Parametric Adaptive Shell for an Autonomous Stock Handling Robot

Designed for a real-world logistics automation platform, this project explores how Rhino and Grasshopper can be used to develop adaptive industrial components that balance structural performance, mechanical constraints, ventilation, and manufacturability within a fully parametric workflow.

From Form-Finding to Fabrication: Pabellón Generativo Michoacán

A generative pavilion built in Morelia, Mexico, explores how form-finding, Voronoi-based segmentation, and digitally fabricated nodes can translate computational logic into a lightweight physical structure assembled from recycled CPVC components.

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.

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.

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.

Pedorthic Information Modeling: Revolutionizing Orthopedic Footwear with 3D Printing and Computational Design

Developed by footwear engineer Daniel Petcu, Pedorthic Information Modeling (PIM) revolutionizes the design of orthopedic footwear by combining parametric design principles with 3D printing. This innovative approach allows for fully customizable, functional, and stylish medical footwear, overcoming the limitations of traditional hand-made methods.

Circular Economy in Action: The Wood Project

The Wood Project by MANUFACTURA and La Metropolitana uses Rhinoceros and Grasshopper to convert sawdust into 3D-printed architectural elements, demonstrating the potential of computational design in sustainable, circular economy practices.

Exploring New Frontiers in Lamp Design

The Crescent Lamp is a parametric design and digital fabrication product that showcases the seamless blend of minimal surfaces and advanced craftsmanship. It was developed as part of Controlmad’s Master course and highlighted the transformative potential of algorithm-aided design.

Pewter Meets Ceramics: The Creative Process of Zinnterlace

The Zinnterlace project combines traditional materials with modern technology to create sustainable and customizable art, emphasizing the importance of sustainability in contemporary

art and design through interdisciplinary collaboration.

Arloize: Turning Wood Scraps into Personalized Clocks

The Arloize project repurposes wood waste into functional art, empowering makers to create modern yet traditional clocks while promoting environmental sustainability and local craftsmanship.