

VITRO-P: Generative Design for Customizable Vascular Networks in Optical Tissue Phantoms

A generative design workflow built in Rhino and Grasshopper is redefining how vascular systems can be simulated, fabricated, and studied. VITRO-P introduces a flexible, fabrication-agnostic approach to creating customizable tissue phantoms with embedded vasculature, bridging computational design and biomedical research.

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.

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.

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.

Recreating 1950s Medellín: Scenic Design Powered by Rhino

Blending music, memory, and digital design, La Sociedad de la Cumbia recreates the spirit of 1950s Medellín through a carefully crafted scenic production built with Rhino 3D.