

Rethinking Acoustic Guitar Construction Through Digital Fabrication

A digitally native acoustic guitar developed entirely in Rhino 8, combining NURBS modeling, AI-assisted learning, and 3D printing. By replacing the traditional soundhole with a system of internal air channels based on Helmholtz resonance, the project rethinks both acoustic performance and fabrication logic.

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.

Spatial Monoliths: From NURBS Data to Hand-Cast Sculptures

Spatial Monoliths explores the transformation of NURBS-based digital models into hand-cast sculptures, combining parametric design, laser-cut molds, and rotational casting techniques.

The project bridges computational workflows with material craftsmanship, resulting in precise yet expressive physical artifacts.

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.

Parametric Craftsmanship: Digital Workflows and Jewelry Fabrication at IXU Design

At IXU Design, computational design meets traditional jewelry craftsmanship. Using Rhino and Grasshopper, complex parametric geometries are translated into precise physical pieces through casting, advanced materials, and meticulous hand finishing.

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.

Live LLM Data to SubD Geometry: A Biomimetic Workflow in Rhino 8

By integrating a live LLM API directly into Grasshopper, Malvina Stamatiadi transforms AI-generated coordinate data into a biomimetic SubD lattice inspired by dragonfly wing venation, resulting in a 3D-printed lamp that bridges artificial intelligence and physical craft.

Squama: Technique as a Generative System in Body Jewelry

Squama explores how fabrication technique can operate as a generative design system, transforming flat silver into a responsive body landscape through parametric kerf bending.

Precision Through Surface Logic: A Class-A Surfacing Study in Rhinoceros 3D

This educational study explores Class-A surfacing logic in Rhinoceros 3D through a focused investigation of surface continuity, reflection flow, and control-vertex discipline. Using a faucet geometry as a neutral formal framework, the project examines how analytical feedback can actively guide high-quality NURBS surface construction.

When Performance Becomes Visible: Refining Running

Trim with Orca3D

At Bayliss Boatworks, performance is evaluated not only through data, but through how a yacht looks and feels at speed. By leveraging Orca3D's Marine CFD tools inside Rhino, the design team is refining running trim and stagnation lines, elevating both hydrodynamic behavior and visual clarity on the water.