Helical Timber Staircase: Parametric Design and Fabrication of a Non-Standard Geometry

This project explores the design and fabrication of a non-repetitive helical staircase, where parametric workflows and NURBS modeling enable precise control over complex geometry.

Marquise H.V: Parametric Canopy and Digital Fabrication in Teresina

A fully parametric canopy composed of 210 unique glass panels showcases how computational design and digital fabrication can be successfully implemented beyond major urban centers.

Casa Fratelli: Generative Growth within a Historic Ruin

A parametric liana composed of 1,000 3D-printed elements reclaims a historic ruin in Bucharest, using generative design and custom fabrication workflows to merge light, material, and

growth logic.

Itaca: Parametric Design and Large-Scale 3D Printing for a Self-Sufficient Farm

A 3D-printed building developed with Rhino and Grasshopper explores how parametric design and large-scale additive manufacturing can support self-sufficient living systems and circular construction models.

Drawn in Code, Cast in Concrete: The MCIC Monumental Stair

At the Madera Cyber Innovation Center, a monumental stair became the centerpiece of both design ambition and collaborative execution, a sculptural concrete and glass feature shaped by computational design and realized through a fully coordinated digital workflow. This project showcases how advanced modeling tools can turn complex architectural visions into buildable, precise outcomes.

Oberhauser’s Balloon: Parametric Control and Large-Scale Concrete 3D Printing

A 3D printed concrete lamp that embraces its own layered logic, the Oberhauser’s Balloon demonstrates how parametric modeling and Selective Paste Intrusion can redefine scale, precision, and expression in outdoor lighting.

Christmas Sparks in Envigado: City-Scale Lighting Through Digital Design

A city-scale Christmas lighting project in Envigado, Colombia, where Rhino was used as the central platform for 3D modeling, dimensional control, structural coordination, and fabrication documentation of complex illuminated elements inspired by Art Nouveau.

Designing Dignity: Modular Shelter Systems Informed by Lived Experience

How can modular systems support dignity, privacy, and adaptability in shelter environments? This project uses Rhino to translate lived experience into a flexible, fabrication-ready design that rethinks how transitional housing spaces can evolve.

Digikala Flagship Store: A Physical Prototype for the Future of Online Retail

Digikala’s first flagship store reimagines online retail as a physical and immersive spatial experience: a 400 m² prototype where portals, interactive environments, and a continuous spiral transforms passive browsing into active participation.

The Brick Screen: A Parametric Reinterpretation

of the Traditional Jali

The Brick Screen, designed by Muhammad Talha Muftee and Shaikh Abdul Basit for the Arts Council of Pakistan Karachi, reimagines the traditional jali through parametric design. Using Grasshopper, the architects combined local masonry craft and digital precision to create an environmentally responsive brick façade that has set a new precedent for computational design in Pakistan.