

DuPont™ Corian® 3D – Math series

Design: Corrado Tibaldi – Alessio Erioli – Andrea Graziano



New decorative solutions for interior cladding applications now available to architects and designers

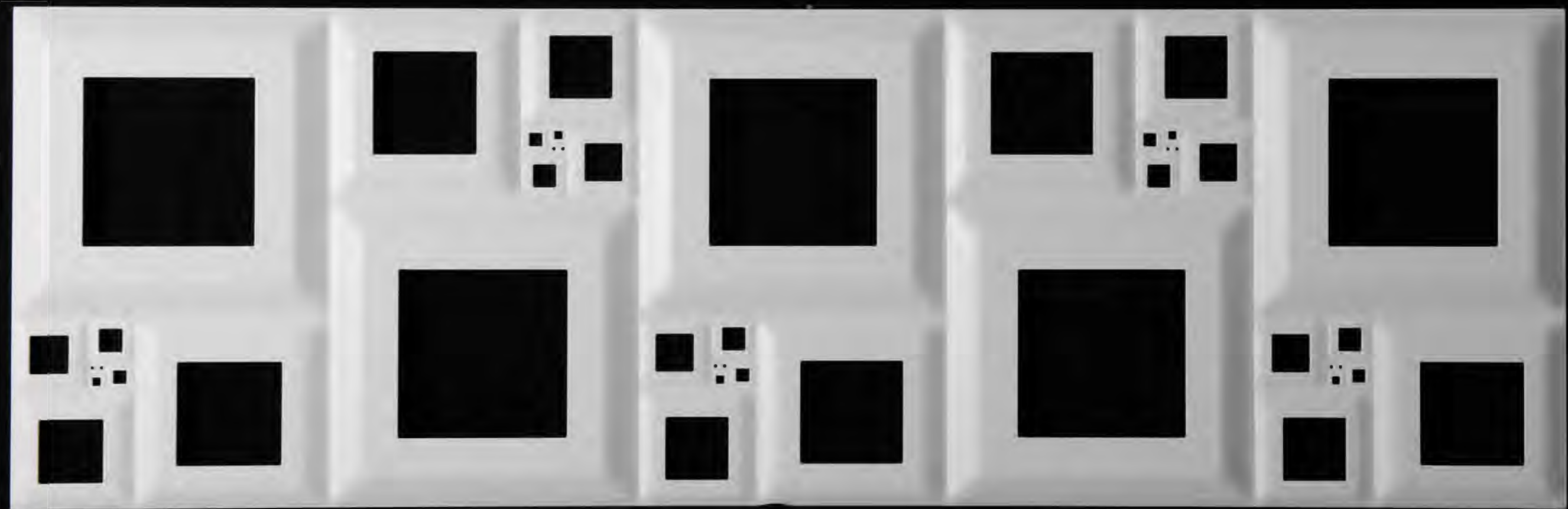
DuPont introduces into the market the “3D” collection of decorative panels for interior cladding applications made with DuPont™ Corian® solid surfaces featuring sophisticated three-dimensional patterns created via an advanced technological solution. The decorative panels of this collection from DuPont can be used in a wide variety of interior environments, both residential and commercial.

The “3D” collection is based on a new technology that enables to quickly apply sophisticated and complex three-dimensional patterns on DuPont™ Corian®.

This technology blends advanced geometry manipulation software tools with a versatile and highly efficient high pressure compression moulding technique.

The first materialization of the “3D” collection is the “Math” series, including extremely elegant, surprising and creative three-dimensional patterns inspired to the theories of famous mathematicians and from mathematical functions.

The “Math series includes six different models: Gauss, Phyllotaxis, Voronoi, Fourier, Fibonacci, Moirè, and it is the result of a collaborative creative effort led by Corrado Tibaldi of DuPont Building Innovations, who involved as external design consultants Alessio Erioli and Andrea Graziano.



Fibonacci

parametric rules

the shape of the panel is closely linked to the Fibonacci spiral path, the squares built on it and the resulting golden rectangle. Every single squares is transformed into a parametric cell with a variable maximum height, taper angle and aperture size. The resulting squares materialize the proportional Fibonacci sequence onto the final shape of the panel.

a

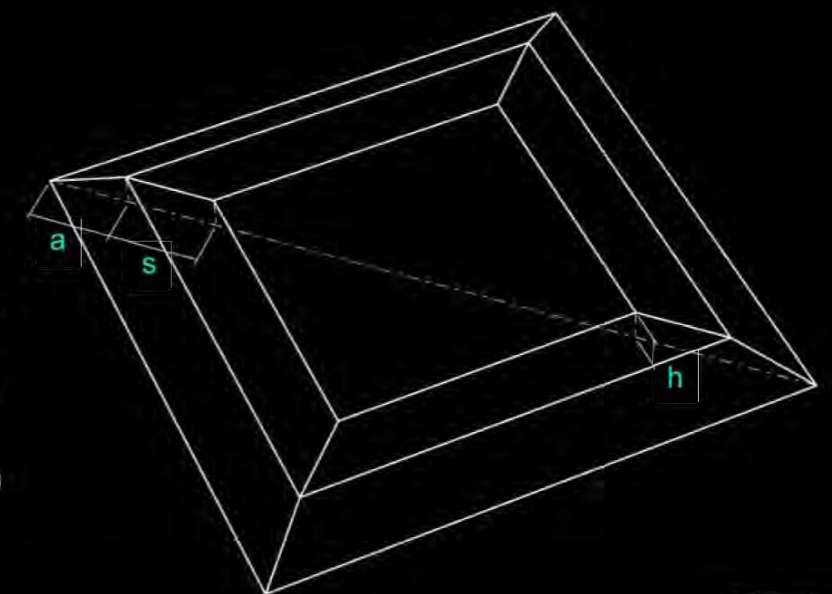
random deviations from component center

h

vertex height based on distance from P_a

s

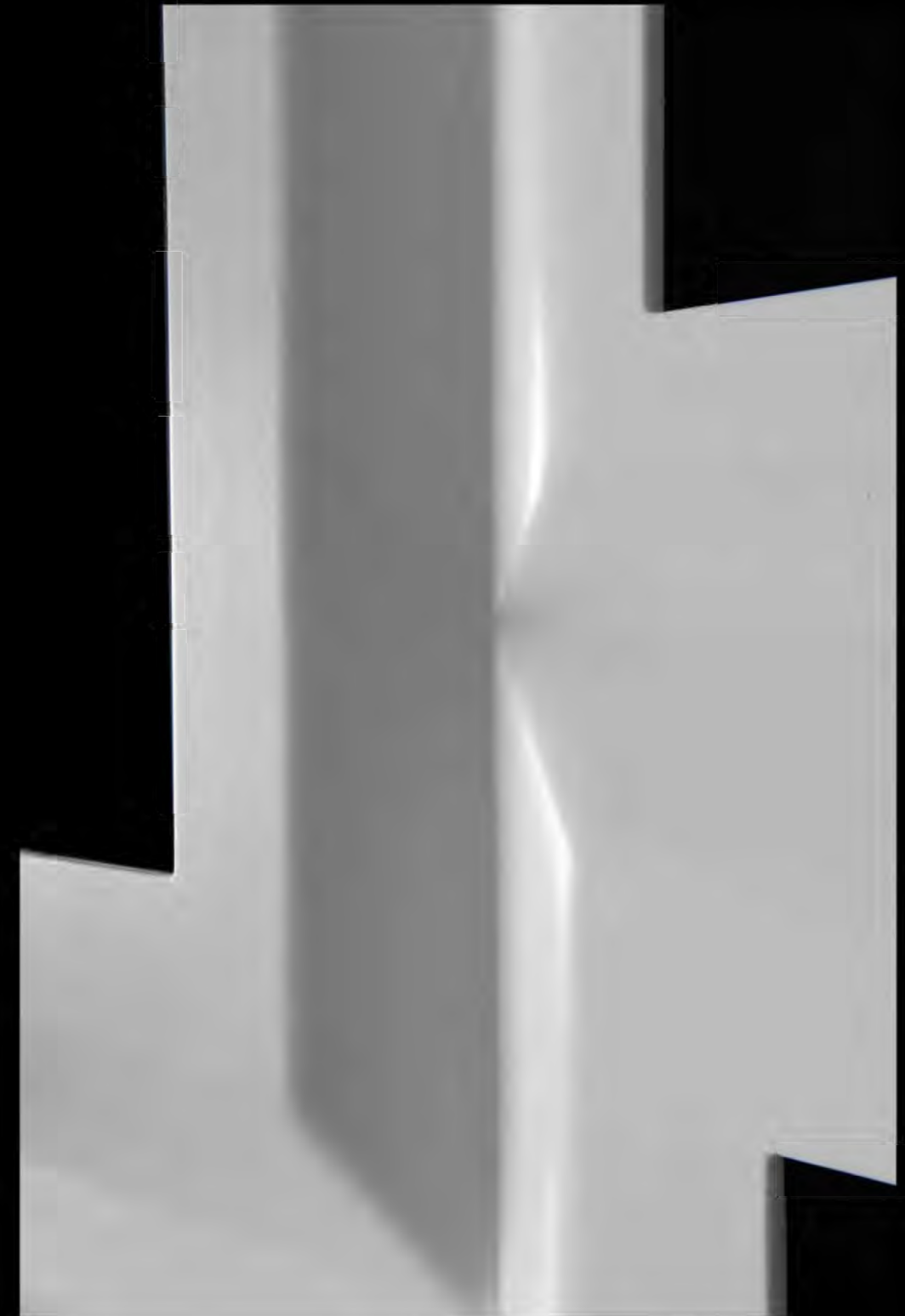
aperture scale based on distance from P_a



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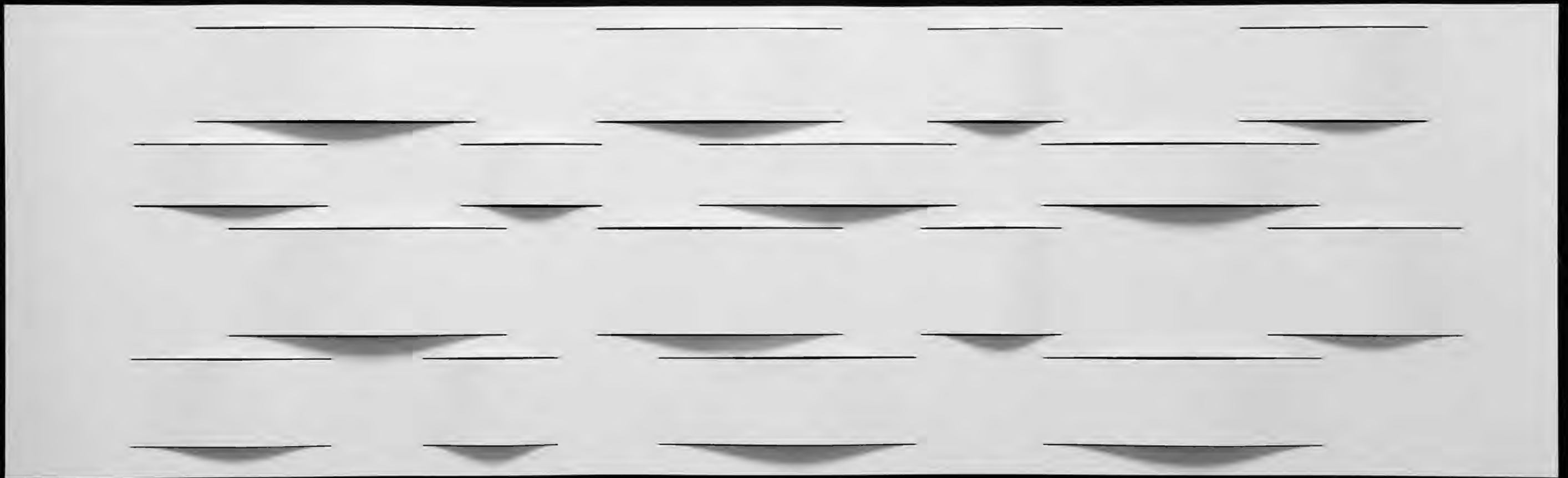


Fibonacci (detail)

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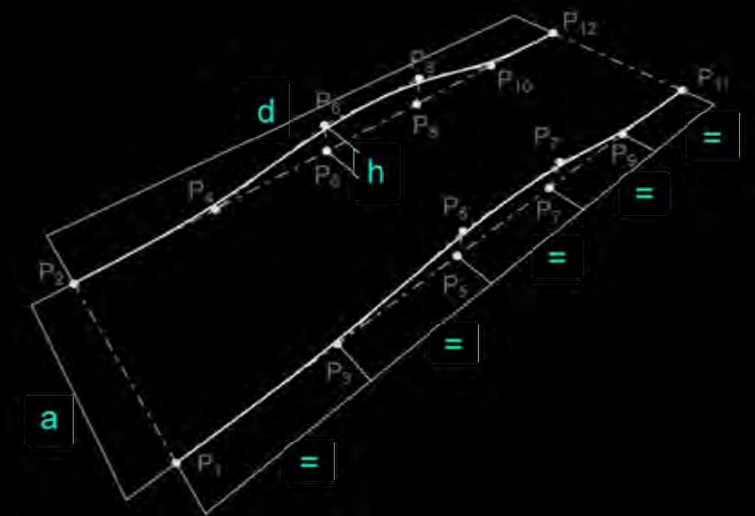


Fourier

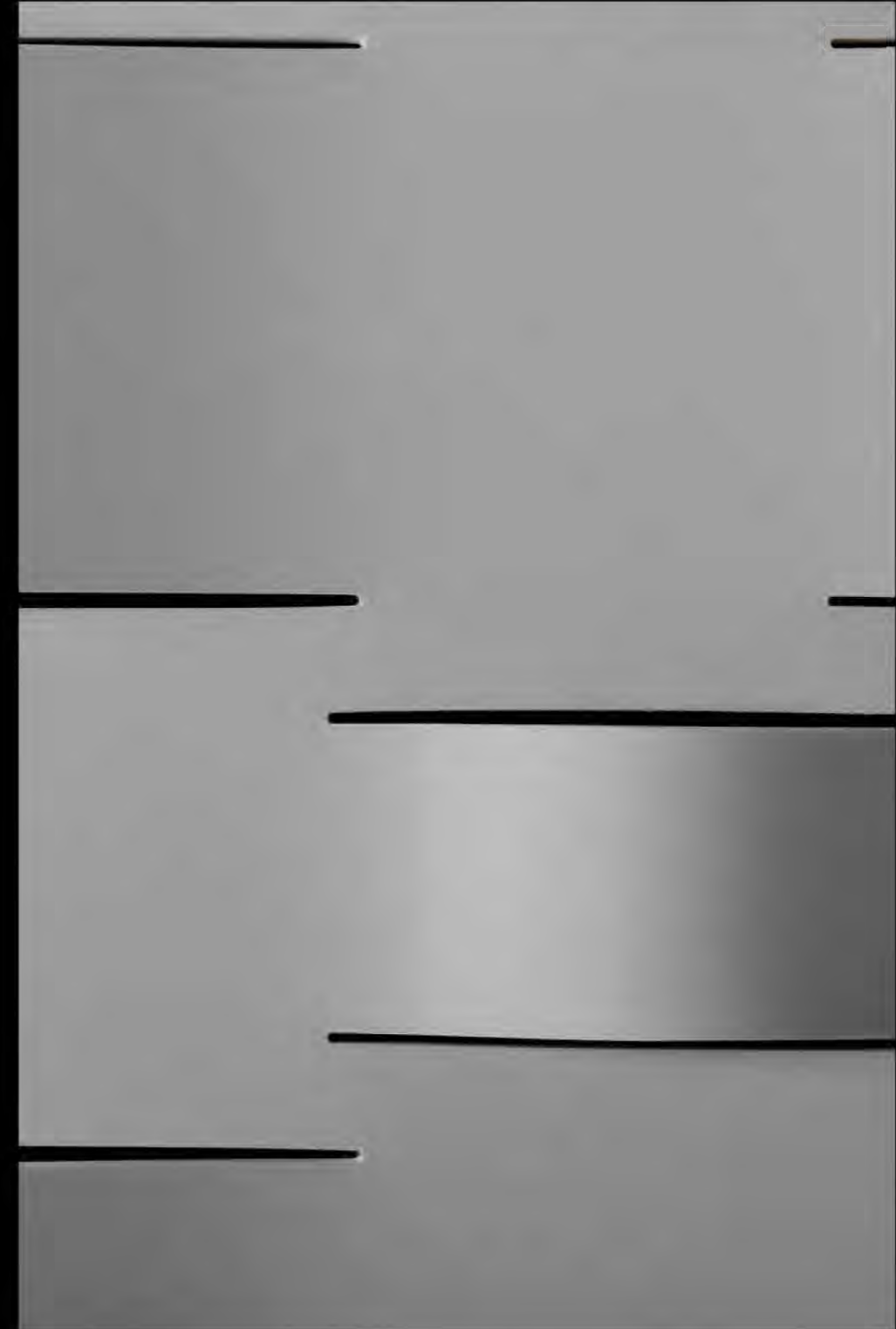
parametric rules

The shape of the panel is the results of a process of subdivision of the surface into bands or ribbons of variable random height. Every ribbon is characterized by a own sinusoidal path based on a random span distance and height. The final panel appears like the result of applied vibrations forces that enliven the single surfaces.

- a** random ribbon height
- d** random ribbon span
- h** random vertex height



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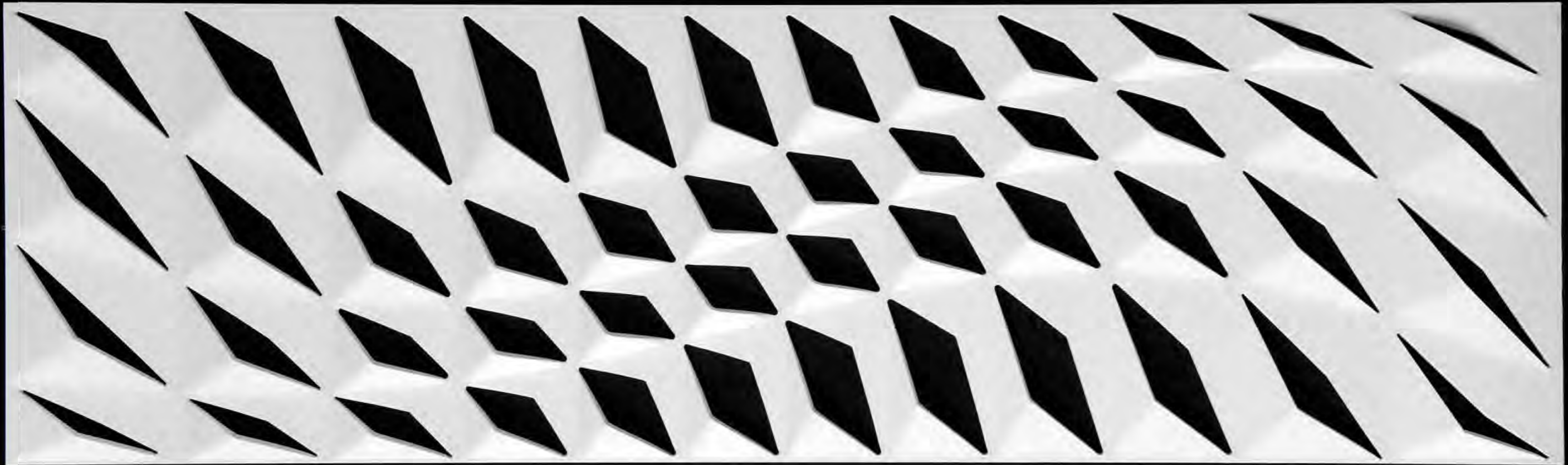


Fourier (detail)

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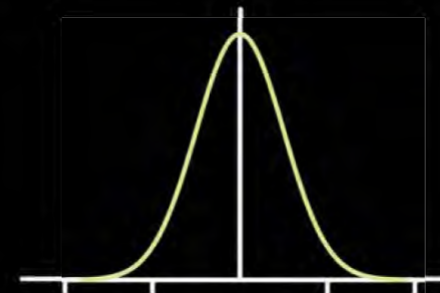
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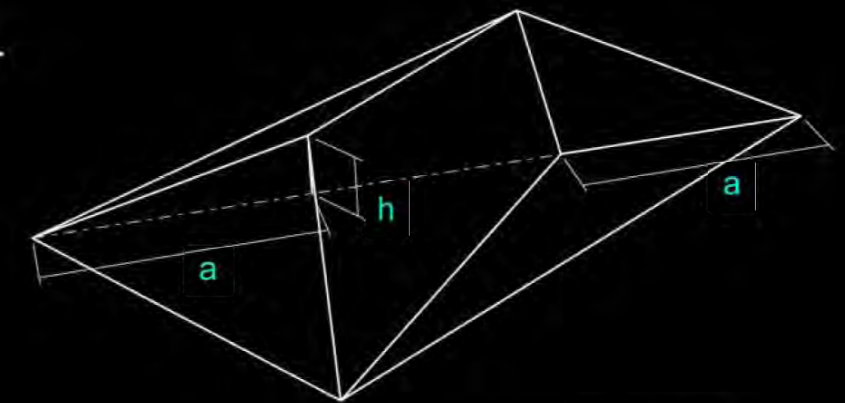
Gauss

parametric rules

the shape of the panel is the results of a process of subdivision of it into a variable number of cells. Every single surface is thought like a diaphragm composed by two modular shapes. The aperture determined by this shapes is governed by the values of a fully controlled gaussian curve. One of this shapes move into space with a distance parameter to create a sort of pocket.

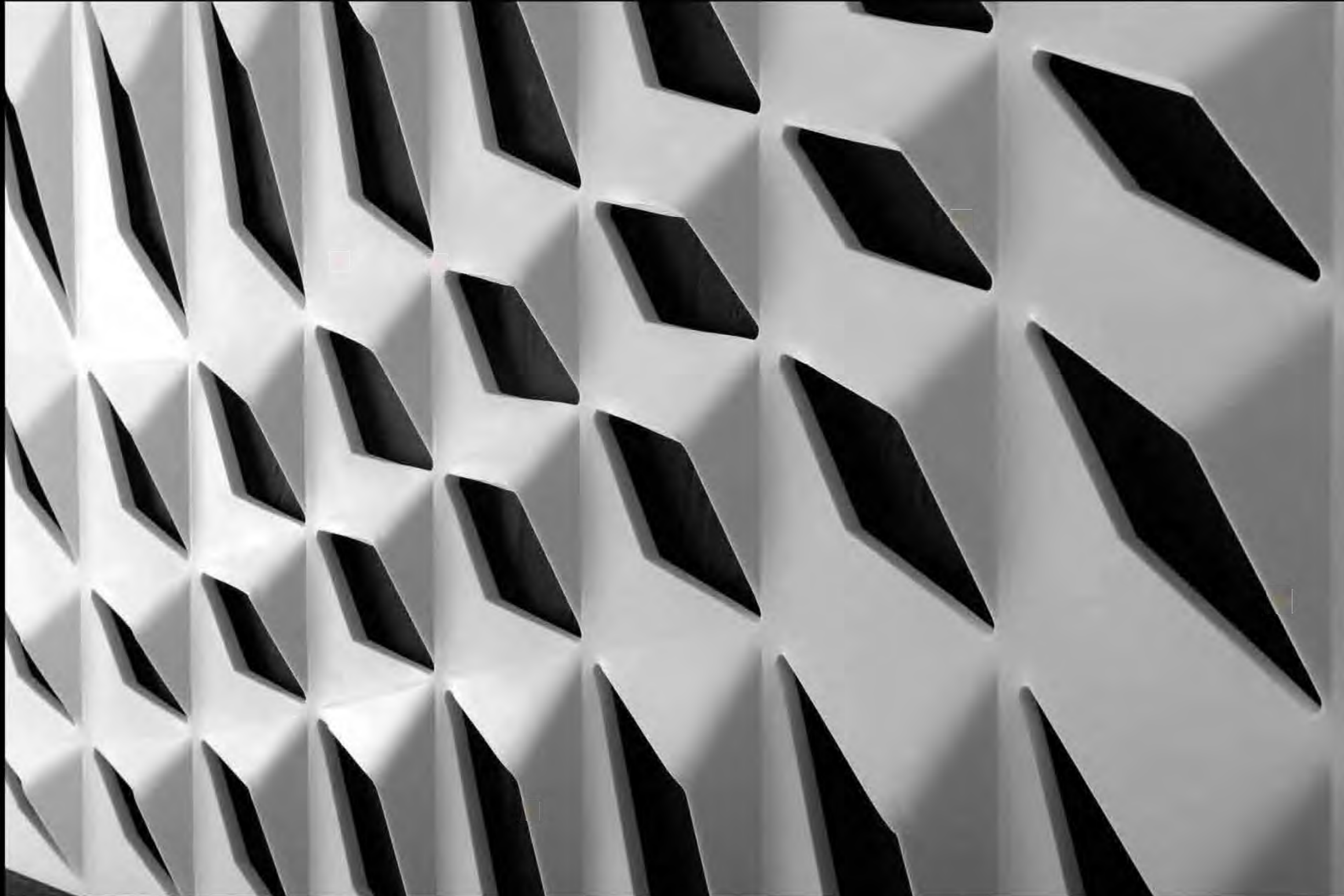


- a** size of occlusion of the cells controlled by gaussian curve
- h** height of top point of the faces



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Gauss (detail)

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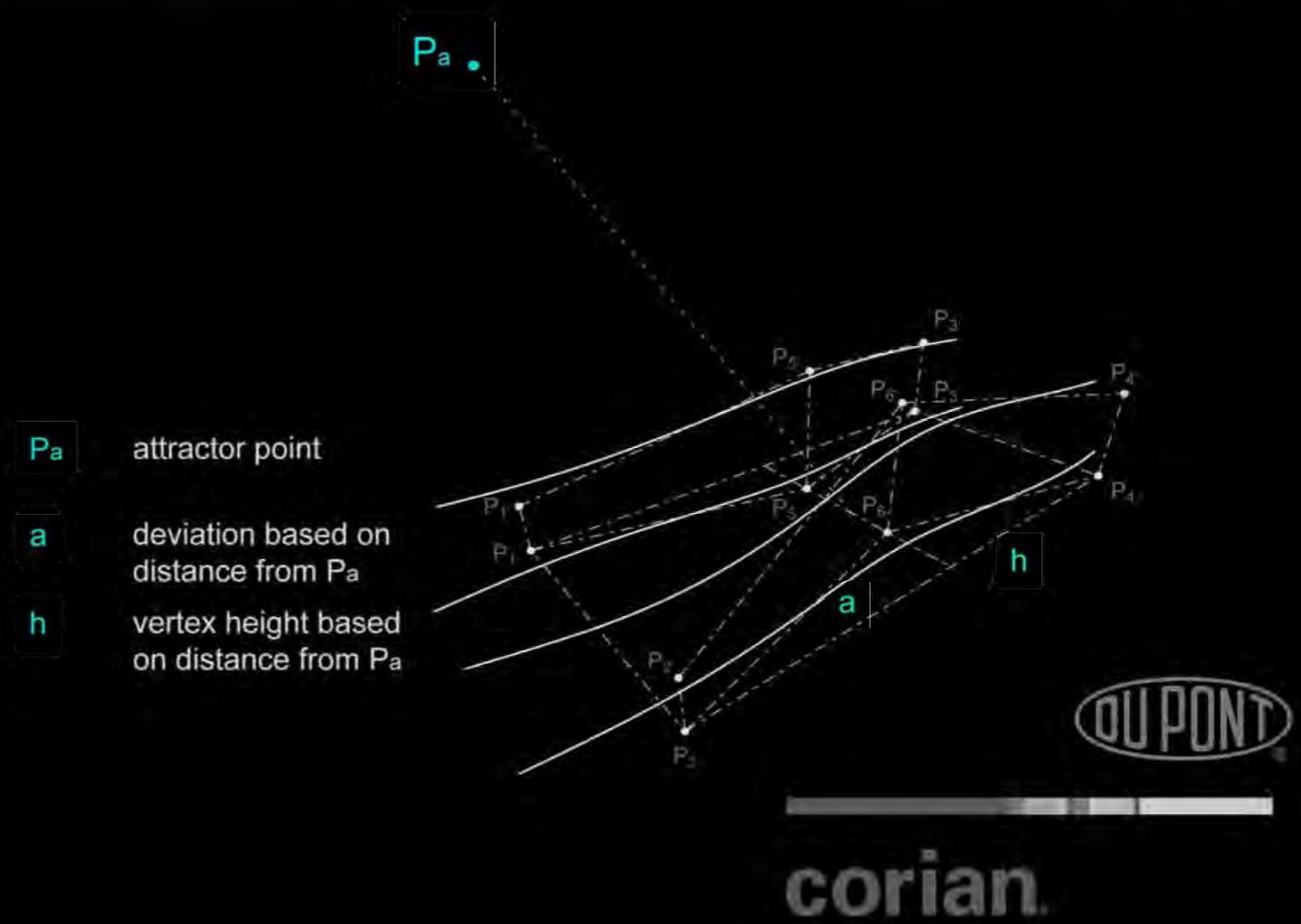
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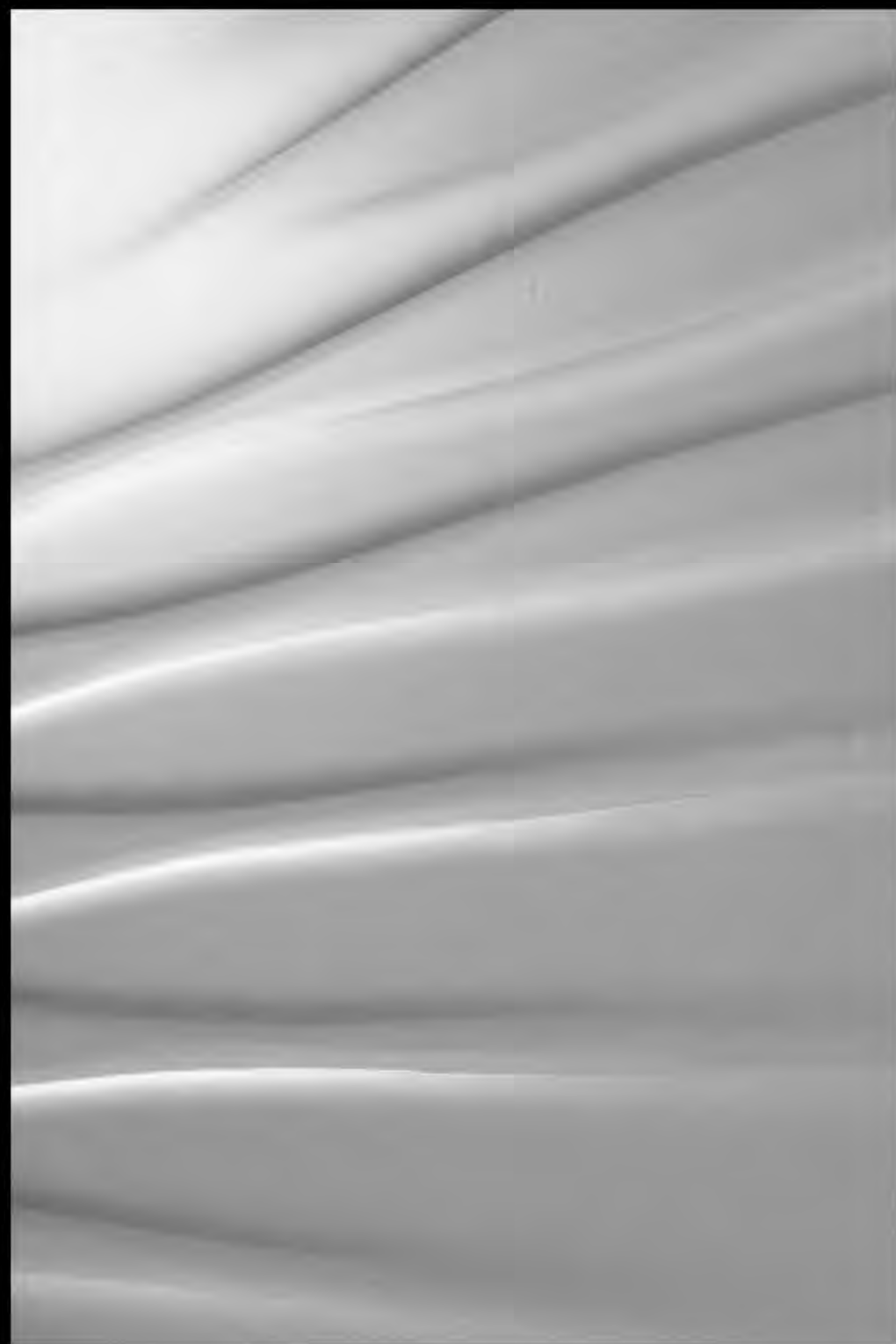


Moiré

parametric rules

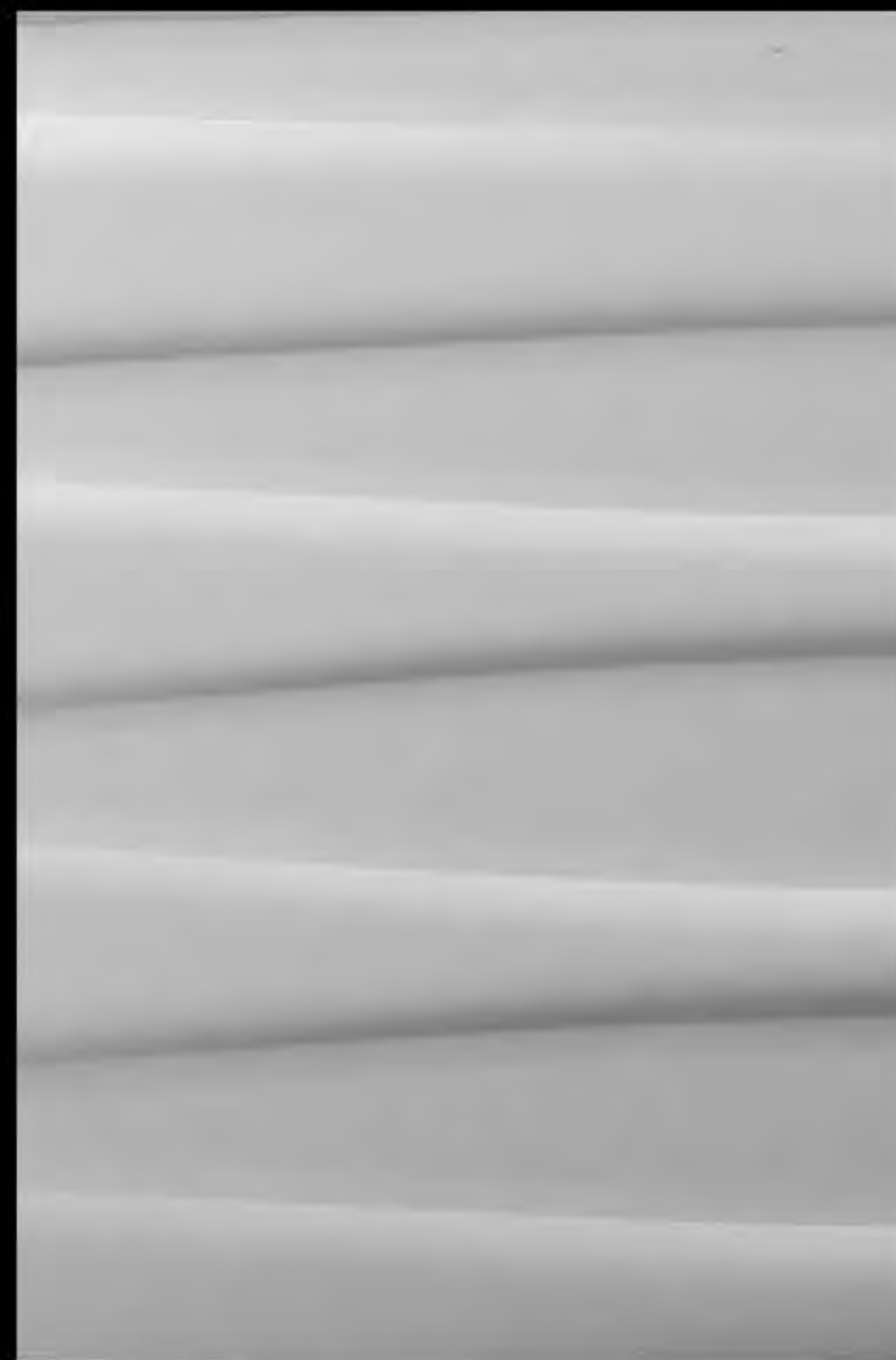
the shape of the panel is the results of a process of subdivision of it into a variable number of stripes. The distance of every center of stripe from an ipotetic point attractor governs the height and the deviation of the sinusoidal curves generating the surface. The optical result of this wave effects determines a sort of Moiré effect on the surface of the panel..



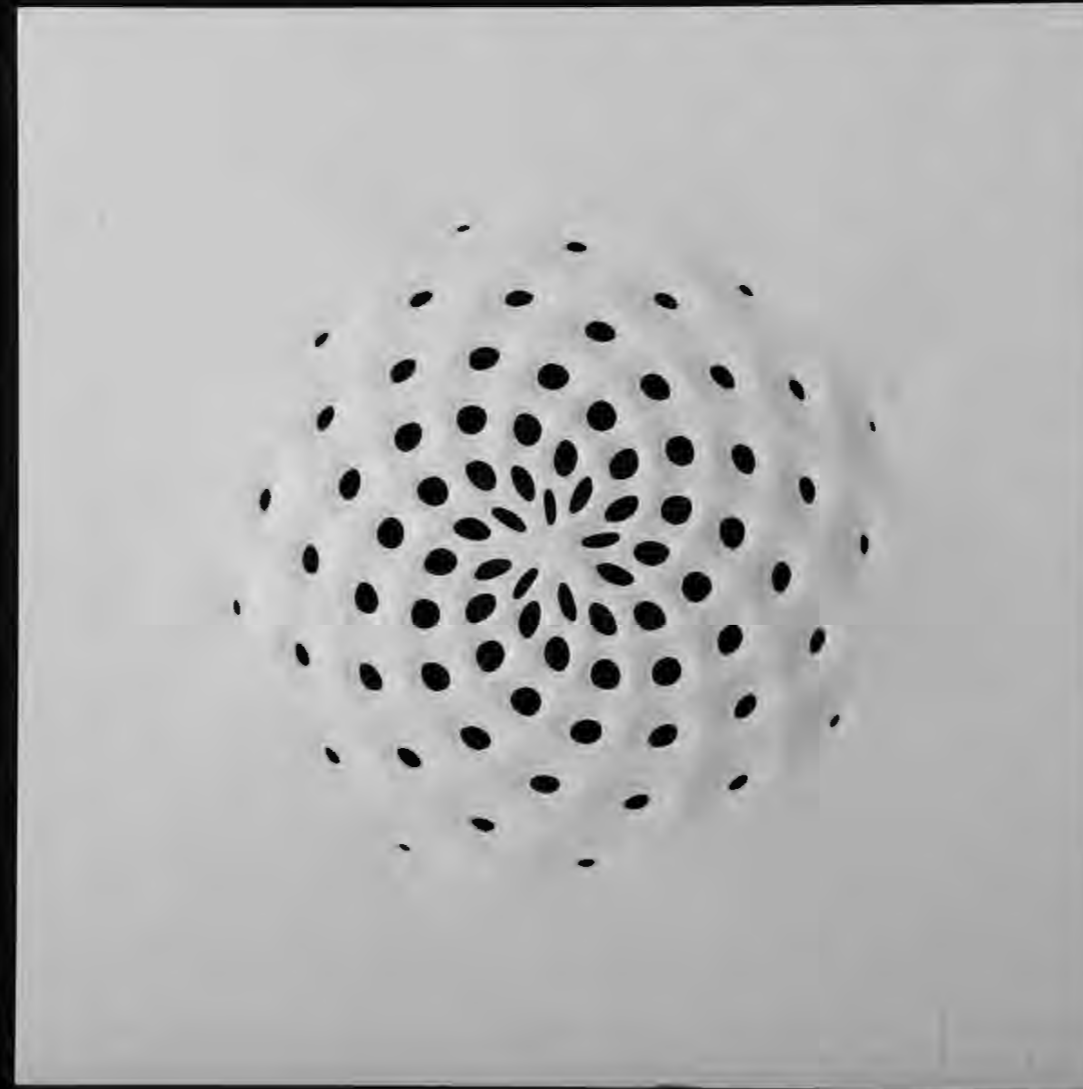


Moirè (detail)

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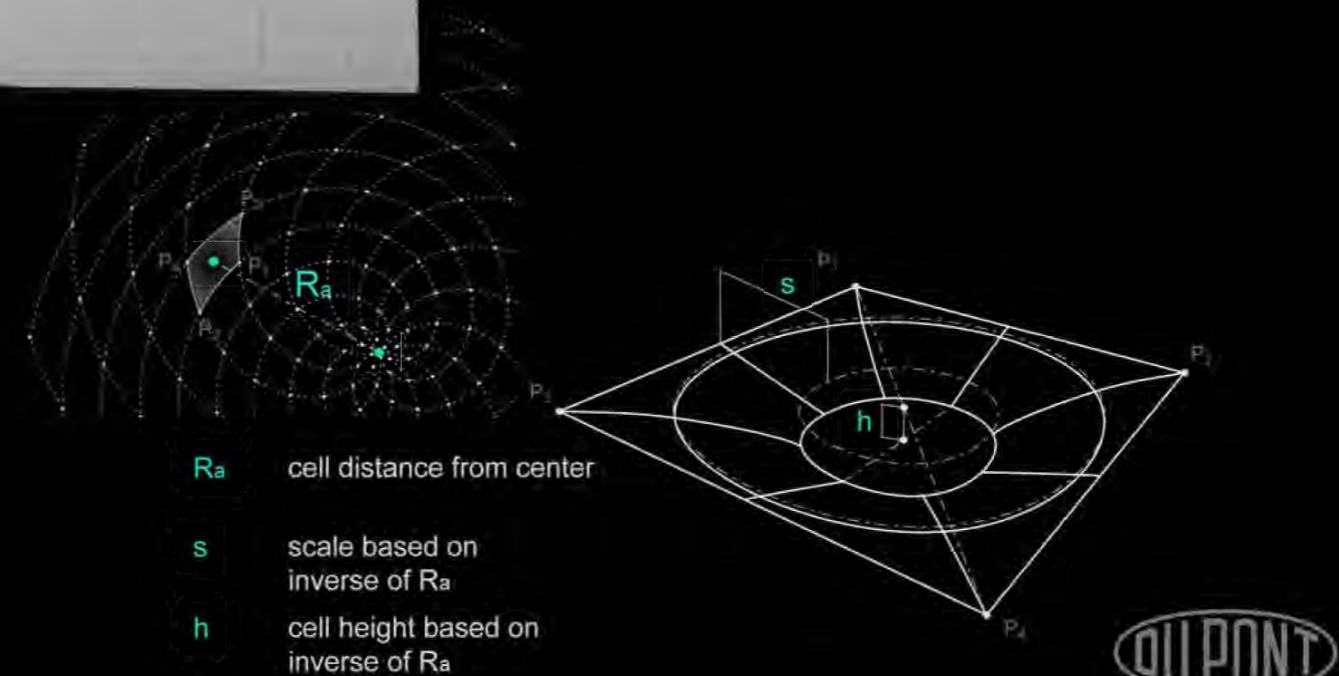
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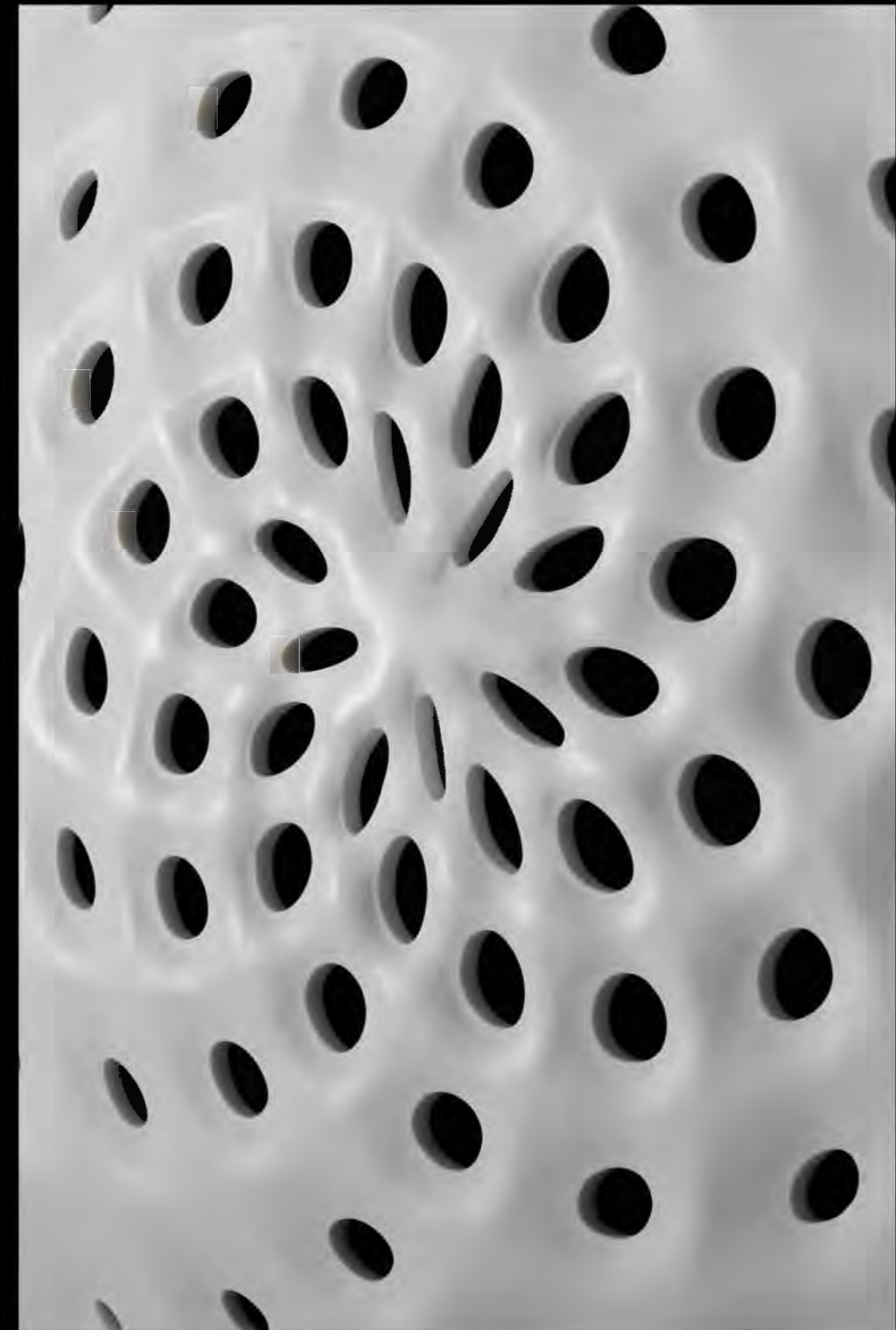
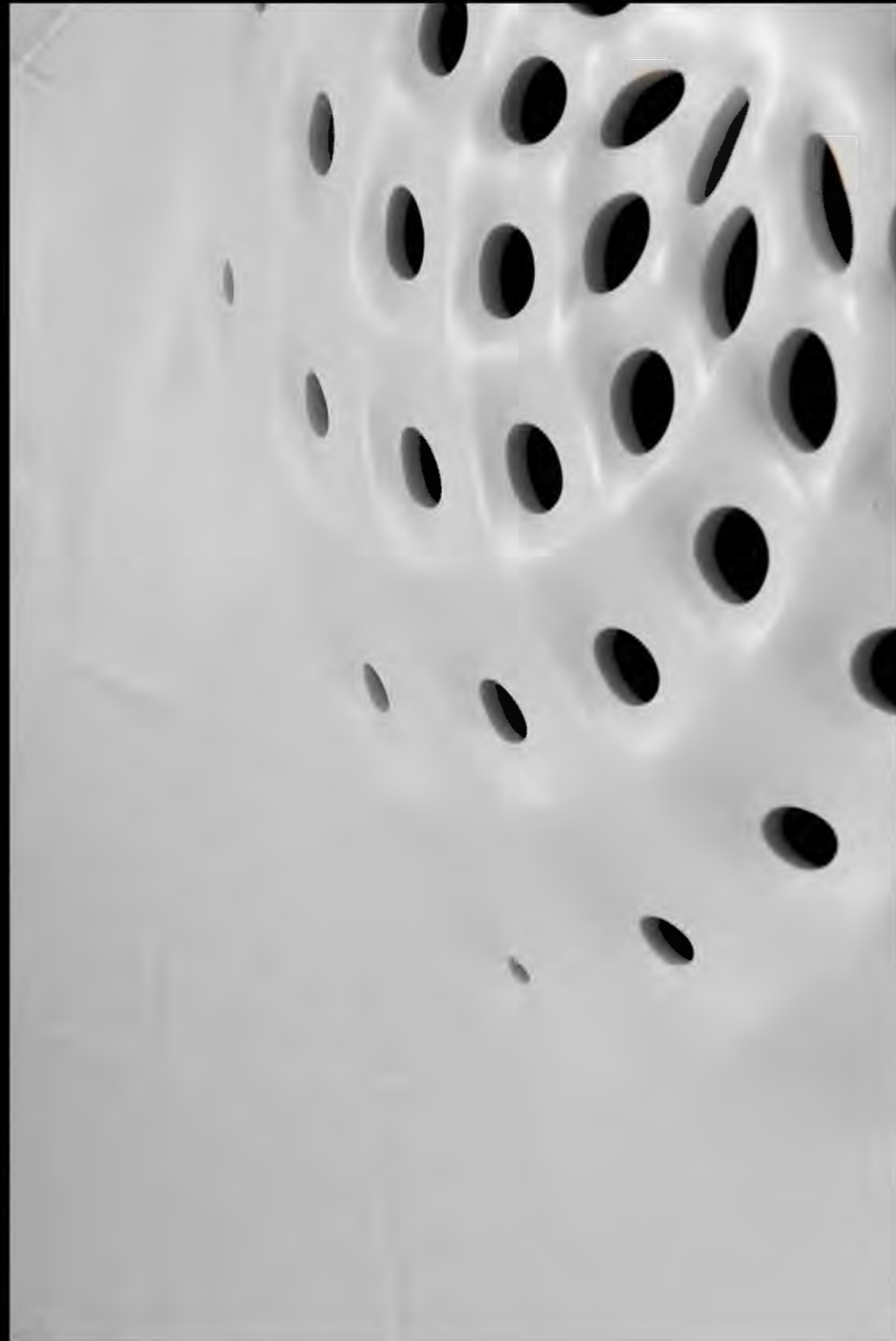


Phyllotaxis

parametric rules

the shape of the panel is inspired to the famous Fibonacci spiral and Phyllotaxis pattern based on two sets of spirals revolving in opposite directions. The shapes emerging from this intersection are the base for a series of inner curves scaled and moved proportionally to the inverse of their distance from the center of the spiral. The result surface looks like a flower bas-relief.



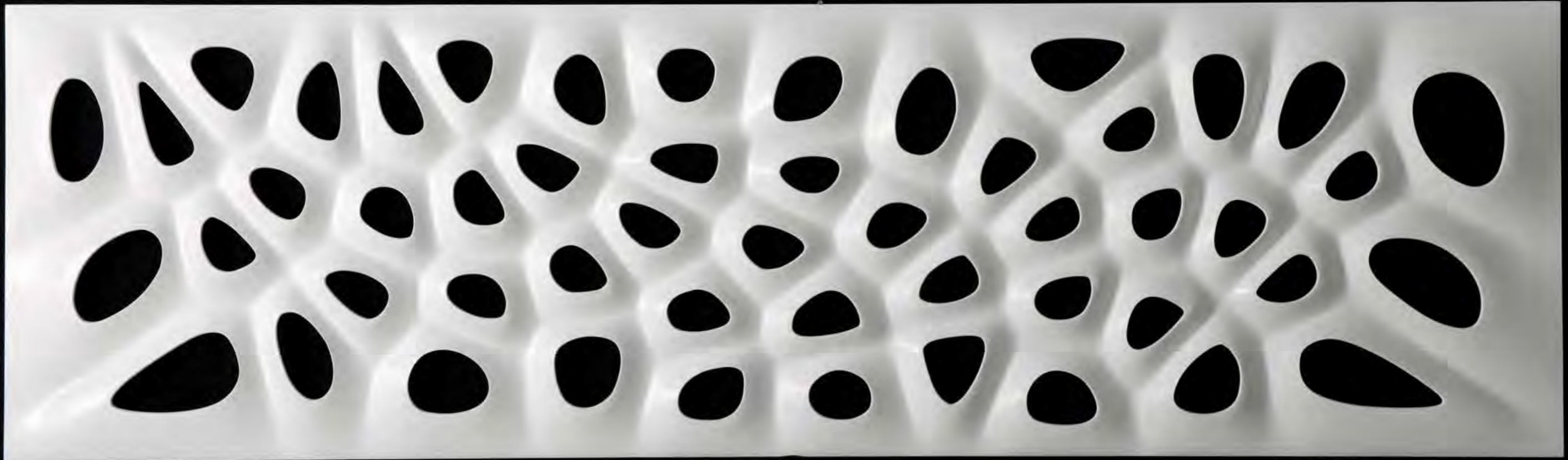


Phyllotaxis (detail)

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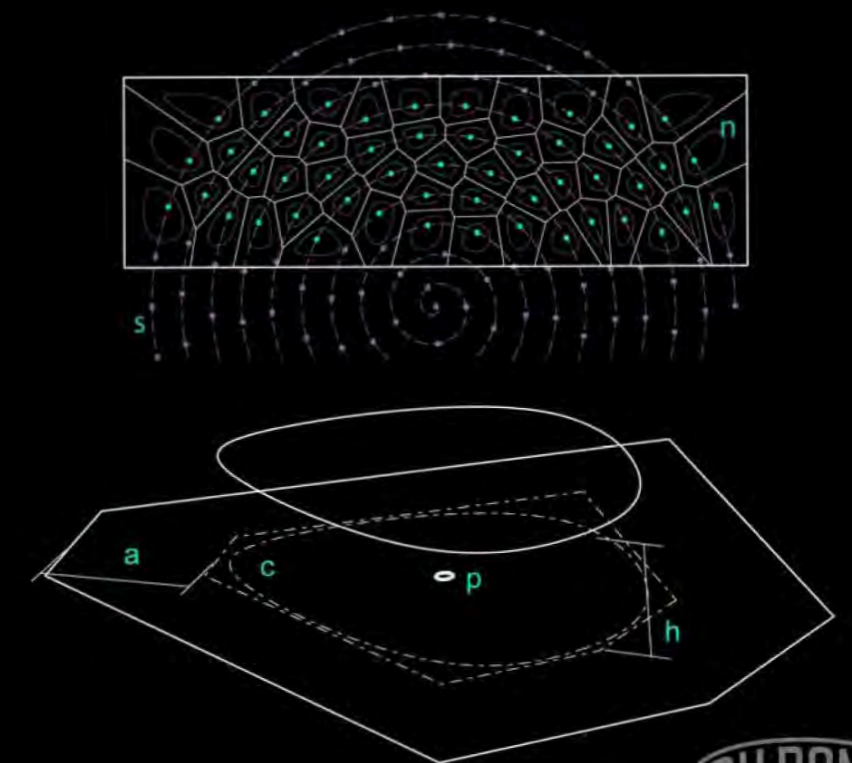


Voronoi

parametric rules

the shape of the panel is the results of a Voronoi diagram based on an array of points subdivision of a spiral. Every single voronoi cell boundary generate another offset and interpolated curve shifted at a parametric height. So the original Voronoi cell contour and those curve are the base for an operationl patching that provides a characteristic cell tessellation.

- s base spiral
- n number of points "p" on spiral
- a offset from boundary of cell
- h maximum height of extrusion of cell
- c curve created on "a" polyline vertex



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Voronoi (detail)

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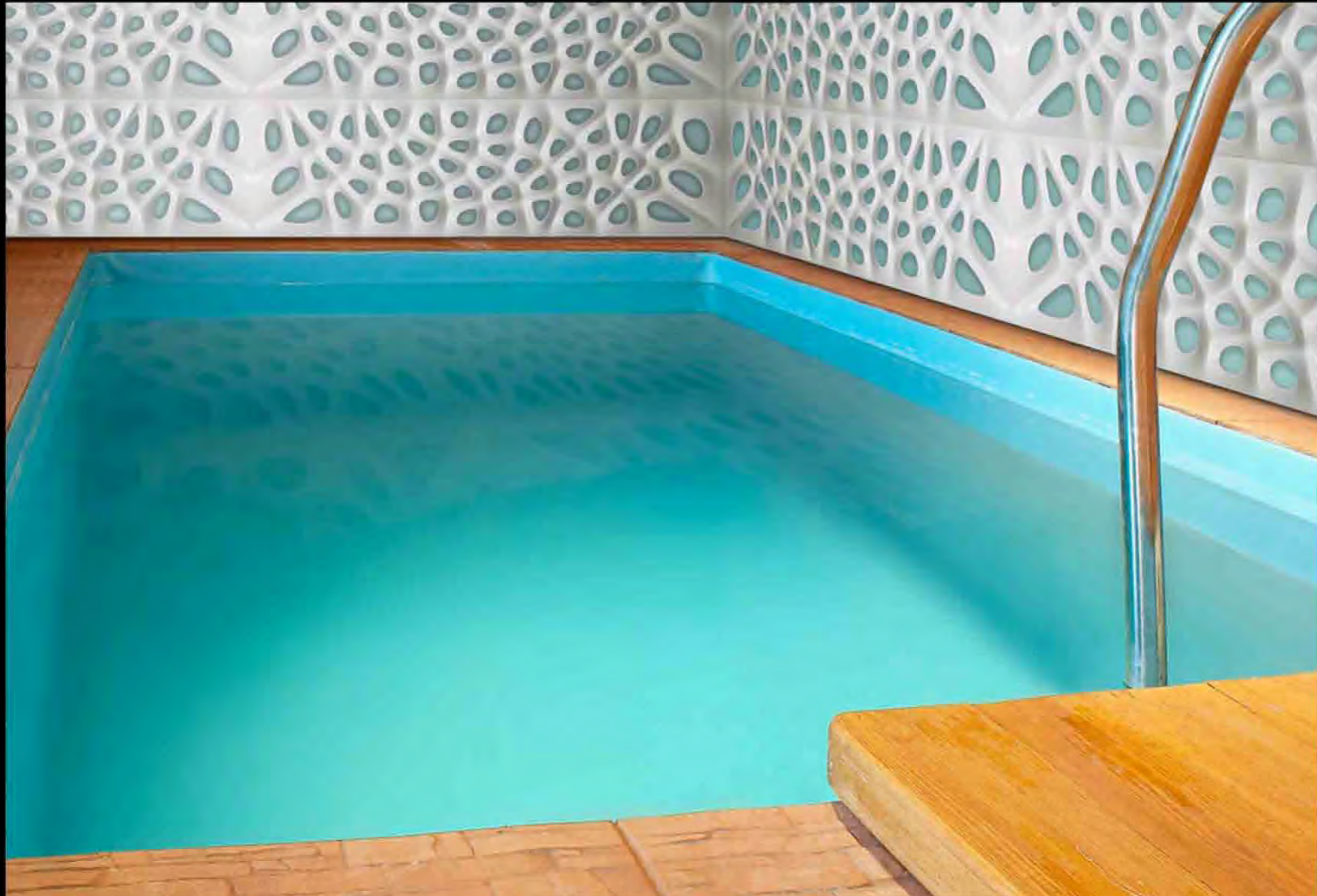


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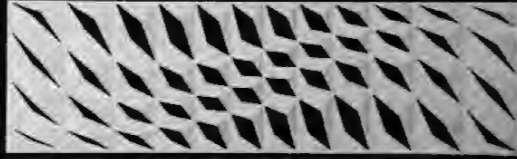


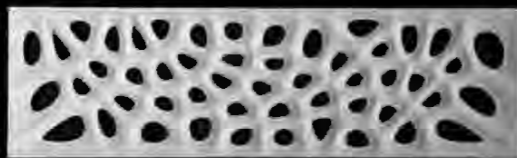


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model		dimensions (L x H)	thickness	
	Fibonacci	2200 x 720 mm	6 mm	12 mm
	Fourier	2485 x 760 mm	/	12 mm
	Gauss	2440 x 725 mm		12 mm
	Moire	2450 x 750 mm	6 mm	12 mm
	Phyllotaxis	700 x 700 mm	6 mm	12 mm
	Voronoi	2450 x 720 mm	6 mm	12 mm