

# Cells<sup>TM</sup> Organic Lasercut Railings





## About EeStairs

EeStairs make feature stairs and balustrades of exceptional beauty, precision and structural integrity in Europe, North America and Asia. We work closely with leading architects, interior designers, engineers and high-profile commercial and private clients to produce stairs of outstanding formal, material, and technical quality.

EeStairs controls the entire stair-making and installation process. We collaborate in taking original designs through the final detailed and engineering stages. We fabricate according to the ISO9001 and ISO14001 quality systems in our BREEAM Outstanding factory. We then install the stairs and balustrades using our own experienced installation teams.

We are innovators. Our engineers and materials specialists continue to develop sophisticated, and often unique, detailing systems to ensure that our clients' original designs and specifications will always produce stairs of superb architectural quality – and also be a delight to use.

The culture of excellence at EeStairs is driven by a single intensely focused desire: to create Beauty Between Levels.





## What is Cells?

Cells™ stairs, an exclusive innovation by EeStairs, combine art and geometry in an elegant and unexpected way. The organic open weave design of Cells™ steel balustrades are derived from computer-generated Voroni tessellations, which form a flowing 'weave' of laser-cut steel cells.

As a result, no two Cells™ balustrades are the same, guaranteeing that every Cells™ staircase is unique. And the balustrades form a strong integrated structure with stringers, treads, or floor edges.

Designers can choose the density and shape of the cells – for example, polygons, bubble patterns, or a range of cell sizes to produce balustrades that have a delicate or monumental character.

Registered Model



## Cells: The key benefits

- 1 — Shapes. Cells™ balustrades can be straight, curved, spiral, elliptical, or asymmetrically radiused.
- 2 — Stylish. 2 Cells™ balustrades create a stylish and artistic effect.
- 3 — Unique. The pattern of each Cells™ balustrade is individually unique.









## Poincaré, Paris

A luxury apartment in the Avenue Raymond Poincaré, Paris, required a feature staircase in the middle of its stylish living room. The staircase connects the home's central space to its master bedroom, and its attractive wooden treads and risers combine gracefully with the white-painted steel Cells™ balustrades.

EeStairs worked closely with the French architects, ART QAD, to ensure that the stairs would form a beautiful, highly-crafted centrepiece for the apartment. Our attention to detail is particularly evident where the irregular geometry of the balustrade cells join the stringers without any loss of surface smoothness or geometrical accuracy.

The stairs also feature an attractive, glossy EeSoffit™. Our designers and materials specialists perfected the EeSoffit™ to ensure absolute smoothness, geometrical precision, and durability, qualities that are very difficult to achieve with plaster soffits. Crucially – and again unlike plaster soffits – the EeSoffit™ doesn't create shadow-gaps between the soffit and the stringer.









## Customisation

Cells™ stairs can be customised in the same way as EeStairs customises more familiar stair types. The cellular balustrades can be seamlessly and securely attached to steel stringers, or directly to metal or wood stair treads or floor edges.

The steel balustrades can have irregularly shaped polygonal cells or irregular bubble patterns, and they can be factory-painted in any RAL colour, or given different patination treatments. Designers can also specify the size of the cells – for example, smaller cells at the base of the balustrade which rise to more open cells, or a random array of small and medium sized cells to create a more monumental balustrade.

Cells™ stairs can also be designed and made as a 'double-act' with a glass, wood or solid metal balustrade on one side of the treads, and a Cells™ balustrade on the other.

Because Cells™ balustrades are made of steel, designers can specify tighter radiuses on the stringers without compromising the strength of the stair structure as a whole.





# KLM, Amsterdam





## KLM, Amsterdam

This four-stage staircase at KLM's office at Amsterdam's Schiphol airport introduces an unusual organic design to a setting that is otherwise all about minimalist structures and high tech travel. The stairs, designed by Coare Realisatie and made and installed by EeStairs, feature EeStairs Cells® balustrades, whose open geometric networks can also be seen on the balcony balustrade outside the building.

This is the tallest set of Cells® stairs made by EeStairs, and the fact that the balustrades are largely transparent is a great benefit at an airport. So too is the way each flight of stairs is divided to create a 'lane' of steps for people to sit on cushions to watch aircraft.

The smoothly crafted handrails, and the treads of the white-painted steel stairs, are made with sustainable FSC-certified wood. Another key factor for KLM was safety, which is why the lower layer of geometric cells in the balustrades are smaller than those nearer the handrails.









## Geoff talks Cells

Architecture writer Jay Merrick talks to EeStairs designer Geoff Packer about Cells™ balustrades.

Jay Merrick: Where did the idea for Cells™ originate?

Geoff Packer: I'd always been interested in designing steel balustrades with organic cellular patterns. I tried drawing them, but it was quite difficult and time-consuming. Then I remembered seeing some Voroni cell patterns quite a few years ago.

JM: What are they?

GP: Voroni cells are a continuous flow of irregular polygonal shapes generated by a system invented more than a century ago by the Ukrainian mathematician Georgy Voronoy.

JM: And how is the system used to create Cells™ balustrades?

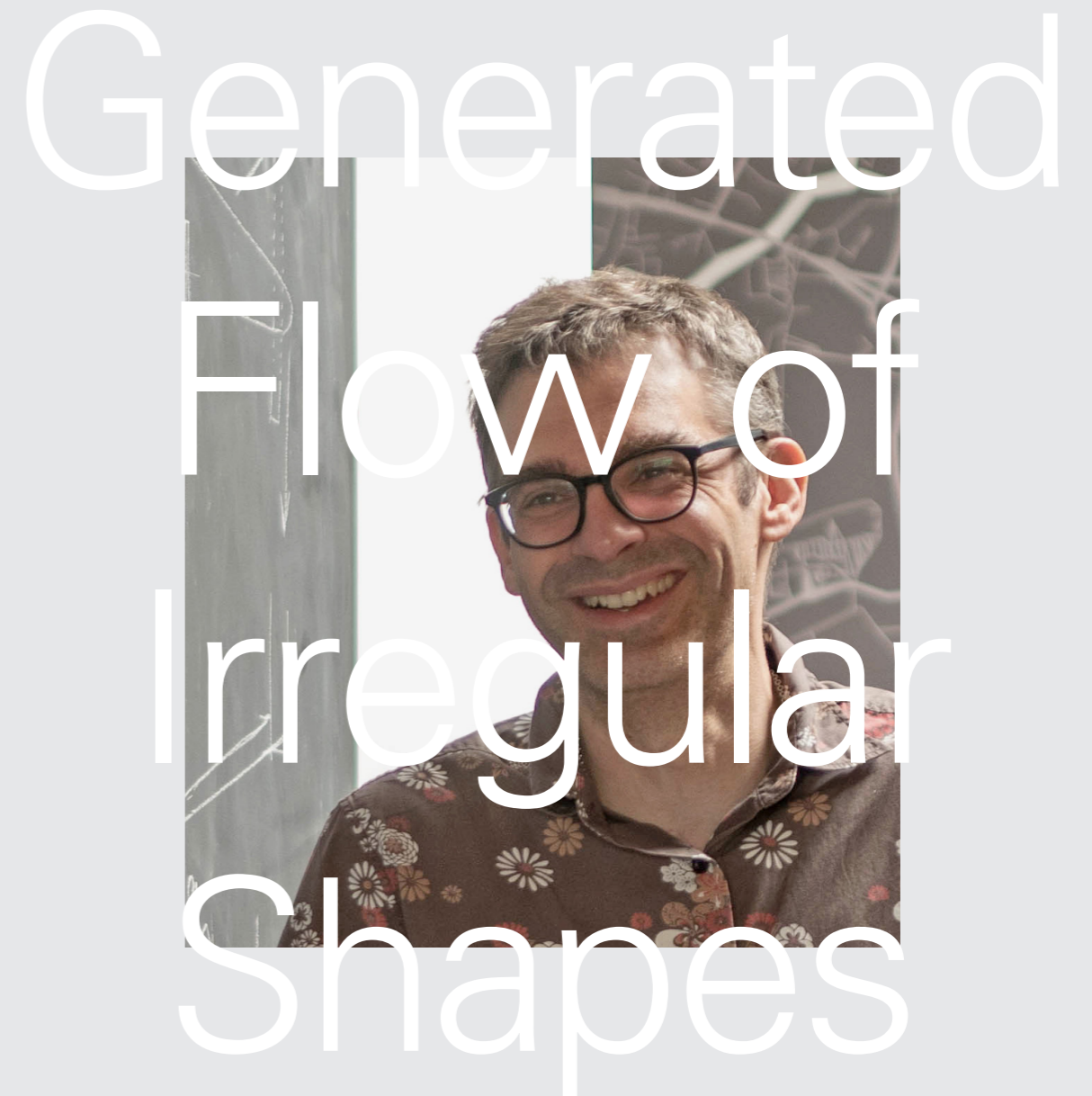
GP: To put it very simply, I select a particular density of points to give cells of a general size range, enter the dimensions of the balustrade, and then generate a flow of polygonal cells using software algorithms. The software includes parametric programmes, and also adapted film industry software normally used to generate 3D explosions.

JM: Big Bang balustrades! And how are the cell patterns transferred to the balustrade fabrication process?

GP: The Voroni patterns are fed into CAD software, which then tells the laser cutters in our factory how to cut the cell shapes precisely in the sheet steel.

JM: How do you ensure that the cell shapes are truly accurate?

GP: It's quite simple to laser-cut them perfectly on a straight Cells™ balustrade. On curved balustrades, it's more complicated but the end result is just as precise – and beautiful, we think.







## Application

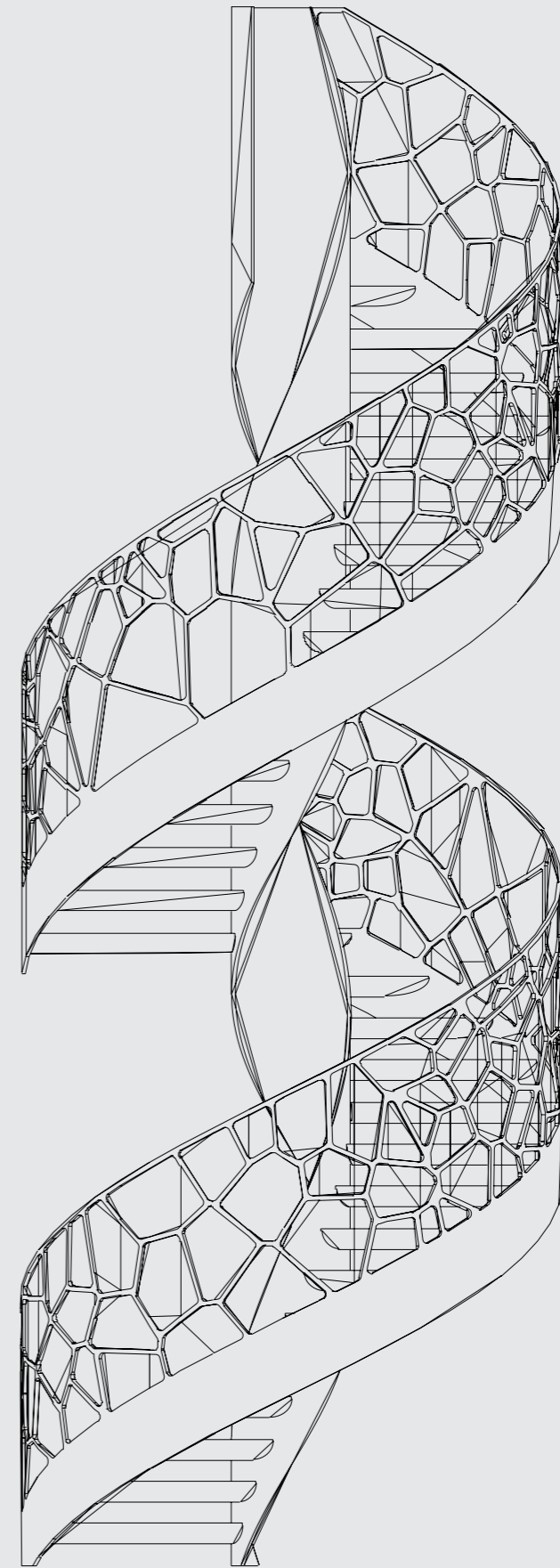
Cells™ stairs are ideal for domestic, commercial, and office interiors where the designer or specifier wants stairs that combine elegance, strength, and Wow Factor. EeStairs have made and installed Cells™ stairs in stylish homes in cities including Paris, London, and Moscow. In Amsterdam, EeStairs installed a multi-stage Cells™ office staircase at Amsterdam's Schiphol Airport.

The unique aesthetics of Cells™ balustrades, and their steel structure, means they can be used at the edges of floors, such as the perimeters of atriums, stairwells, and patios to make a strong design statement.



## Specification

Material	Steel
Balustrade/ railing	Cut steel in organic pattern (size of apertures depends on the application)
Handrail	Not applicable. Equal to the top of the balustrade.
Treads	Square or rounded in wood
Structure	Open
Shape	Straight, spiral or helical staircase
Purpose	Exclusive
Finish	Steel: powder coated in all RAL colours Wood: varnished
Welding technique	MIG
Fixings	Treads by blind attachment, to be determined by application, shape stairs and implementation balustrade





## Safety & Regulations

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Cells™ balustrades are strong and secure because they are an integral part of the steel structure of the stairs.

However, if the stairs are likely to be used by children, it is important for health and safety to reduce the size of the individual balustrade cells to prevent children from climbing on them. EeStairs restricts the size of the individual cells to a maximum width of 10cm if children will be using stairs with Cells™ balustrades, to avoid creating footholds for climbing.

EeStairs is happy to advise designers or clients who plan to specify Cells™ balustrades in child-friendly settings.

## Innovations & Products

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1m2™

Cells™

EeSoffit™

groovEe™

NextGen™

TransParancy™ 1-01

TransParancy™ 1-02

TransParancy™ 1-03





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