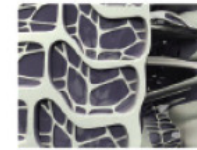


The Art of Making

FabLab, Generative, and Parametric Design

Master Project Digital Media

Dr. Bernard Robben
Florian Lütkebohmert
Christian Cohrs



Further path development can be derived as well as the distribution of surface elements. In consequence the structure with one layer and the pattern used for different surface aspects. An algorithmic mathematical algorithm for the generation of the phyllotaxis model is used: each angle of growth, multiplication, node size, node position and distance, different number of nodes applied and different radius of space multiplication are used in combination with each other to create a unique space. According to the different aggregation space generated by the phyllotaxis model and using the control the surface width and behavior of each layer element, the resulting space is defined.

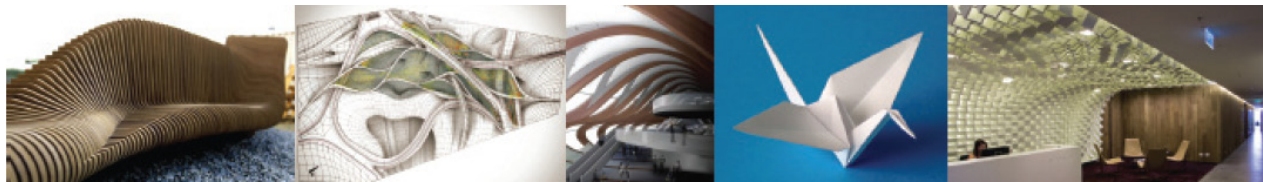
Independent the building people's behavior that intelligible space and pattern. The aggregation for the building is a unique space that is created during building. Individual aggregation for the building is a unique space that is created during building.

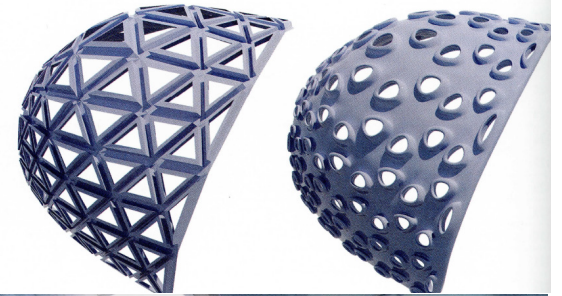
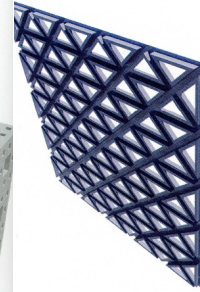
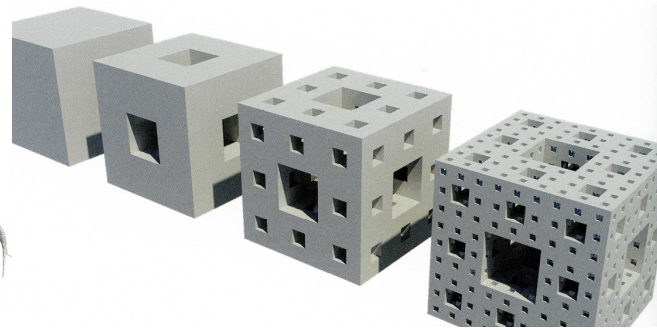
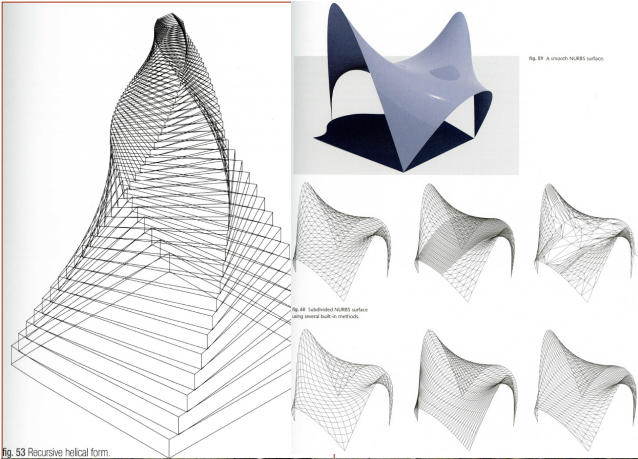
Each a look for a building that provides a unique space that can be used in a stable and sustainable way.

Thinking for a building that provides a unique space that can be used in a stable and sustainable way.

Using an example of the phyllotaxis model as a case study, the phyllotaxis model is applied to the generation of a building space. In order to apply the specific model to the generation of a building space, the phyllotaxis model is applied to the generation of a building space. The phyllotaxis model is applied to the generation of a building space.

In the phyllotaxis model is used the algorithm of the phyllotaxis model. In this case as a building space the phyllotaxis model is used to generate a unique space that is created during building and is connected with the building space and the building space is created during building.

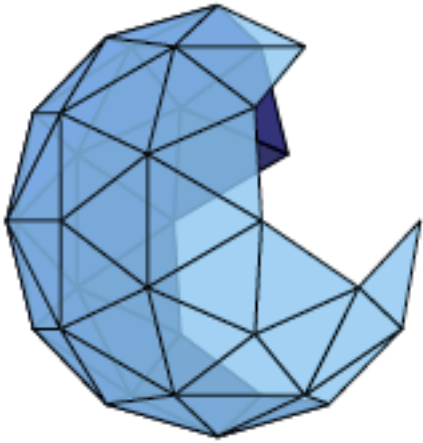




**We will work in the fabLab.
We will produce interactive objects.
We will design myriads of forms.**

**We will get familiar with
generative design,
parametric design,
and fabLab technologies.**

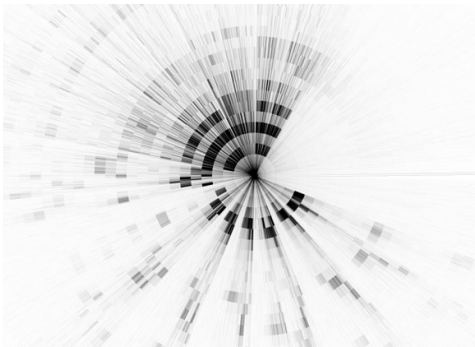




Generative design is a design method in which the output – image, sound, models, animation – is generated by a set of rules or an Algorithm. Most generative design is based on parametric modelling.

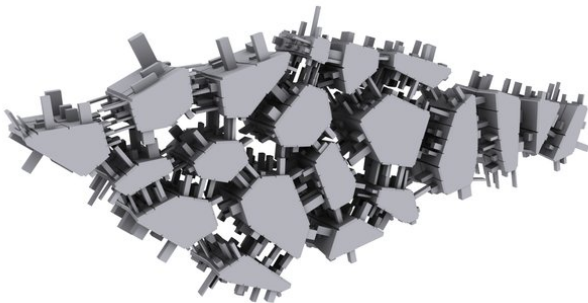


Parametric design is a process based on algorithmic thinking that enables the expression of parameters and rules that, together, define, encode and clarify the relationship between design intent and design response.



FabLab is a technical prototyping platform for innovation and invention, providing stimulus for local entrepreneurship.

Generative design is becoming more important, largely due to new programming environments. In the course we will use Processing and Rhinoceros 3D with Grasshopper as well as FabLab technologies like 3D Printer and Lasercutter.

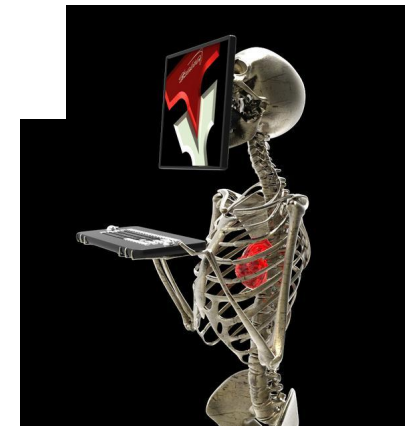


Hartmut Bohnacker, Benedikt Groß, Julia Laub, Claudius Lazzeroni: Generative Gestaltung – The Book (<http://benedikt-gross.de/log/2009/09/generative-gestaltung/>)

Kostas Terzidis 2003: Expressive Form – A Conceptual Approach to Computational Design, Routledge London und New York

Julia Walther-Hermann und Corinne Büching (Hg.) 2013: FabLab – Of Machines, Makers and Inventors, transcript-verlag Bielefeld

Robert J. Lang 2012: Origami Design Secrets – Mathematical Methods for an Ancient Art, CRC Press Taylor & Francis Group



Questions?

Dr. Bernard Robben

phone: 0421-218-64383

email: robben@uni-bremen.de

www.dimeb.de

