

# Rethinking Egyptian Crafts Through Parametric Design

At the German International University in Egypt, two Industrial Design theses used Rhino and Grasshopper to reinterpret traditional Egyptian crafts through computational design. Inspired by Mashrabiya woodworking and Talli embroidery, the projects explore how parametric workflows can expand design possibilities while keeping artisans at the center of the process.

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## 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.

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## 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.

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# **Designing Dignity: Modular Shelter Systems Informed by Lived Experience**

How can modular systems support dignity, privacy, and adaptability in shelter environments? This project uses Rhino to translate lived experience into a flexible, fabrication-ready design that rethinks how transitional housing spaces can evolve.

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# **Epicycloid Blossom: A Parametric Lighting Piece**

# Shaped by Geometry, Python, and AI-Assisted Design

Epicycloid Blossom is a digitally developed sculptural lighting piece generated from the mathematical behavior of the epicycloid curve. Although the piece was not physically fabricated, the project reached full production-ready documentation and stands as a refined example of AI-assisted parametric design.

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## Adaptive Fashion: Designing with Body Data

Adaptive Fashion is a design research project by Laura Civetti that transforms body data into generative garment patterns using Rhino and Grasshopper. By translating information such as posture, curvature, and stress zones into computational rules, the project prototypes adaptive clothing systems with 3D printing, paving the way for highly personalized, high-performance fashion.

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**Waffle-Structured  
Exploring**

**Chair:  
Robotic**

# **Manufacturing in Design Education**

A team of DIA Master's students at Hochschule Anhalt explored computational design and robotic manufacturing by creating a full-scale, waffle-structured ergonomic chair, combining efficiency, ergonomics, and sustainability. Exhibited at Campus Fest 2025, the project showcased the potential of digital workflows and robotic fabrication in architectural education.

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# **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.

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# **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.

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# Bio Corallo: A New Biomaterial for Digital Craft and Architecture

Bio Corallo is a lightweight, bio-based ceramic composite developed by Ana Bridgewater that merges digital craft with ecological material research. Made from porcelain and tapioca starch, the project explores how computational design and sustainable thinking can reshape the future of lighting, architecture, and modular fabrication.