

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.

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.

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.

ShaperBay: A Browser-Based Platform for Custom Surfboard

Design and Fabrication

ShaperBay is a browser-based platform that empowers users to design and export custom surfboards using parametric tools powered by Rhino and Grasshopper. Its standout Hollow Wood Structure (HWS) feature supports the fabrication of sustainable, high-performance wooden boards through laser-cut templates and intuitive digital workflows.

La Pendentia: A Community-Led Suspension Bridge Project in the Swiss Alps

La Pendentia is a slender suspension bridge in the Swiss Alps that blends digital precision with ecological sensitivity. Designed using Rhino and Grasshopper, it showcases how thoughtful engineering and community collaboration can shape resilient, elegant infrastructure.

Behind the River Plate Facade: A Digital Approach

Dive into the innovative design and digital fabrication process behind the parametric facade of the River Plate Football Club parking structure. This story highlights the use

of Rhino, Grasshopper, and various plugins to tackle complex challenges and achieve an efficient and visually dynamic result.

Mangrove: A Record-Breaking Glass Sculpture by Nikolas Weinstein

Suspended in the grand atrium of Solaire Resort North, Nikolas Weinstein's record-breaking glass sculpture Mangrove redefines architectural art. Drawing inspiration from the intricate roots of native mangrove trees, the monumental 27-meter-tall installation combines 11 kilometers of borosilicate glass tubing with advanced digital tools like Grasshopper.

“Brilla la Tradición”: The 2024 Christmas Lighting Design in Envigado, Colombia

This year's Christmas lighting project in Envigado, Colombia, titled Brilla la Tradición, transformed the city with over 4,500 hand-crafted figures, combining traditional holiday symbols with cutting-edge design and production techniques.

Thrill Island: Designing Adventure on the Icon of the Seas

Thrill Island aboard Royal Caribbean's Icon of the Seas combines storm-ravaged tropical aesthetics with cutting-edge computational design, utilizing Rhino and Grasshopper to craft immersive attractions like waterparks and adventure courses, while overcoming production challenges for a first-of-its-kind cruise ship experience.