EPFL CDH ARTIST IN RESIDENCE PROGRAM LAUSANNE

ENTER THE HYPER-SCIENTIFIC

ALISON MARTIN

18.10.—9.11. 2024

EL.BA

EL.BA is a sculptural exploration of minimal forms. Intricate 3D shapes emerge in a delicate balance of forces, when carefully arranged flexible beams, elastic fabric, and inextensible cables are in perfect equilibrium. Inspired by fundamental principles of nature, these sculptures transcend the common typologies of shape and define a new approach to exploring curved 3D forms.

The cross-disciplinary collaboration between artist Alison Martin and the Geometric Computing Laboratory directed by Prof. Mark Pauly brings together scientific inquiry and artisanal practice, linked through the common language of geometry and a shared fascination for the unknown. Explorative model making and sophisticated algorithms complement each other in an experimental study of material, space, and form. *EL.BA* aims to transport the viewer's gaze to a new perspective and make mathematical concepts more accessible through the physical experience.

Alison Martin studied graphic design and visual communication at Exeter College of Art and St. Martin's College of Art and Design. Her work involves analysis of geometry and topology in traditional weaving patterns and takes various perspectives on the dynamic dimensions of fiber entanglement, interlacing, braiding, and classical weaving.
► instagram.com/alisonmartin57/

Credits
Design and Realization: Alison Martin, Quentin Becker, Liliane-Joy Dandy, Filip Goc, Florin Isvoranu, Uday Kusupati, Mark Pauly, Yingying Ren, Seiichi Suzuki, Michele Vidulis.

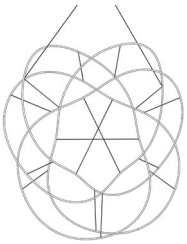
Produced by the EPFL Geometric Computing Laboratory
► gcm.epfl.ch

EL.BA 1

Tensile forces in the precisely crafted fabric stabilize the bending forces in the beams to form a minimal surface of complex topology. Dissecting space and seemingly creating toroidal tunnels, the sculpture defies any notion of volume, or inside and outside.

Materials: Carbonfiber beams, regenerated nylon fabric, velcro

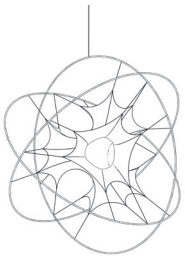
EL.BA 2



Knotted flexible rods mutually suspend each other to form two interwoven trefoils. In their natural state, elastic trefoil knots, the simplest knots in 3D space, form two closely touching planar circles. Only through the interplay with carefully placed cables can they escape to the third dimension and find their shape in an elastic tensegrity.

Materials: Aluminum poles, fishing line

EL.BA 3



Three rings form an interwoven link, known as the Borromean Rings, shaped and held in space by a complex flow of forces through the stretched fabric. Following the topology of the octahedron, the fabric surface delicately balances the rings' tendency to form perfect circles, thus enabling a harmonious embedding in 3D space without any direct contact between the rings.

Materials: Aluminum poles, regenerated nylon fabric, fishing line

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Initiated by the EPFL College of Humanities (CDH), amplified by EPFL Pavilions, and in partnership with the City of Lausanne, the EPFL – CDH Artist-in-Residence (AiR) Program Enter the Hyper-Scientific reflects the CDH mission of fostering transdisciplinary encounters and collaborations between artists and EPFL's scientific community. The program invites professional Swiss and international artists for three-month residencies to realize innovative and visionary projects at the intersection of art, science, and advanced technologies.

Curator & Head of Program: Giulia Bini
Program Administrative Assistant: Christine Farget
Communication Assistant: Lucie Ryser

EPFL PAVILIONS

Pavilion A

PLACE COSANDEY
1015 LAUSANNE

TUESDAY-SUNDAY
11AM-6PM

EPFL ■ College of Humanities

EPFL Pavilions Amplifier for Art, Science and Society Lausanne

Ville de Lausanne