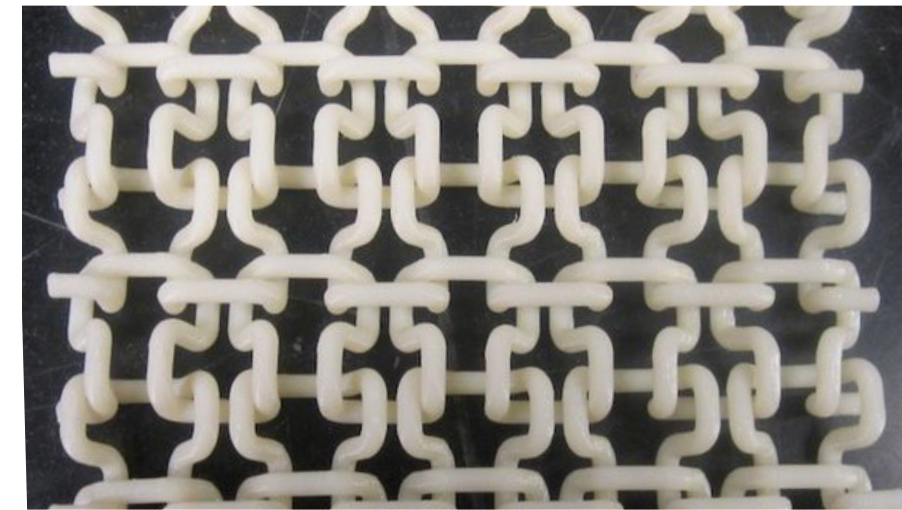
JUNE 13 -
JUNE 27

CATEGORIES

The flexible tessellations were divided into categories based on the making method and its properties:

- | | |
|------------------|------------------|
| 2D tessellations | 3D tessellations |
| - cuts and marks | - modular |
| - composites | - joints |
| | - geometry |

2D AND 3D EXPERIMENTATION



2ND PART

JUN 27 -
JULY 4

FORM ANALYSIS

After making samples for all categories, each one will be analyzed to understand the levels of flexibility and the principles applied to each case.

CONCLUSIONS

The results from the analysis will be taken into account in determining the best approach to create new and improved designs.

DEVELOPMENT

New designs will be developed based on the previous experiments and analysis. These new designs will be applied to different fields.

3RD PART

JULY 4 -
JULY 14

FASHION DESIGN & ARCHITECTURE

Flexible tessellations are a good fit in the fashion industry, given that they can replace fabric and make more interesting shapes.

In Architecture there is tendency to incorporate organic shapes and patterns into the designs. By incorporation flexible tessellations digitally fabricated this task can become easier and even more organic and adaptive.

