

“Exploring Computational Design: La Geometrica Encyclopedia, Volume 0.1”

La Geometrica Encyclopedia, Volume 0.1 – 2D: Computational Design Fundamentals by Javier Martínez Gaxiola introduces the core principles of computational design through diagrams, case studies, and hands-on digital resources that were created with Rhino and Grasshopper. A living encyclopedia, it invites readers to explore and contribute to the evolving language of geometry and computation.

NEXUS: From Machine Learning to Manufacturing

NEXUS by ENCODE Studio explores the fusion of machine learning, generative design, and additive manufacturing to create intricate, morphing geometries showcased during Cairo Design Week. Using Rhino and Grasshopper, the team translated AI-generated patterns into full-scale 3D-printed architectural elements, redefining possibilities for design and fabrication.

Shellscape

Pavilion:

Exploring Wood–Bioplastic Composites in Architecture

The Shellscape Pavilion explores the architectural potential of waste-derived composites through a fully computational and robotic workflow. Developed as part of a PhD research project, this prototype demonstrates how circular materials, structural optimization, and mixed-reality assembly can converge in a full-scale architectural design.

Monumento Pijao Ancestral: A Father–Son Fusion of Art, Technology, and Heritage

The Monumento Pijao Ancestral in Tolima, Colombia, is a 13.6-meter steel sculpture created by artist Edgar Varón Oviedo and his son, industrial designer Edgar Daniel Varón Villarreal. Blending ancestral geometric patterns with advanced 3D modeling in Rhino and Grasshopper, the monument honors the Pijao people through a fusion of art, cultural heritage, and precision engineering.

Designing Adventure at Sea: A

Student's 100-Meter Luxury Superyacht

SCAD senior Holladay Crook designed a 100-meter luxury superyacht concept that blends sculptural form with refined functionality. Developed in Rhino and brought to life through a 1-meter 3D-printed prototype, the project showcases advanced modeling, meticulous fabrication, and a narrative-driven design approach.

Thinking in Code: First-Year Towers from Ain Shams University

First-year architecture students at Ain Shams University utilized Grasshopper to design and fabricate parametric towers, learning to think like system designers from day one. The course emphasized algorithmic logic, data structures, and generative workflows to build not just models, but design intelligence.

Astroid: A Parametric

Ergonomic Mouse Built with Rhino

The Astroid 7000 is a parametric, ergonomic 3D mouse that revives the legacy of the original Spaceball using Rhino as a central tool for design, prototyping, and engineering. This case study highlights how digital modeling can transform legacy concepts into responsive tools for today's designers.

3DCITYGH: A Parametric Workflow for Digital Urban Survey and City Information Modeling

3DCITYGH presents a modular parametric workflow for generating structured City Information Models from survey data and point clouds, enabling efficient urban-scale modeling for risk assessment, heritage documentation, and structural analysis. Developed within Grasshopper, the approach combines AI-assisted segmentation, custom semantic structuring, and BIM/FEM interoperability.

Tips & Tricks: Exploring New Curve Editing Features from Rhino 8 to Rhino WIP

Explore how Rhino 9's new features like Instant Aliases and the Fence trim option streamline curve editing, improving workflows started in Rhino 8. Discover tips to speed up creating and trimming curves with these powerful tools.

Digital Clay: A New Layer at the Natural History Museum

At the Natural History Museum's new Fixing Our Broken Planet gallery, digital design meets sustainable craftsmanship through 3D printed ceramics. Using Rhino and Grasshopper, the team developed modular components that bring innovation to a heritage space without leaving a trace.