Carpet Design Awards 2023 (Carpet Design Awards 2023)
05 Best Flatweave Design

Shapeshifter by Michael Rowan

jqZDzkEL

Entrant details

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Entry details

Your Company Name	Private Label Sdn Bhd
Are you an exhibitor at DOMOTEX 2023?	✓ We have not yet decided whether we will exhibit at DOMOTEX. Please contact us about possible participation options.
I hereby confirm that all information is correct. I have read the conditions of	✓

participation and agree to them
(please see the About
section/Conditions of Participation for
details).

Design/Design Concept

This design by Michael Rowan is part of the "Evolving Patterns" collection.

An Evolving Pattern is a kind of animation in space rather than in time. Instead of creating a large field of identical copies of a single motif, our motifs slowly undergo a process of change. The result avoids the monotony of pure repetition, producing a sense of flow, progression, and narrative structure to the finite canvas of a rug. Evolving patterns can imbue designed objects visual interest , producing a sense of flow, progression, and narrative structure to the finite without overwhelming the eye.

This style of design was explored most famously by the Dutch artist M.C. Escher in his "Metamorphosis" prints, in which lifelike animal forms grow and interact on the canvas. Inspired by Escher, the designer William Huff later introduced Parquet Deformations, a drafting exercise in which design students created abstract tessellations that evolved spatially.

Michael's motif is Escher-esque. Two interlocking tiles ("A" and "B") evolve in shape.

Elements of the design create a visual narrative: At both ends the squares and rectangles are similar in shape and color. It is unclear which element is the ground ; and which the figure. The color blue identifies the "figure". It evolves shapewise from rectangle to a hexagonal lozenge and lightens colorwise. The ground evolves only shape-wise from rectangular to the "bow-tie" shape.

This could be a meditative pattern: the sharp light blue lozenges indicating a discerning awareness arising whereas the rectangles might be conceptual thoughts forming, becoming more defined and then disappearing over the opposite edge.

This layout is open to color study. Different colorways exploring changes in hue, tone and contrast have been explored.

Material/Execution/Structure/Quality/Originality

It would be interesting to know what William Huff would have thought of this pattern. He probably would not classify the motif as a Parquet Deformation. "We play a different (or rather, tighter) game from Escher's. We work with only A tiles (i.e., congruent tiles of the same handedness)... we don't use A and B tiles (i.e. two different interlocking tiles)...".*

In the opinion of Professor Kaplan: I agree (with Escher) that this is unnecessarily restrictive in art and design, and that many beautiful designs are possible if you permit multiple distinct tile shapes to interact and evolve together. But I can understand Huff's desire to limit the exercise as much as possible when giving it to students.**

This pattern is not a Parquet Deformation...then again Escher's work has been often been thought of as magical.

We believe that a flatweave structure is the best way of showing these patterns through its tactile qualities.

Within this structure editions can be woven in bamboo silk, cotton and bamboo mix, silk, in PET and ultimately in silk.

Personally I (Azmi) am delighted with the version of the pattern woven in Blue gradients (image 1). Compared to an earlier version the weaver had exagerrated the lozenge shape by elongating it, making it look sharper. The weaver had corrected a mistake made in generating the artwork. Compare image 1 (actual) and the design plate image 2. The "tribal eye" that is said to guide weavers had done its work.

Colorwise also the actual rug looks better. In Image 2, the design plate looks flat in comparison to the actual.

If rug projects are walking disaster areas then this is a nice accident.

*page 24 Space Tessellations. ISBN 978-3-0356-2517-2 Werner Van Hoeydonck
** e-mail 14 October from Professor Kaplan

Sustainability

The rug is a handwoven cotton dhurry. The yarns are dyed chemically.

A sustainable circular economy is not invented in the studio. We are aware of The Modern Artisan project by Federico Marchetti which is a blueprint for what fashion (and home furnishings) can do to become circular and responsible.The ecosystem of the argriculture or production method used for the raw materials; the processes of washing and dyeing the yarns should all be assessed for their sustainability. In particular, attention has to be given to wastewater treatment prior to discharge for use in say agricultural to ensure that that there is no damage to the environment.

It is possible to weave designs in PET yarns made from recycled plastic bottles but subject to a higher production run. Certification by a Fair Trade Organization also needs to be backed by higher volume.

We are inspired by the brand Shyam Ahuja which revived the handcrafted tradition of flatweaving. All his creations were handmade from first step to last. The emphasis is on quality over quantity, craftsmanship rather than over-consumption. Sustainability in branding emphasizes impermanent experience rather than luxury. It would be interesting to explore the use of natural dyes or indigo for this pattern as an exercise in sustainability.

David Mrugala believes that rug weaving patterning can be transformed using 21st Century digital design. Instead of designing ever more intricate patterns the focus is on clean lines with simple pattern and coloring.

Branding

"Only those who attempt the absurd will achieve the impossible."
M.C. Escher

1. Michael Rowan's main motivation is the math art aspect of our project. He used PostScript to code mathematically-inspired drawings, based mostly on fractals and Parquet deformations.

2. “Evolving patterns” are visual and tactile explorations in asymmetry. Developing “evolving patterns” might give us a better sense that our world is dynamic and ever changing not “static and symmetric”.

In the book "Lucifers Legacy: The Meaning of Asymmetry" (ISBN 0-19-866267-X) Frank Close addresses asymmetry from a scientific viewpoint particularly from the sub-atomic level. He asserts that appearances that seem symmetric superficially are in fact asymmetric for example, the human face, DNA (right-handed), the glucose molecule, etc.

MC Escher's drawing no. 67 "Horsemen" was first used to conceptually illustrate situations in nuclear physics where left/right symmetry is violated by weak interaction on the cover of the book Elementary Particles by Nobel Physicist Chen Ning Wang in 1963. (Also Lucifer's Legacy, page 195).

In "Neutrino" (ISBN 978-0-19-969599-7 page 126) Close likens the oscillation of neutrinos from one flavour to another to MC Escher's series of drawings titled "Metamorphosis".

3. Our explorations seem to corelate to a few of the exercises* from the Basic Course at the University of Ulm:

a. Parquetry/Tiling
b. Exactness through inexactness
c. depth perception studies
d. contrast through interaction of color

This curriculum was developed by Thomas Maldonado and Josef Albers in post-war Germany.

"Parquet Deformations" as taught by Professor William Huff emerged as an"asymmetry out of symmetry" exercise in parquetry/tiling. Weaving can be classified as a study of "exactness through inexactness". In coloring the patterns one needs to be aware that color contrast and the creation of depth can create confusing perceptual effects and avoid them.

*page 74 Space Tessellations experimenting with parquet deformation ISBN 978-3-0356-2517-2.

Other

Michael Rowan, Ph.D is a computational scientist with a background in physics. Michael completed his doctorate in theoretical physics at Harvard University, and undergraduate degrees in physics and mathematics at Oberlin college, where he was first inspired to do math-art working with Prof. Bob Bosch. Whether it is in programming, physics, or mathematical art, Michael is inspired by the idea that simple rules can lead to unexpected structure, and likes to create works guided by this principle.

Azmi Merican wrote to Michael asking for permission to use patterns that he had published online at:

https://scholar.harvard.edu/mrowan/misc

to weave rugs.

In his opinion the link contains an excellent collection of mathematical art.

Michael wrote back in mid October 2021: I will make no formal "conditions," just a humble request that if you display these anywhere and there is any natural space to list a 'collaborator,' that you would list my name. Maybe a second request is that, if you remember, I would be very interested to see any of the final results, if it's easy for you to share a picture or link at that point.

Azmi has submitted an Artist Collaboration Template to Michael with proposed terms and conditions to formalise our arrangement.

He updated Michael with images of the rugs woven in his motif and gave feedback on the favourable reception to the EP range of rugs at M&O.

Reply:

"I really like the way the rug turned out, judging from the image you shared. I do like the color and the weaving quality appears good...especially the final one I think captures the 'continuous deformation' of the shape from square --> lozenge --> square."

Contact has mainly been in the form of sparodic e-mails. Entry for this competition spurred increasing contact with Michael. Our first ever talk is scheduled for mid November.

Log in to enter.carpetdesignawards.com to see complete entry attachments.

michael rowan s... 625 KiB

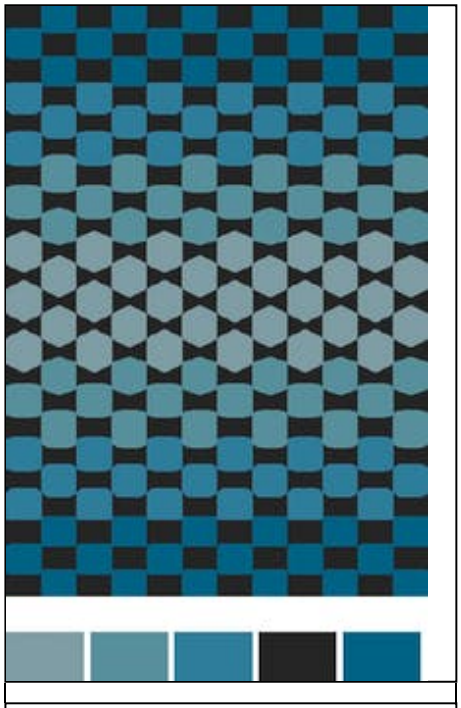
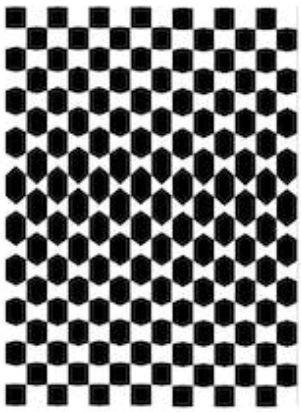
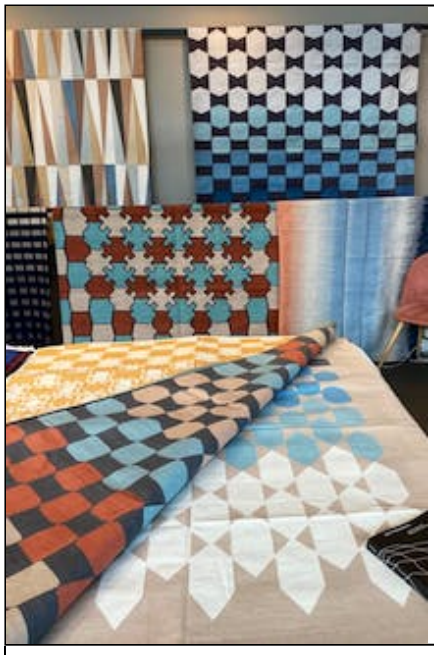


PHOTO-2021-11-... 42 KiB



michael rowan l... 98 KiB

Earlier version of... 621 KiB



three versions of... 965 KiB