

DIGITAL TOOLS AS STRATEGIES FOR ARCHITECTURAL DESIGN
INSTALLING SOFTWARE TO YOUR BRAIN
PARAMETRIC DESIGN
18-19, 20, 21

Workshop instructors

- **Prof.Aref Maksoud** (MAG LAB - Barcelona –Spain/Damascus - Syria)
Assistant professor in Biodigital Architecture Master and PHD program
ESARQ-UIC”Barcelona-Spain”
Professor - lecturer for 3d year in “architectural composition - Architecture in Digital Age”

- **Prof.Francesco Ducato** Stardust*Director.
prof.lecturer in different universities in Spain, Italy, Brazil, USA .
Artist selected by Robert Wilson to participate on summer program of the Watermill
Center, New York.

Synopsis

The workshop “Digital Tools as strategy for Architectural design” organized by MAG LAB in collaboration with AIU, was an exploration about different ways to generate architectural outcomes through the translation of information-based and information-driven morphogenetic processes via digital tools.

The aim of this workshop was to introduce the students to a digitally driven approach to architecture and let them begin an exploration of the potential, range and capacity of this broad world digital tools are not just intended for drawing but as a consistent and powerful design strategy.

Ideas, processes, strategies and conditions interacted and intertwined throughout the whole design path, in order to translate information processing into a spatial architectural outcome.



The students, working in groups, created an architectural skin (an enveloping system with structural capacity, able to generate space and mediate Environmental conditions via information processing) based on morphogenetic strategies, conditions and information extracted and translated from Their investigations and experimentations.

Students investigate general issues of the digital world as well as of contemporary architecture.

The main objective was to extract the information from the research as an input in order to generate a new 3D spatial output, communicating the Design process through the digital skills taught during the workshop.

The Workshop was configured in Lectures and digital tools classes which interweaved with practical work throughout 5 days full time work.

COVERED TOPICS

THEORIES

Introduction to CAD/CAM technologies
Introduction: Evolutionary Computation

Iteration/ generations: Definition of algorithm; computation vs. computers

Topologies, Geometry , Beauty and Performance

DIGITAL TOOLS CLASSES

Introduction to parametric design
3dmax as strategy for Architectural design.

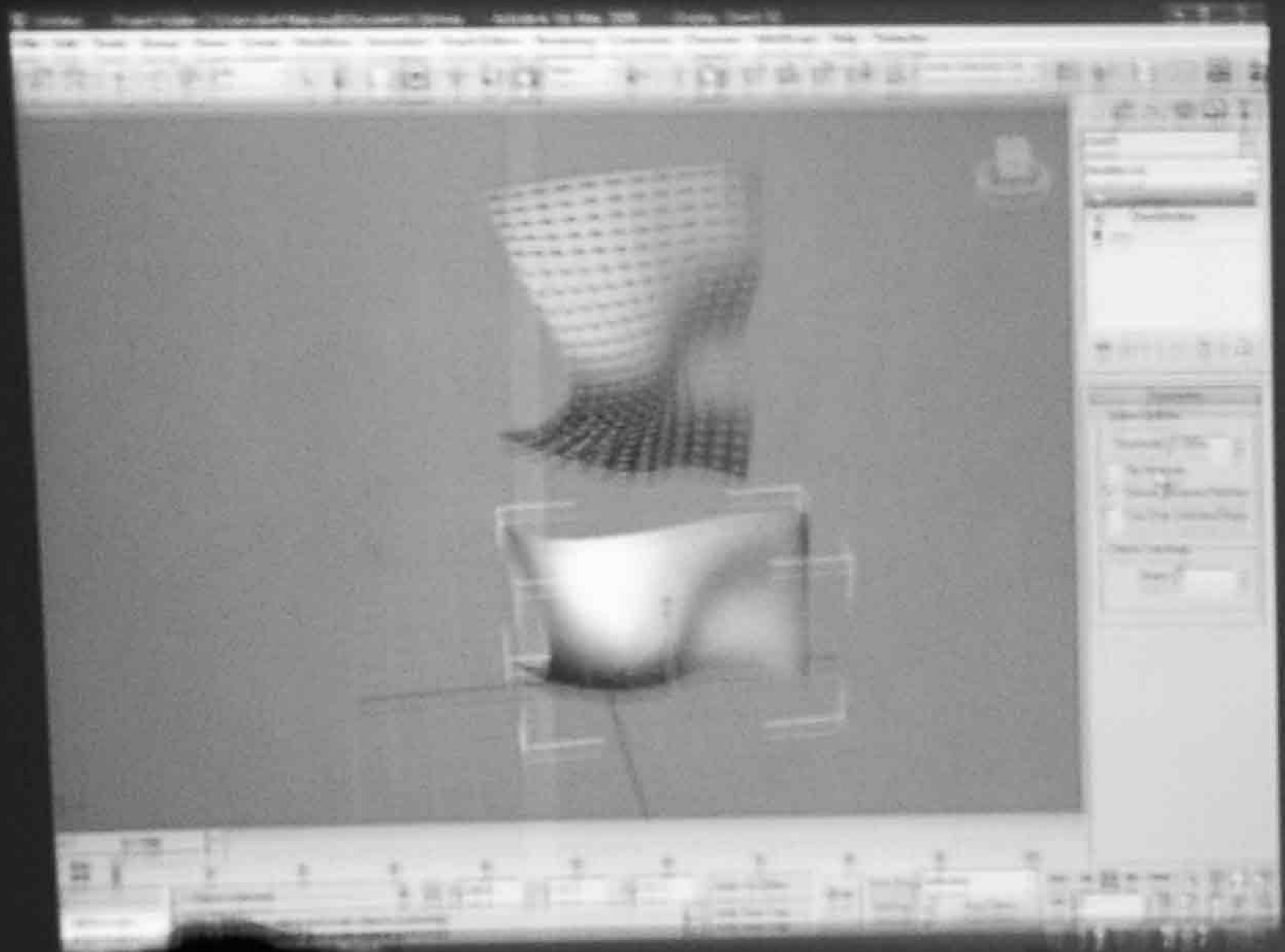
surface tessellation (adaptive strategies)

Nurbs

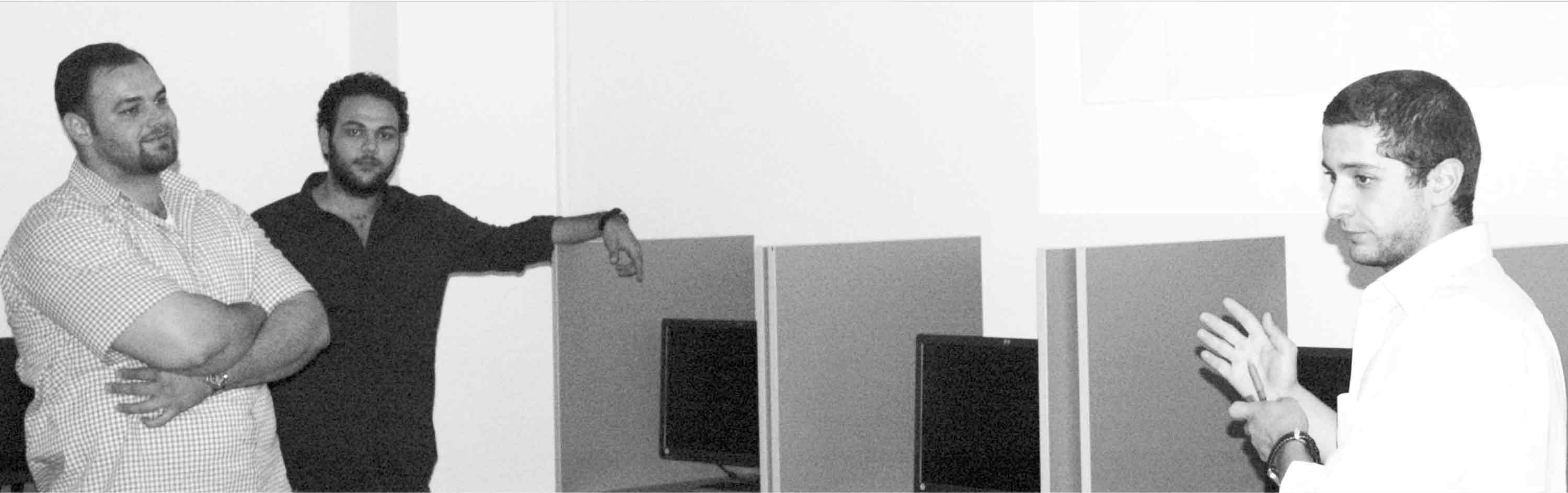
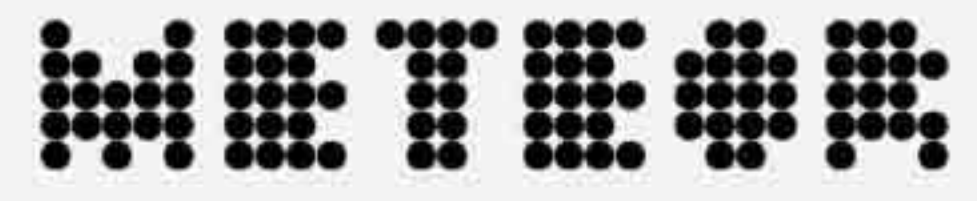
Mesh

Responsive component proliferation
(pluri-potential systems)

Introduction of Modules: Fields/ Spirals //
Subdivisions/ Differentials // Fractals/
Branching.

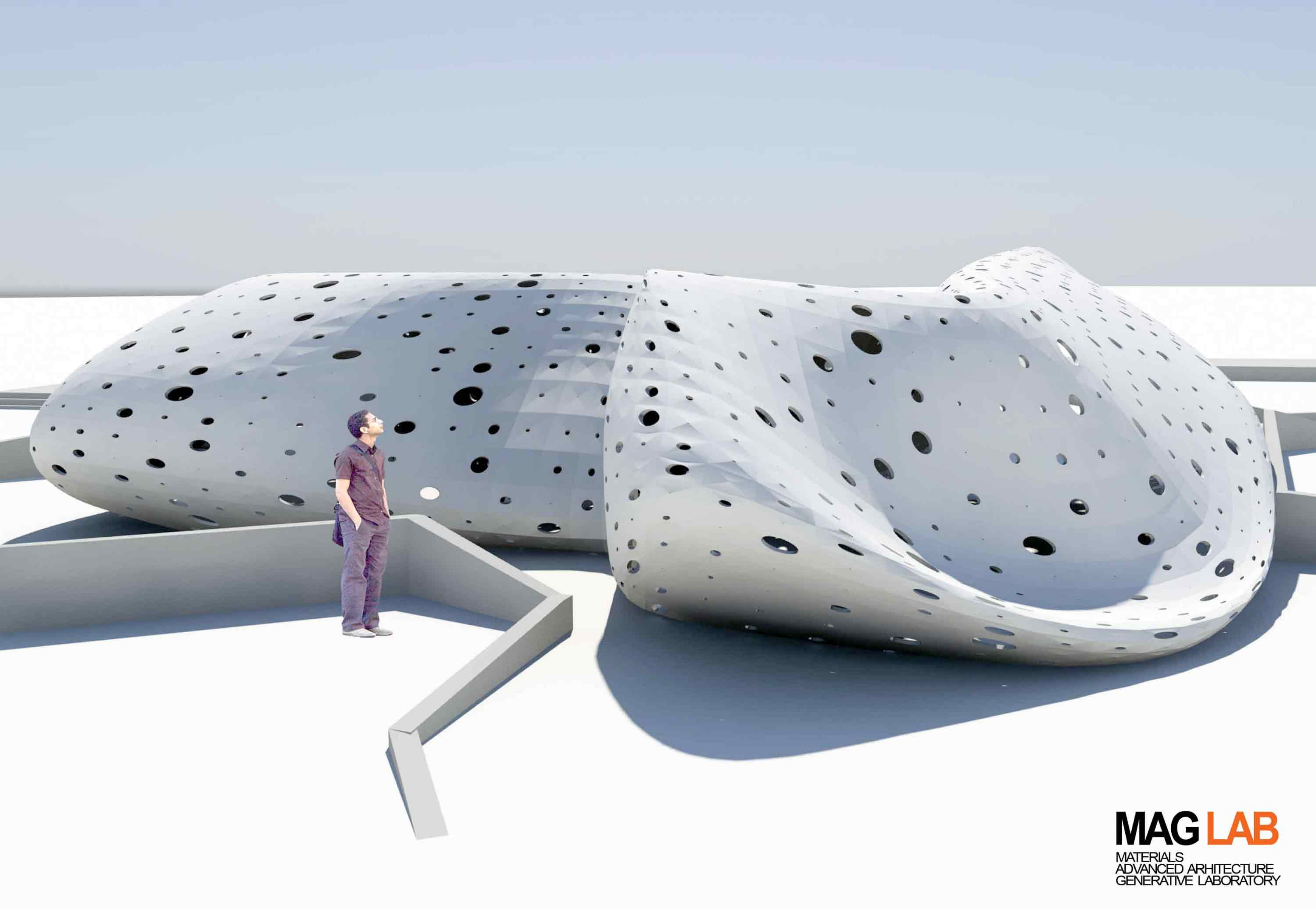


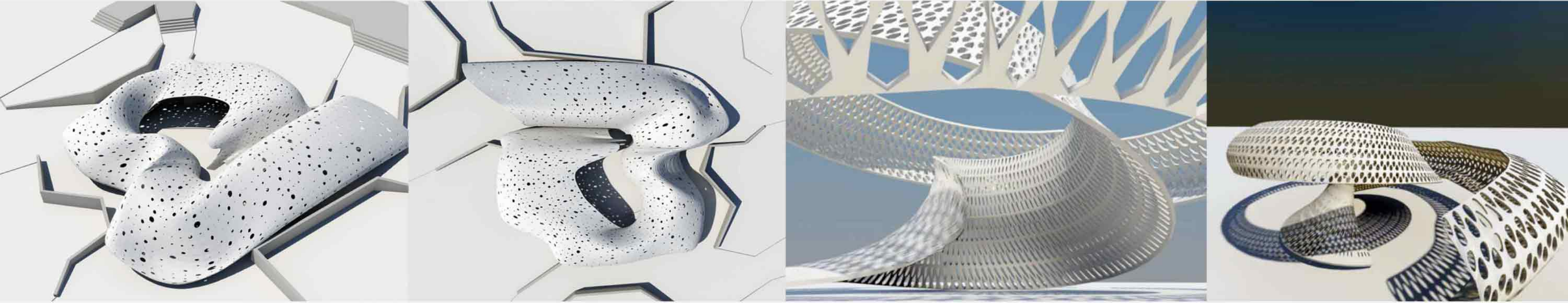
PROJECTS



Digital Heroes

- Abdulla al saffan
- Ahmad muarawi
- Mustafa kuki

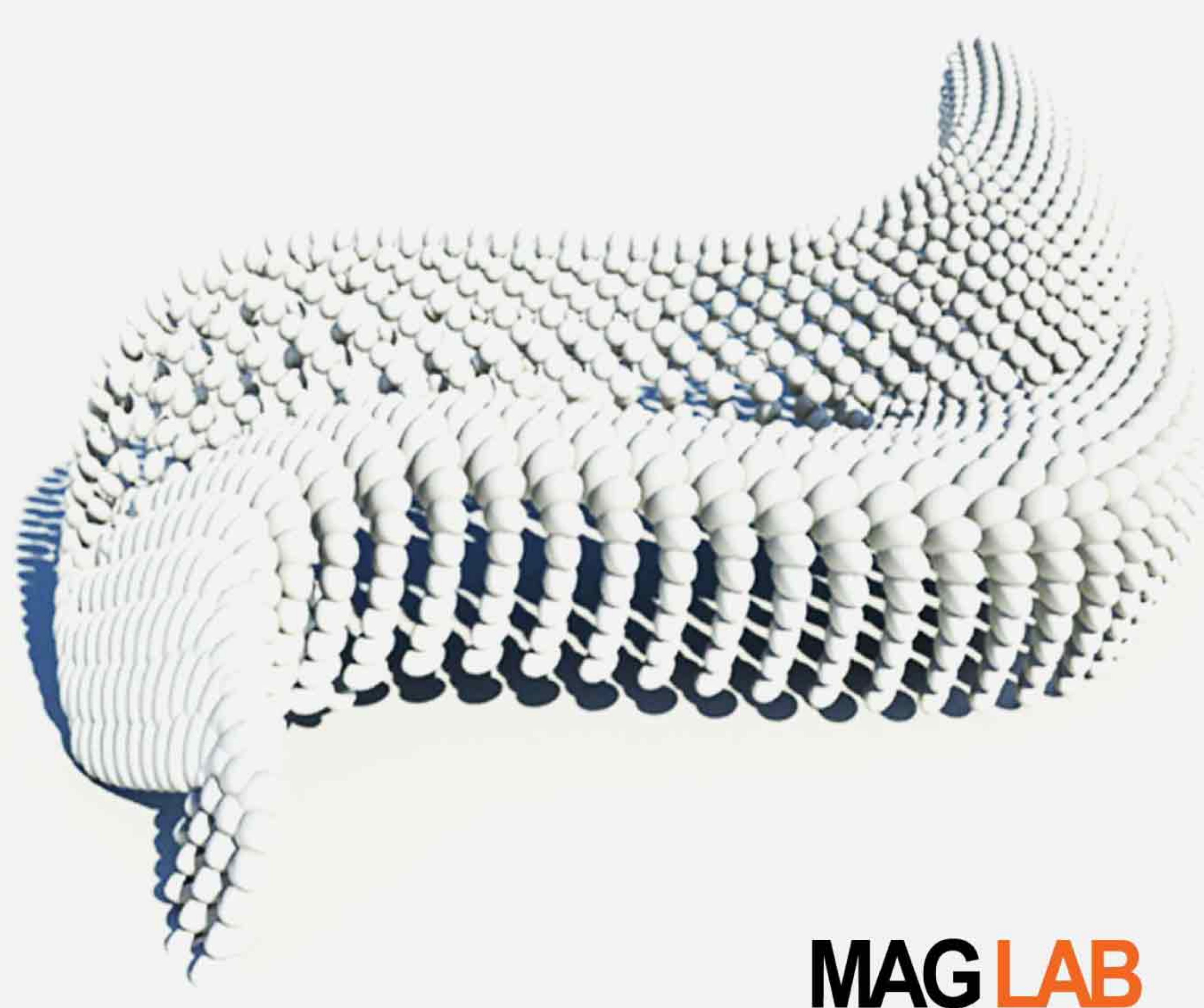
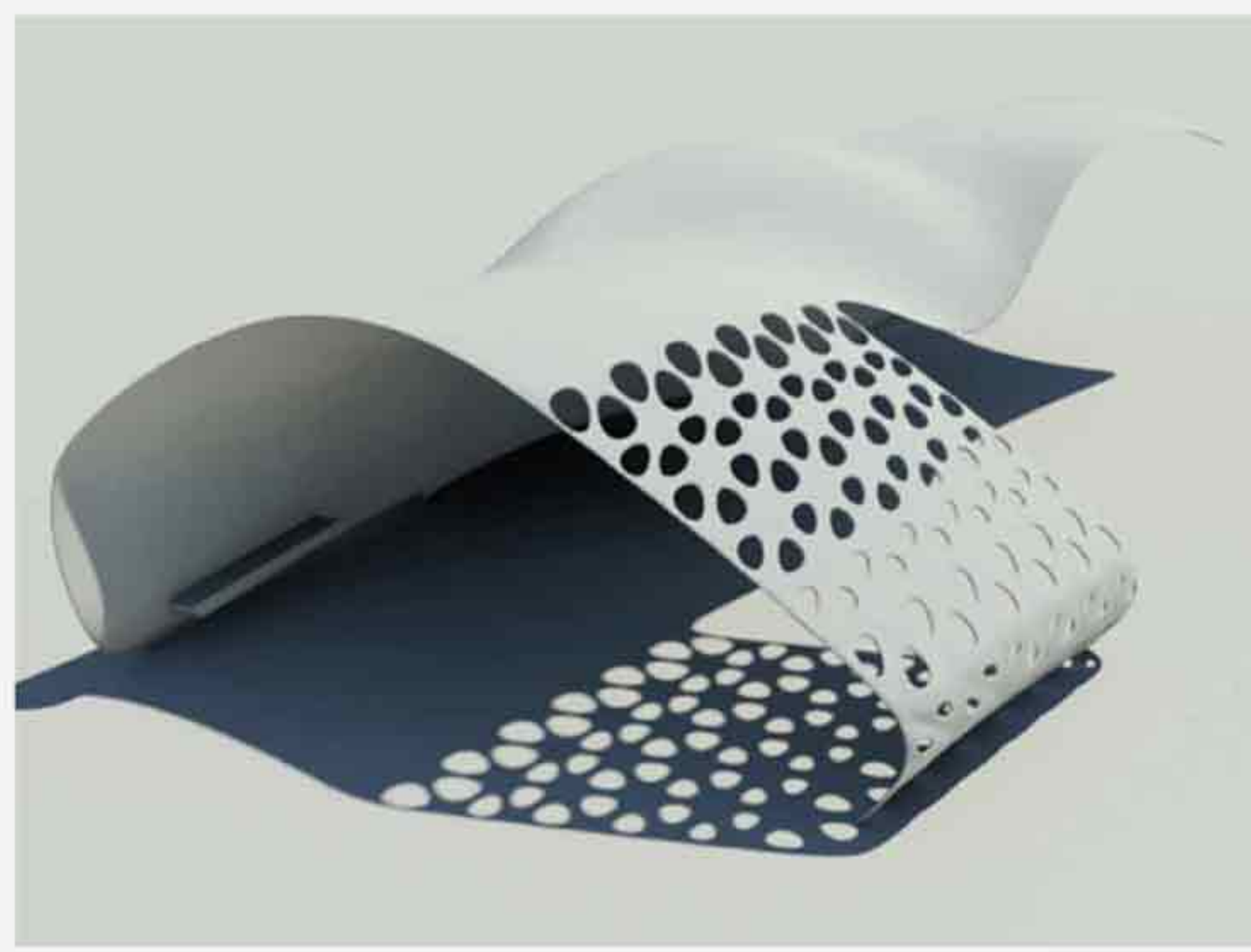
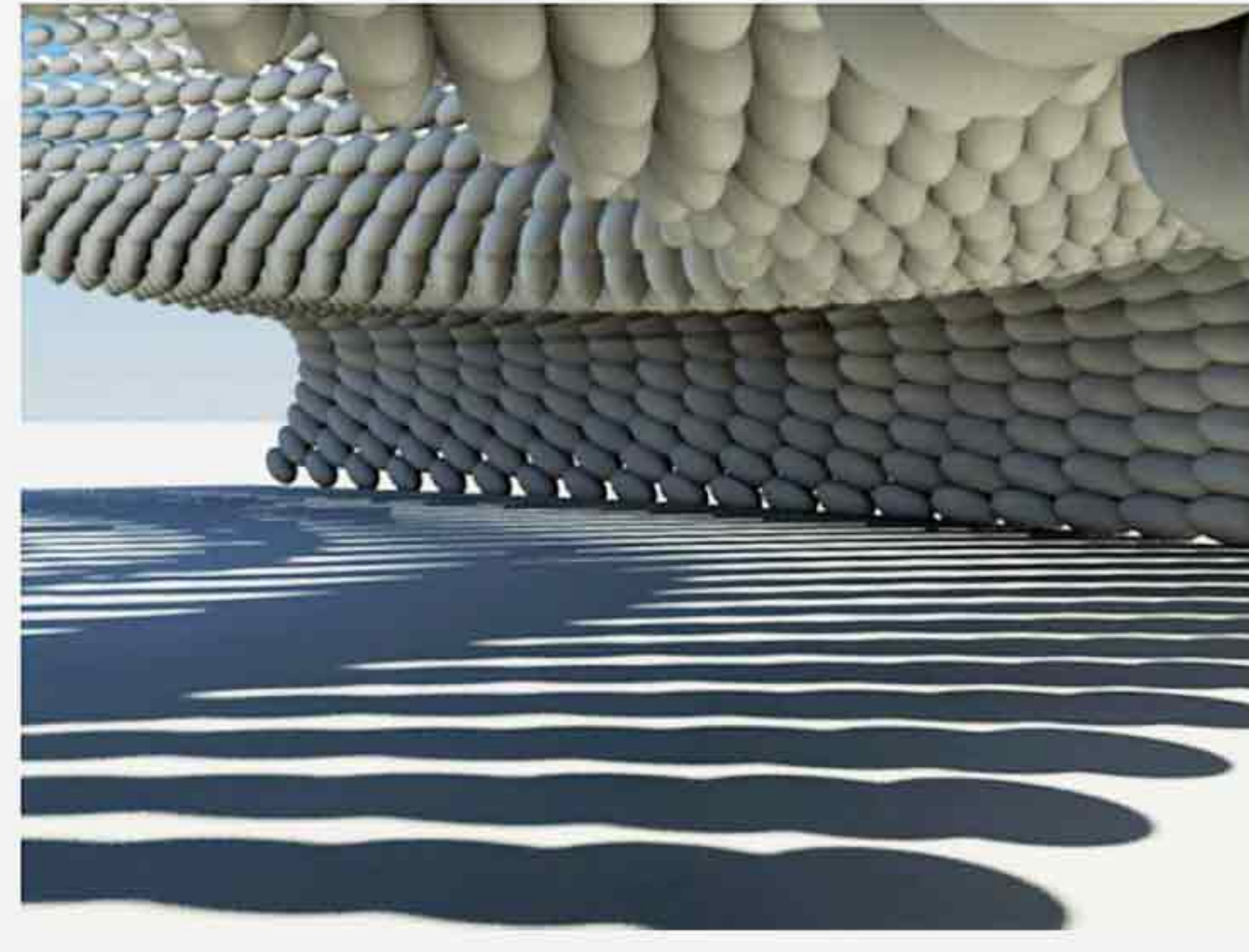
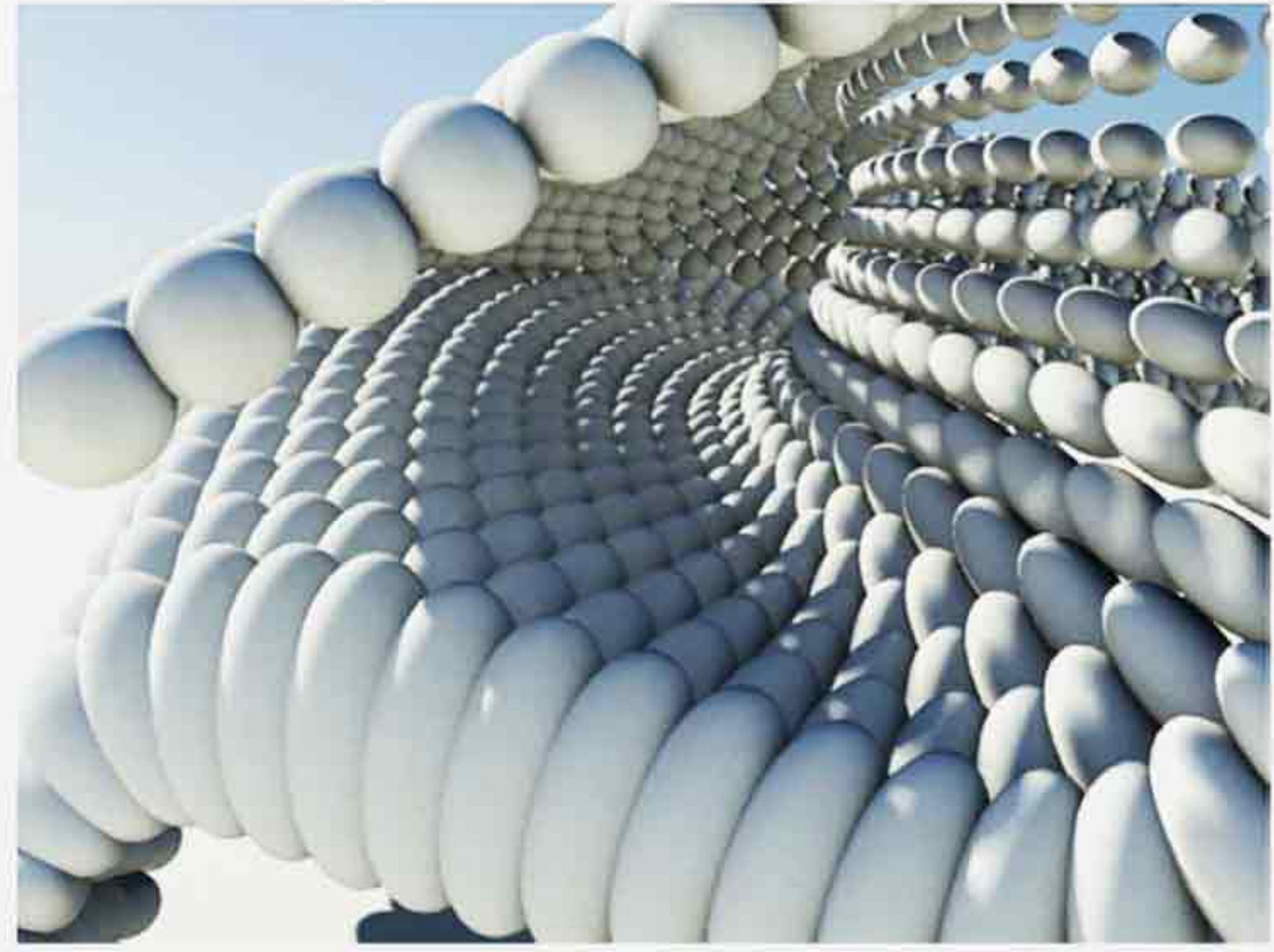
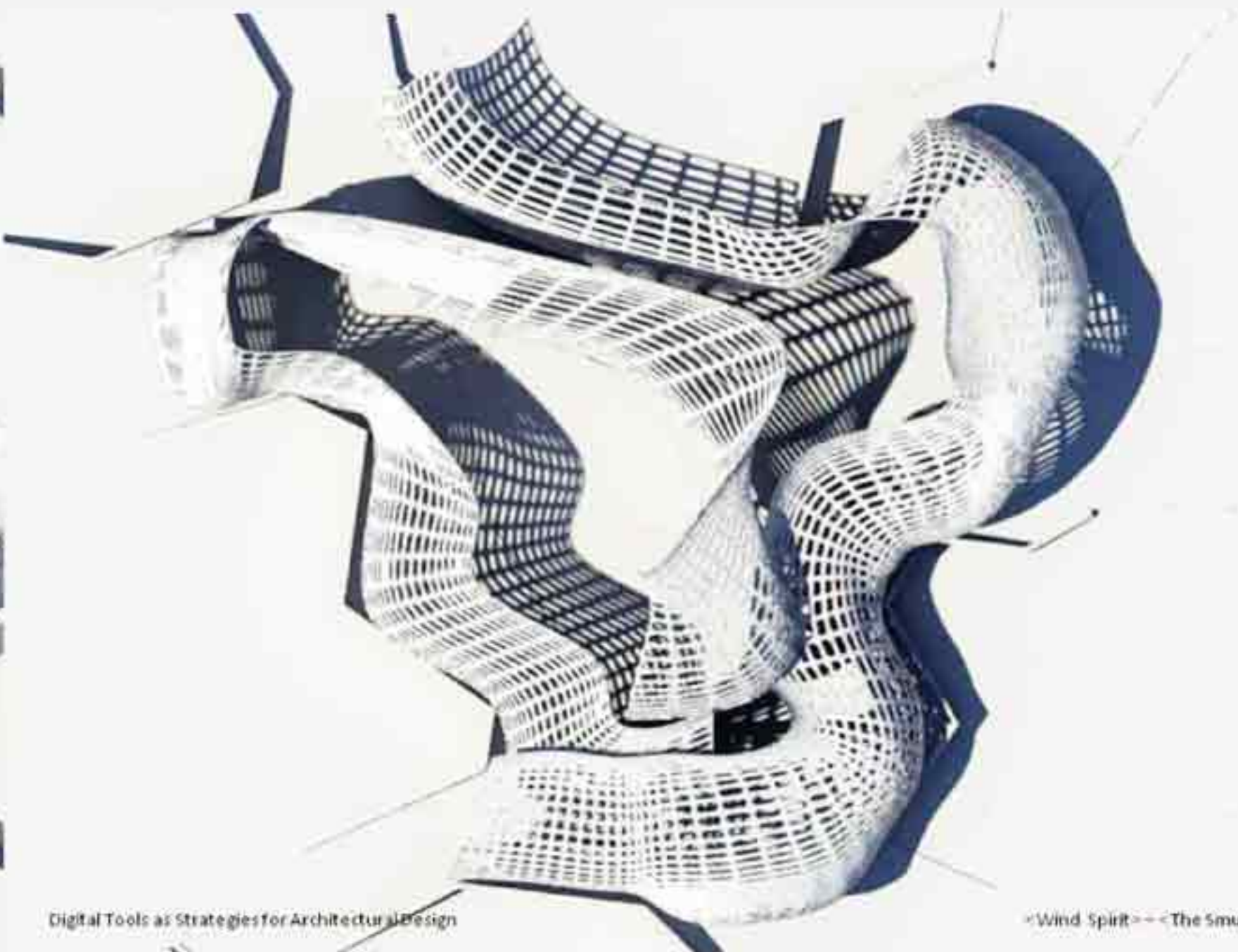






The Smurfs

- Riham Mankash
- Nada Al-taki
- MHD.Adnan Jano
- MHD.Hassan Youssef

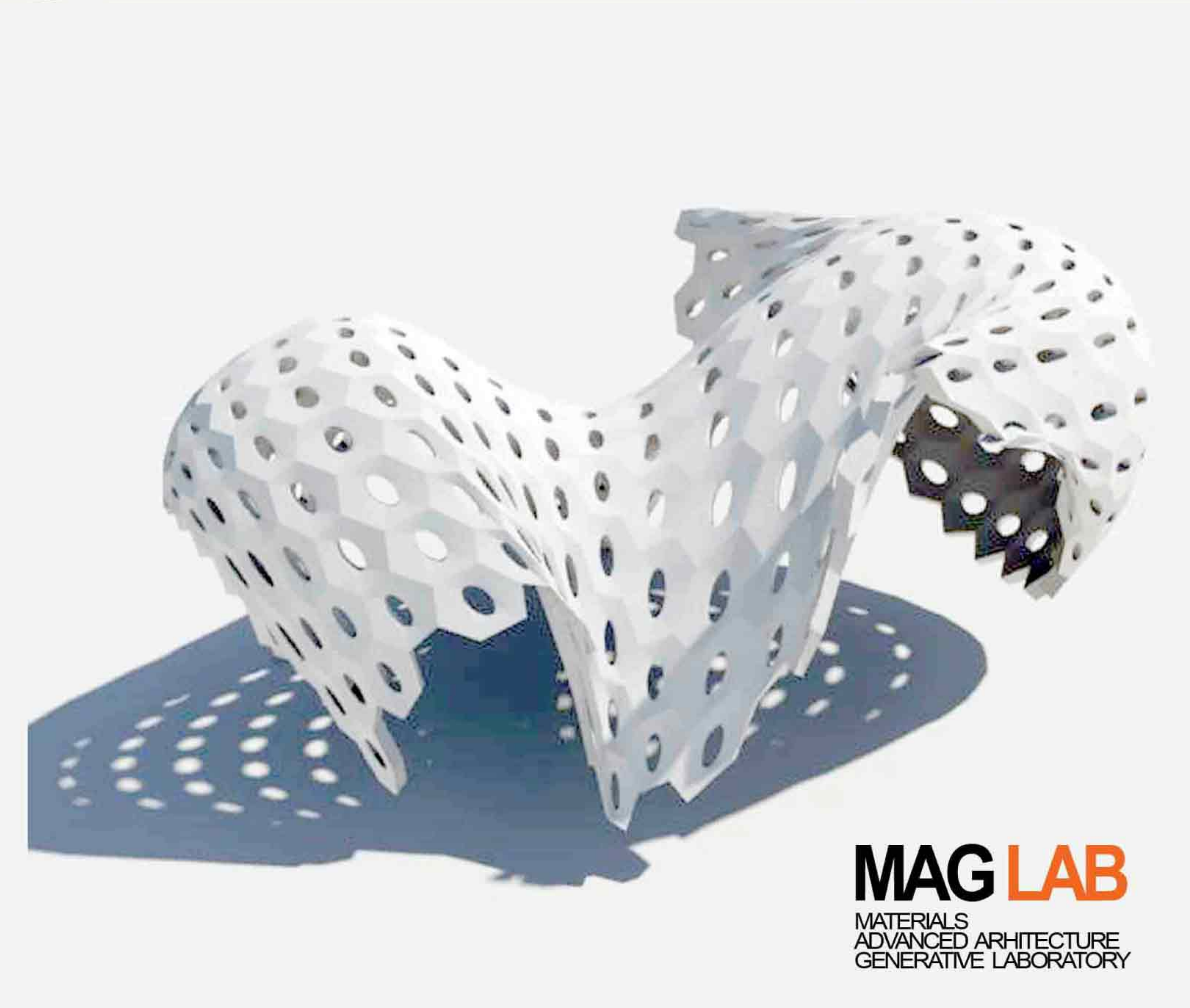
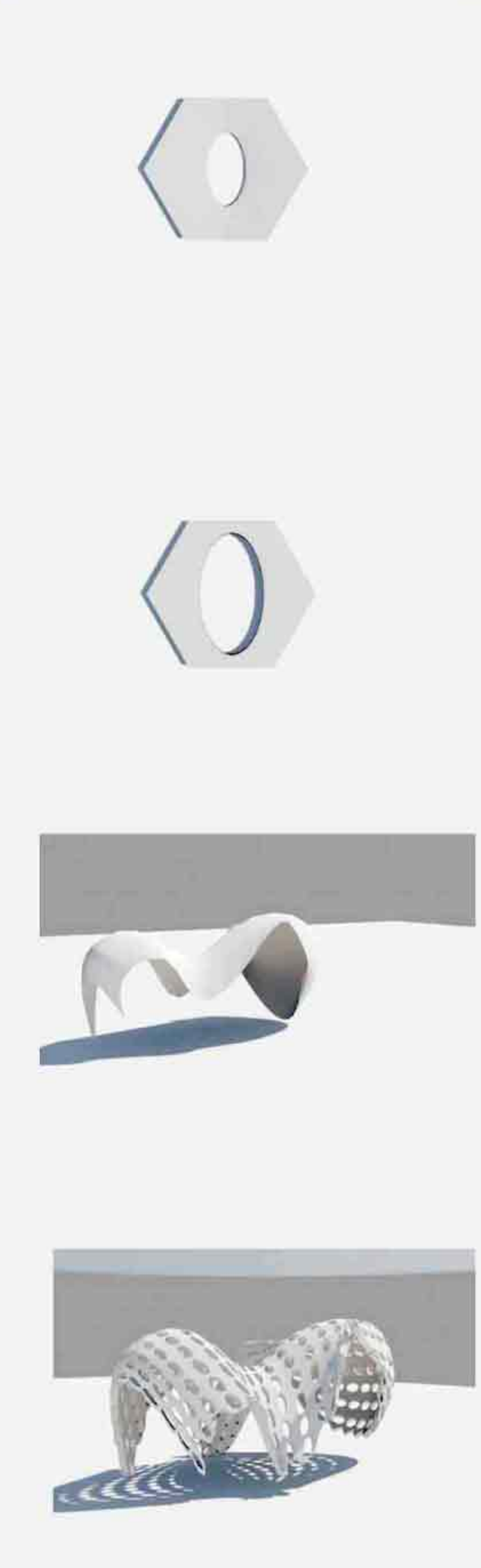
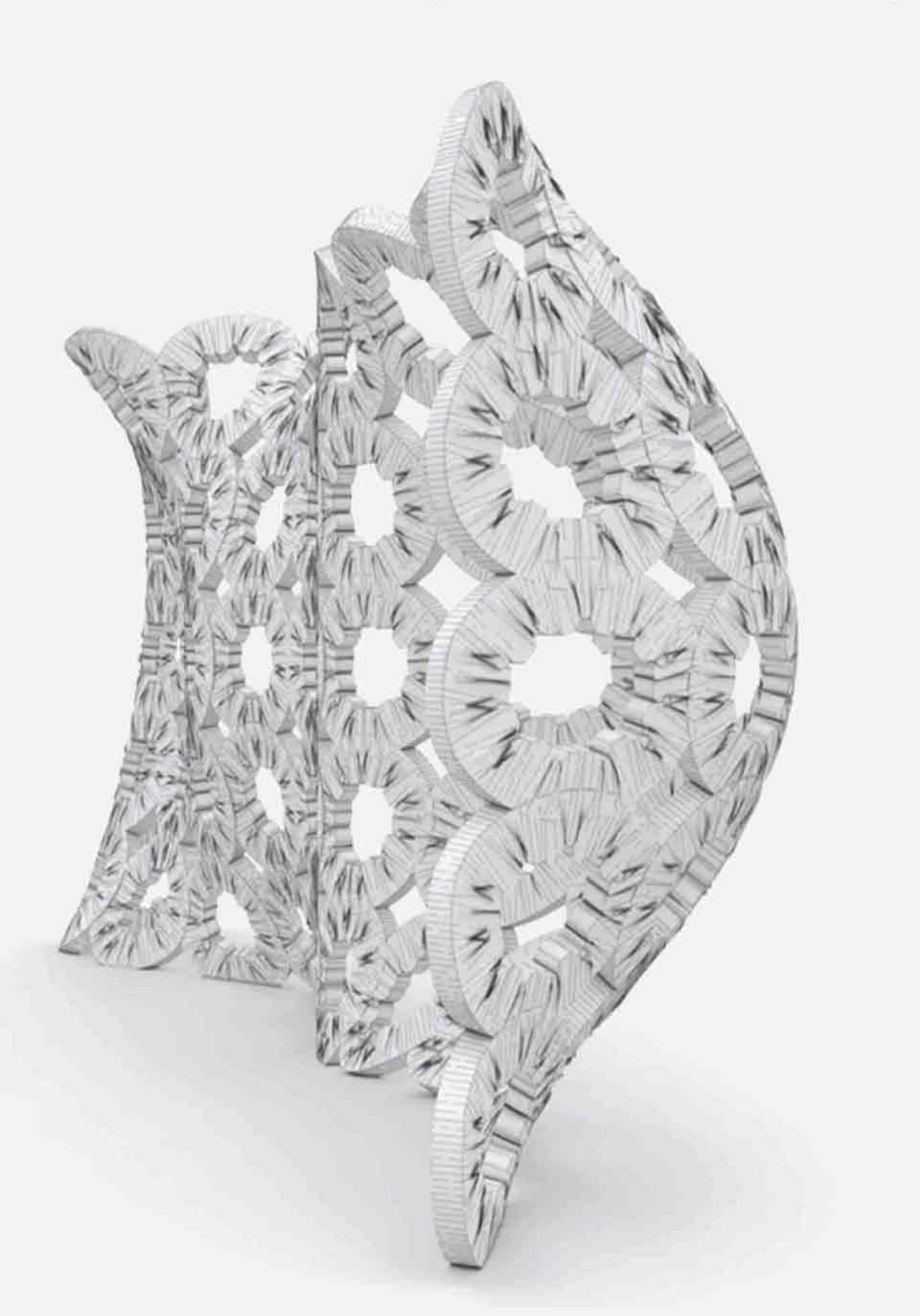
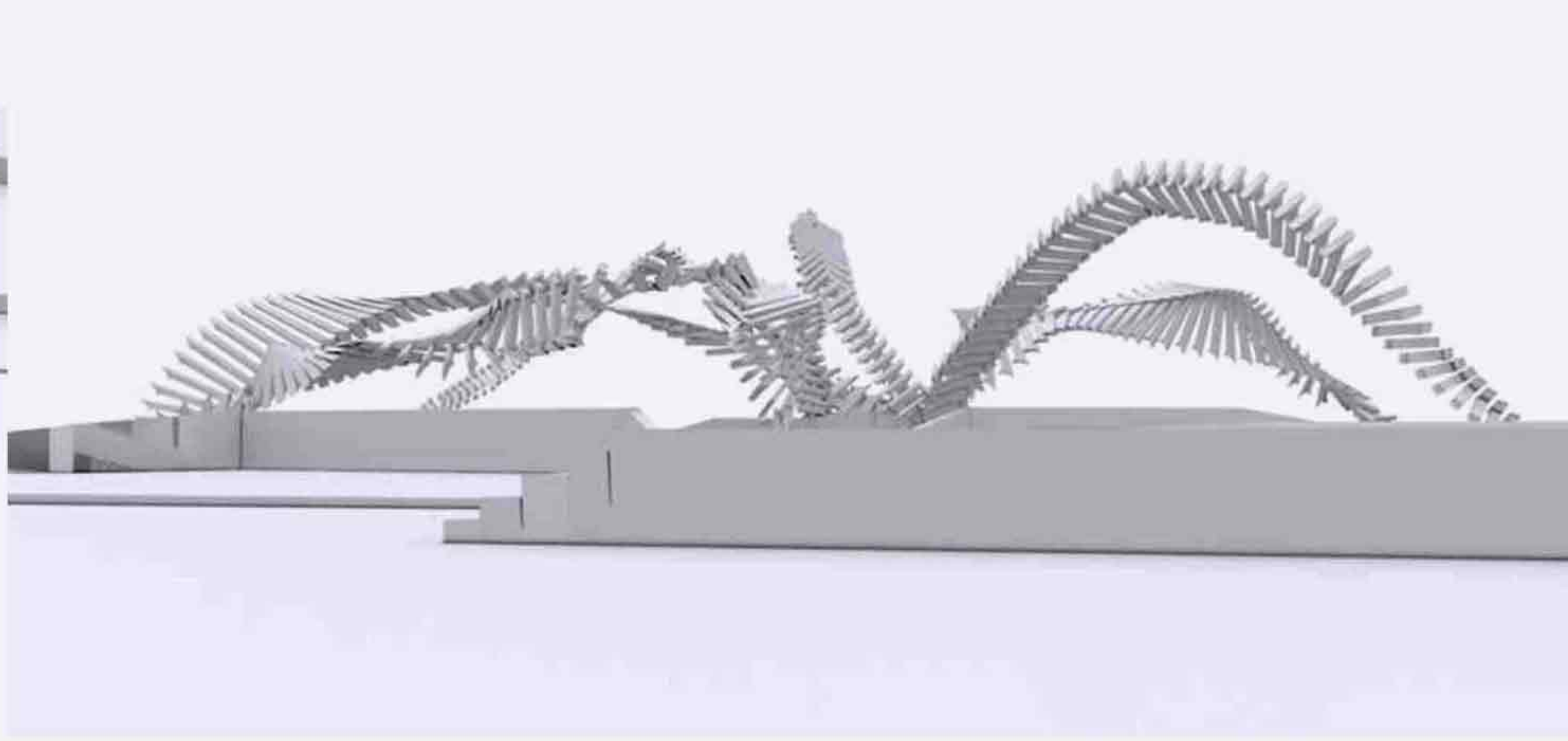
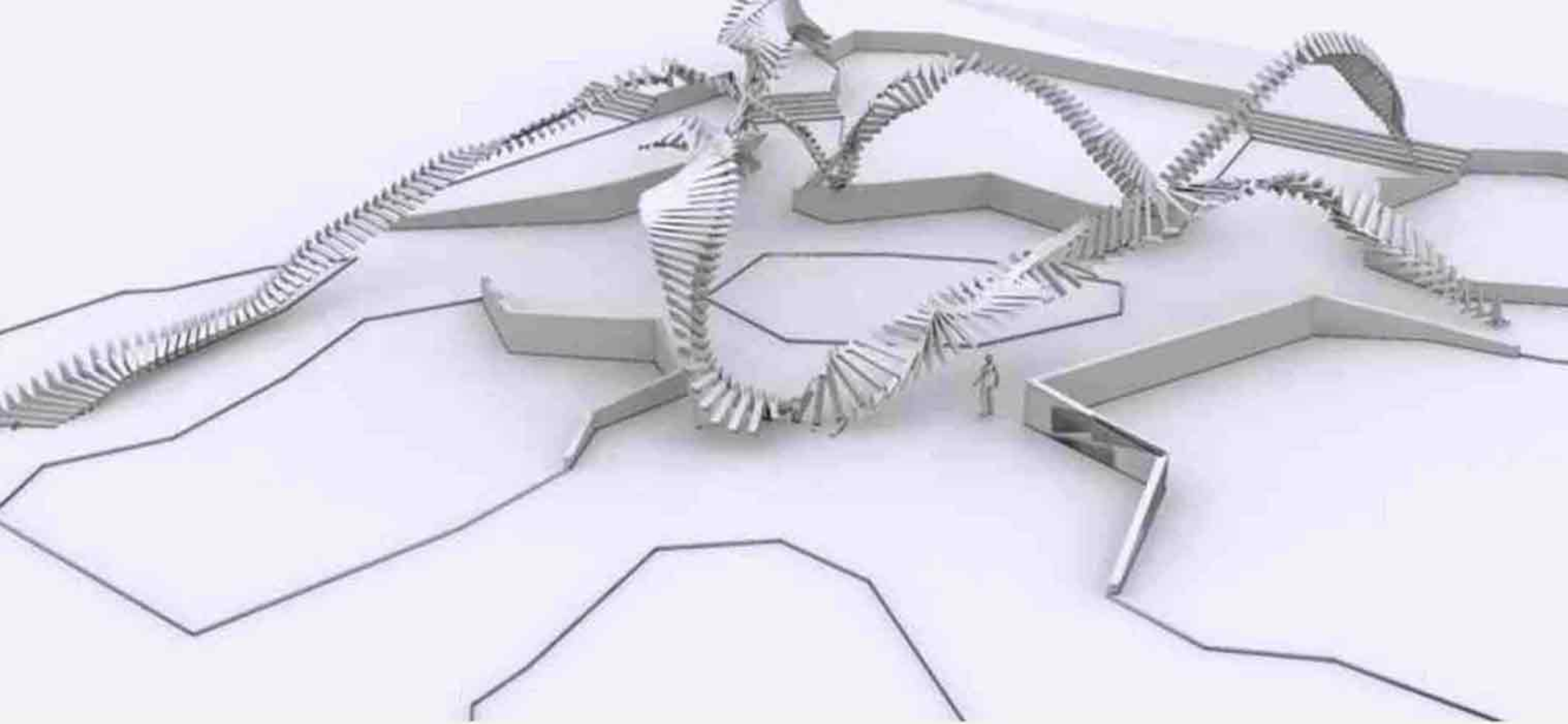


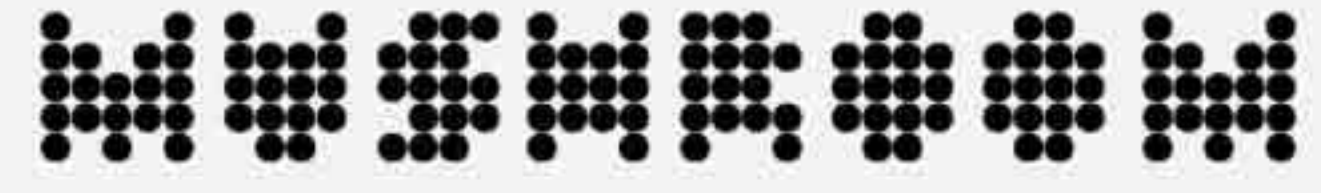
MATERIALS LETTERS



LIVE DESIGN

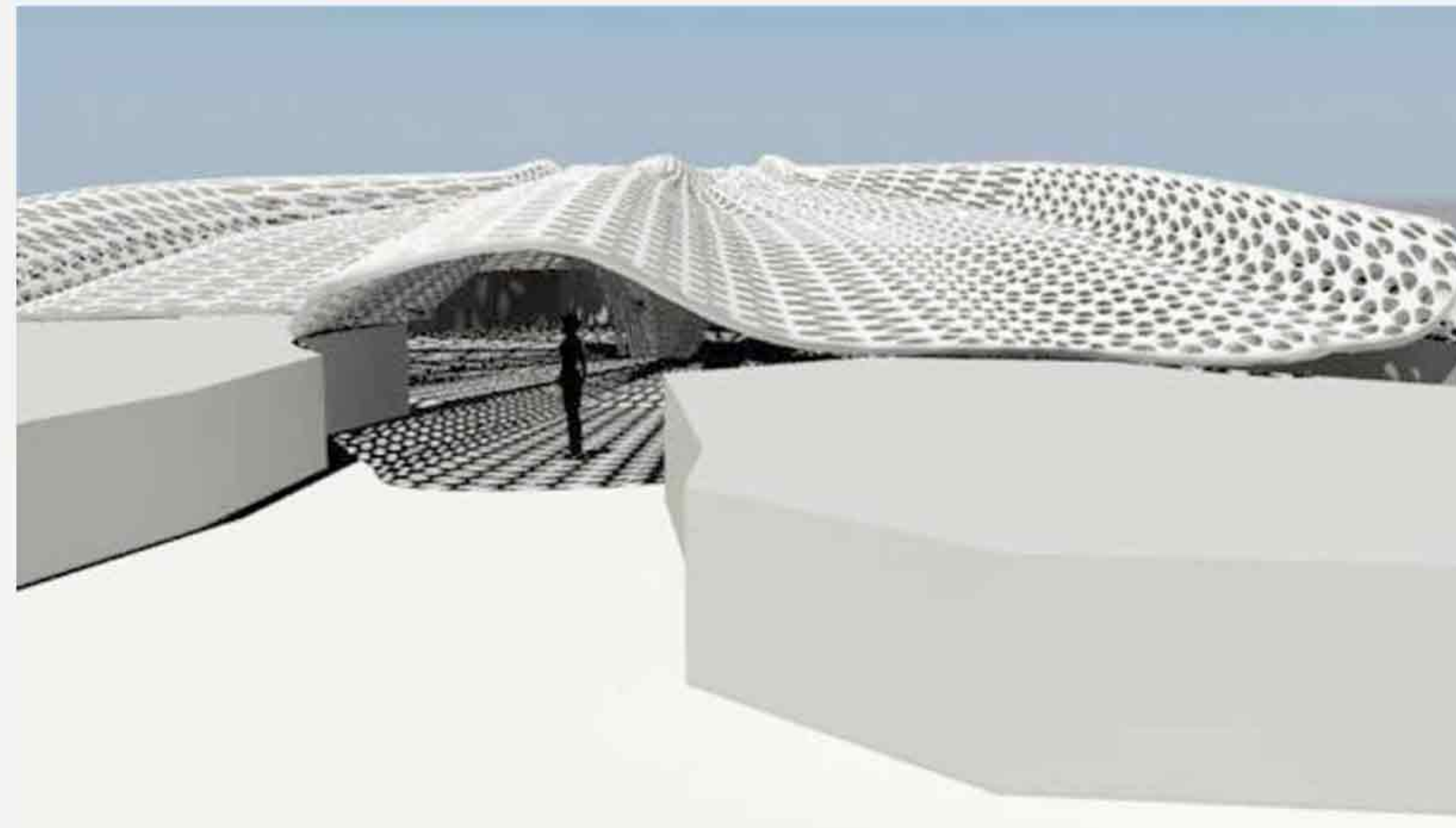
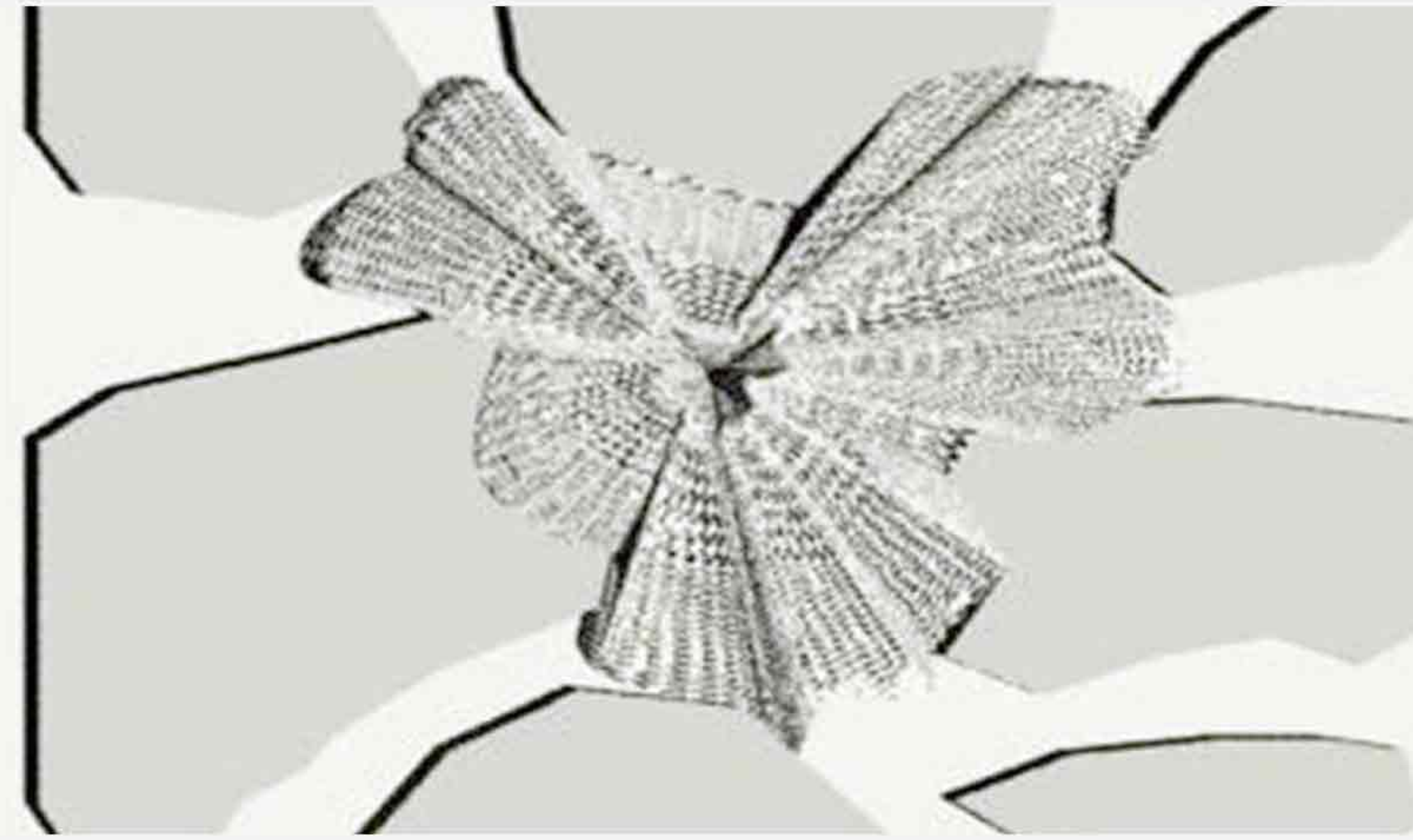
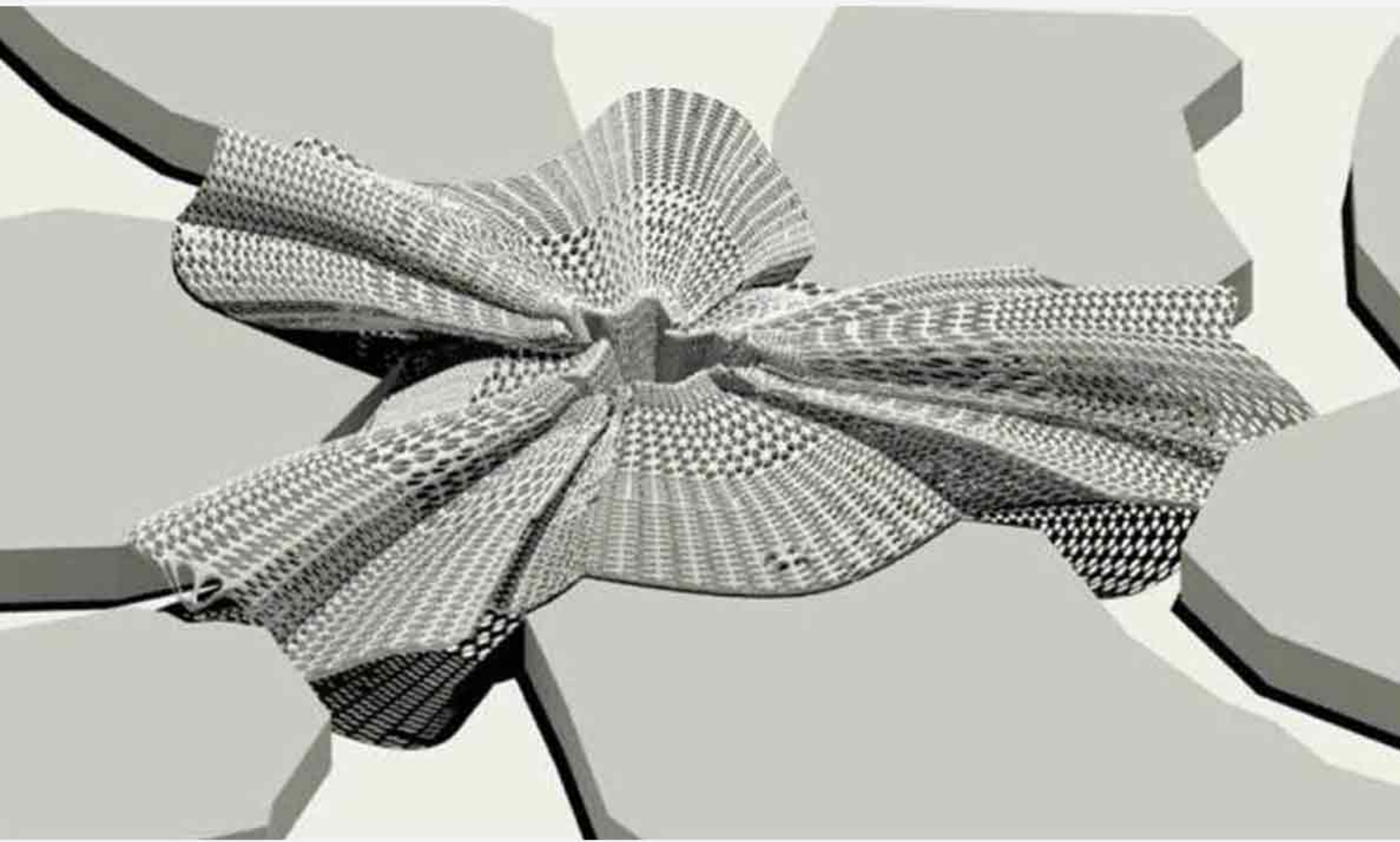
- MUHAMMAD TAQUIDDIN
- AHMAD AKKAWI
- MARIE CALINE SEMAAN
- MHD. RAGHEED AL-TAHHAN





Aquamarine

- Athba Saadoon
- Khetam Al-Samsam
- Ebaa Al-Eliwy

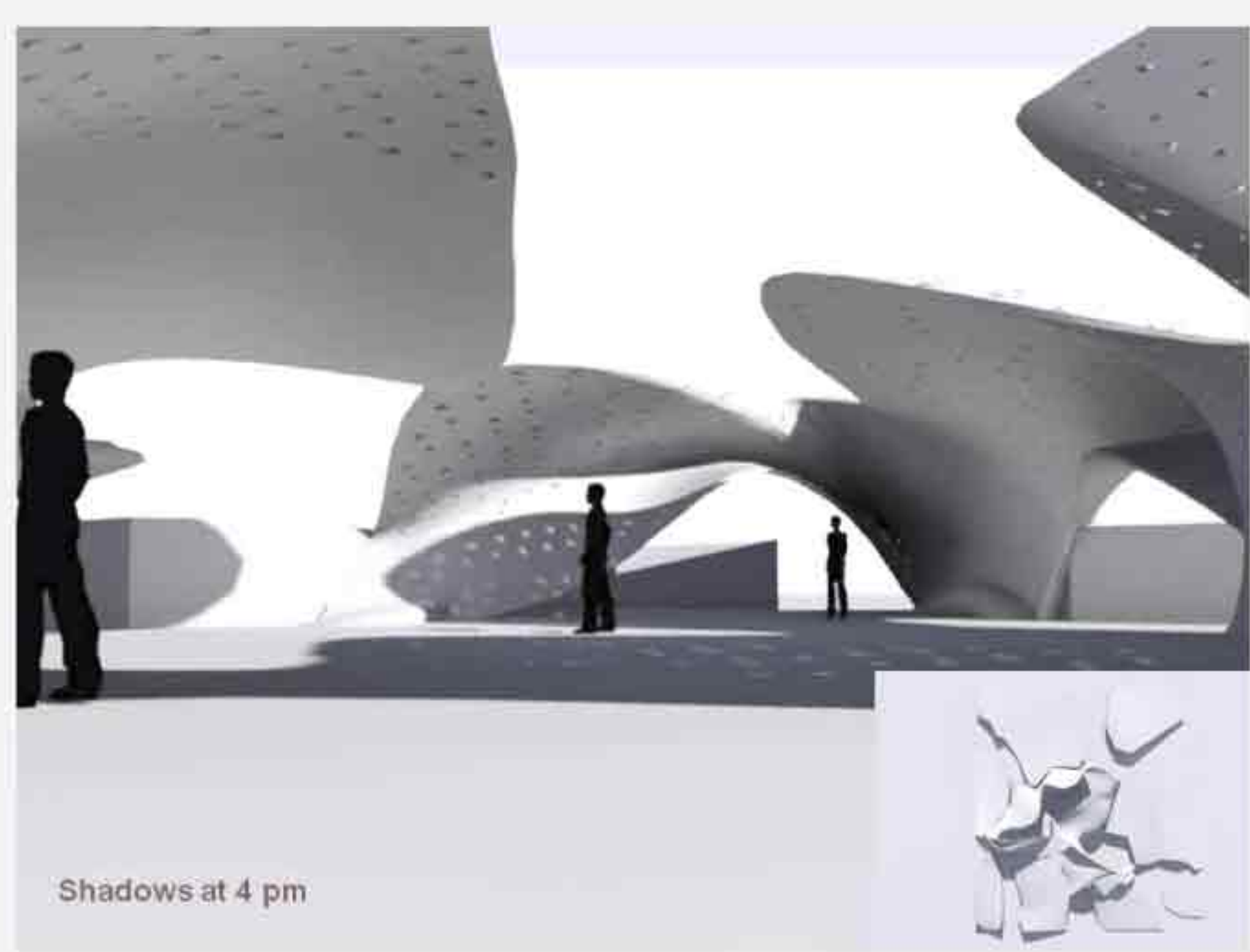
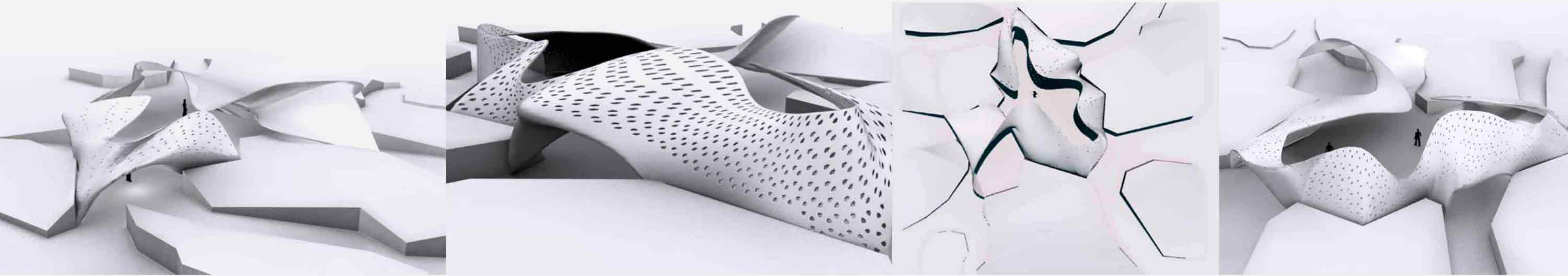


CON-TUNE LINES

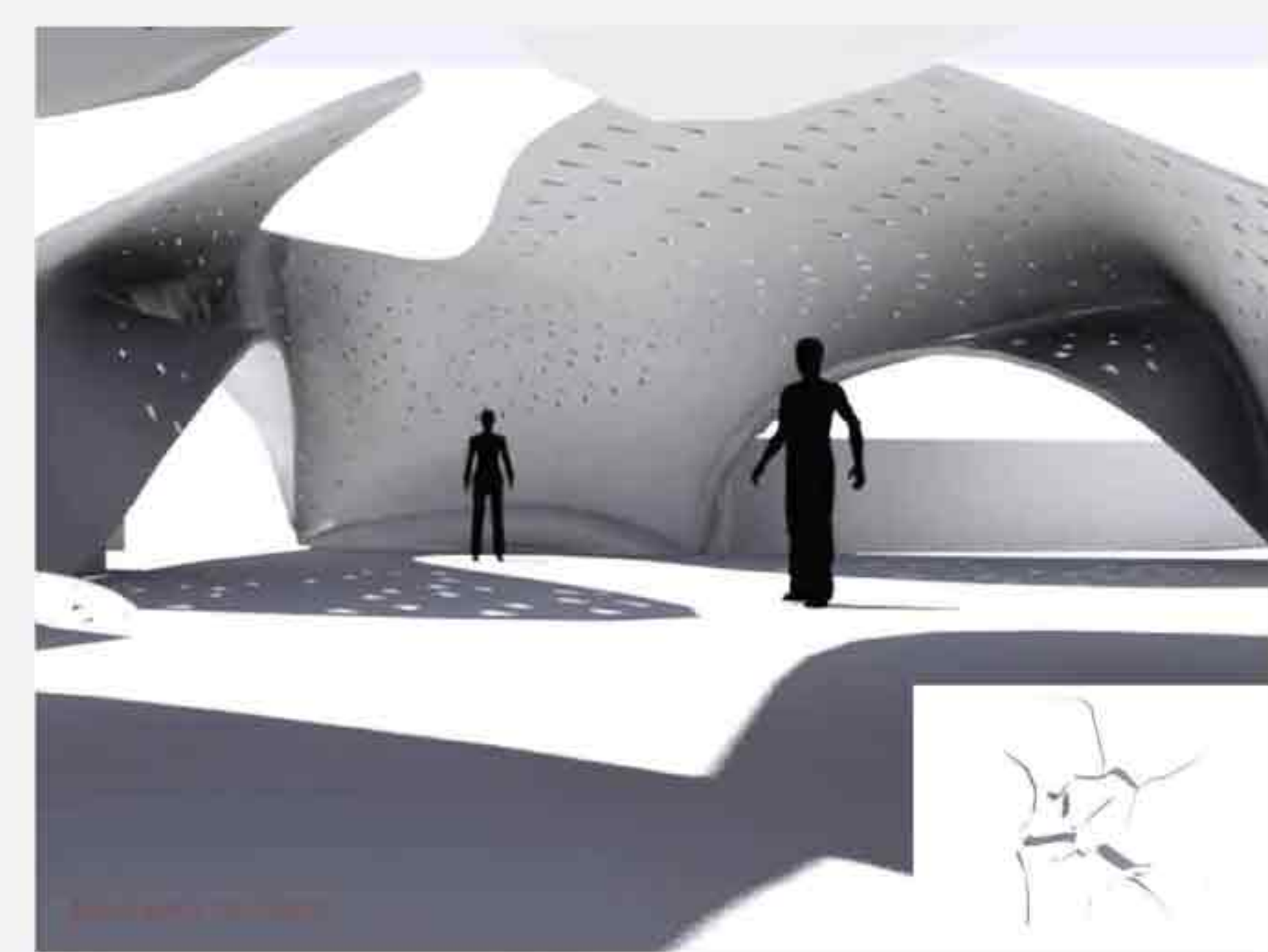


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- Hozan Abdulla
- Abdulrahman alrifai
- Mhd azidin alturjman



Shadows at 4 pm



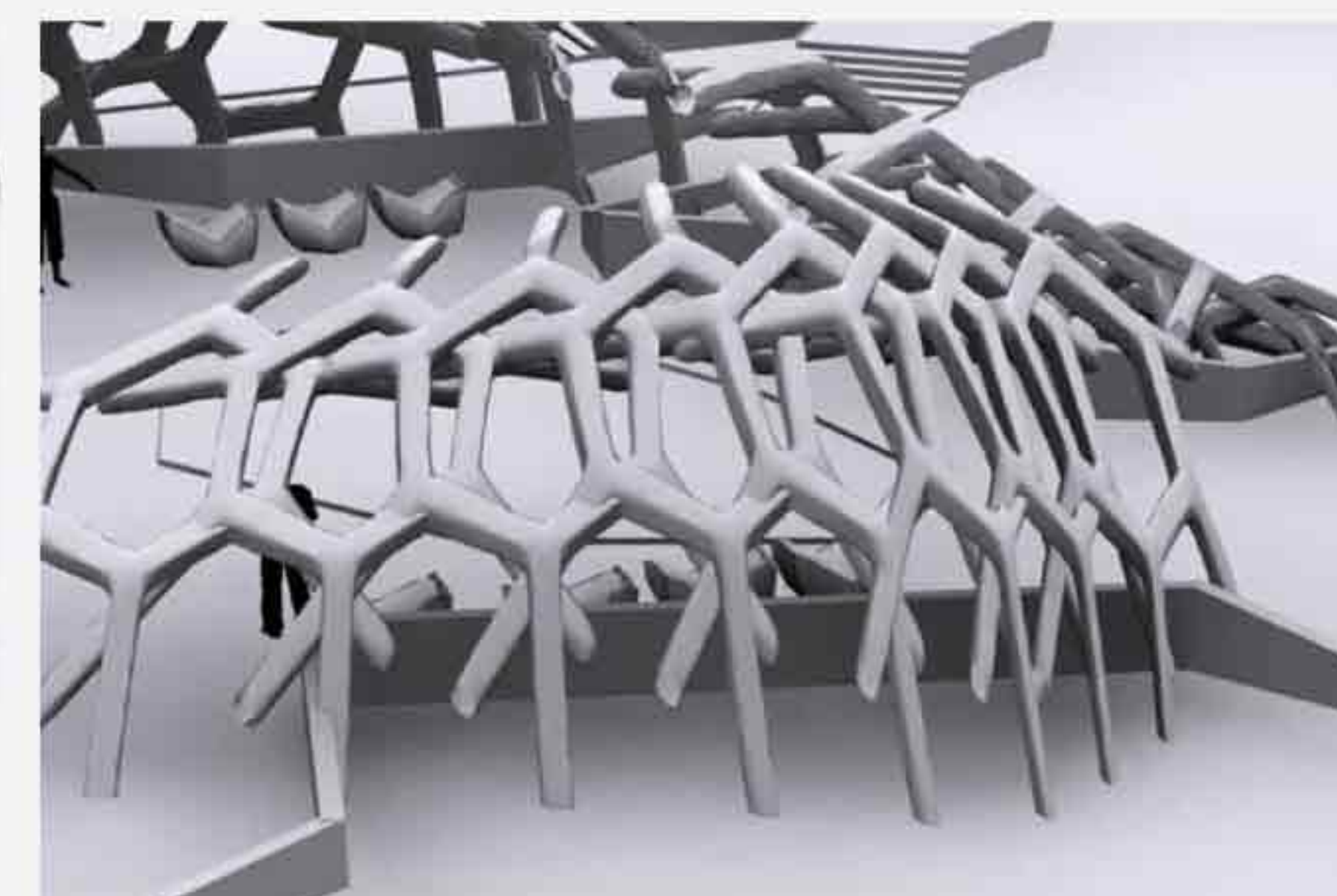
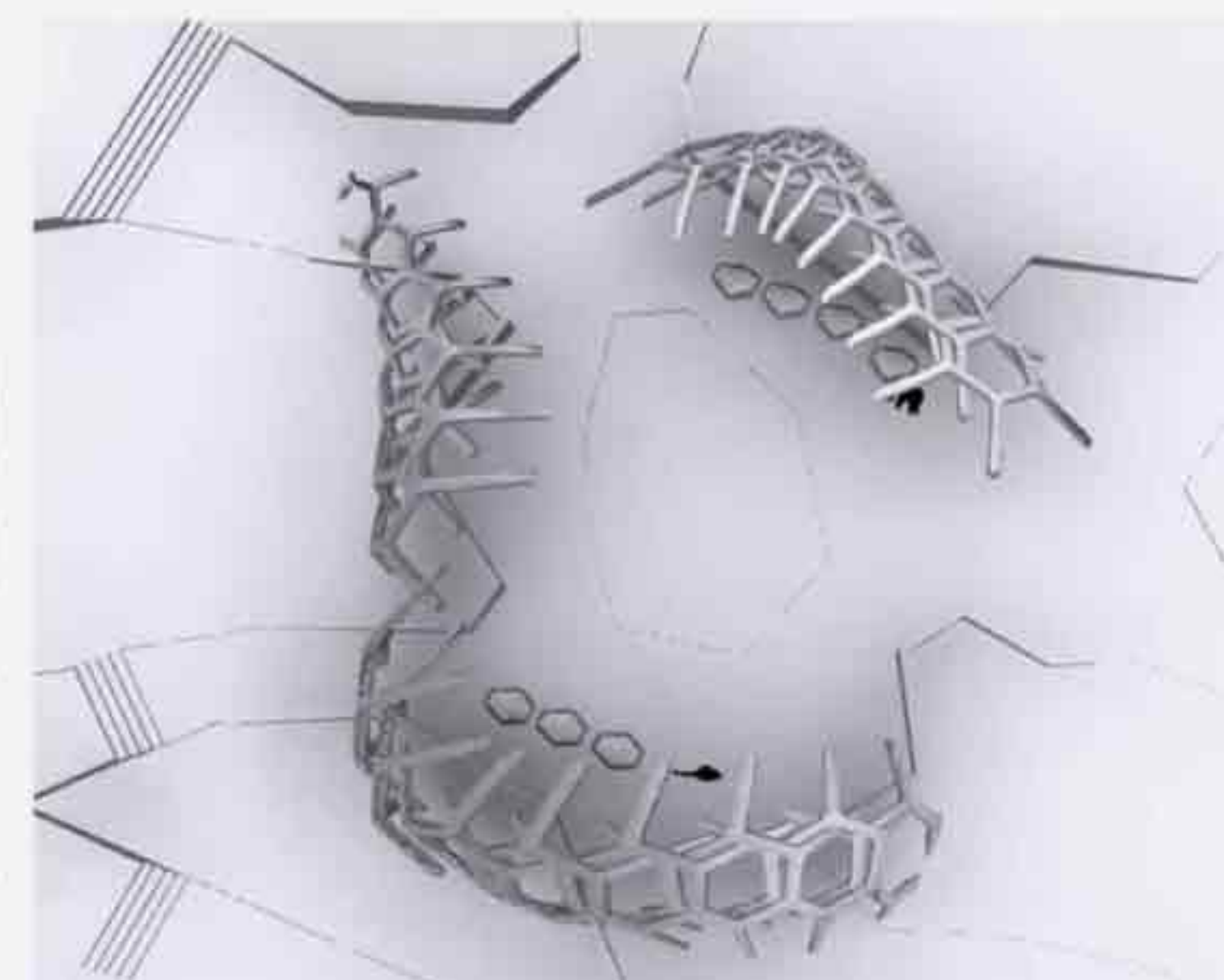
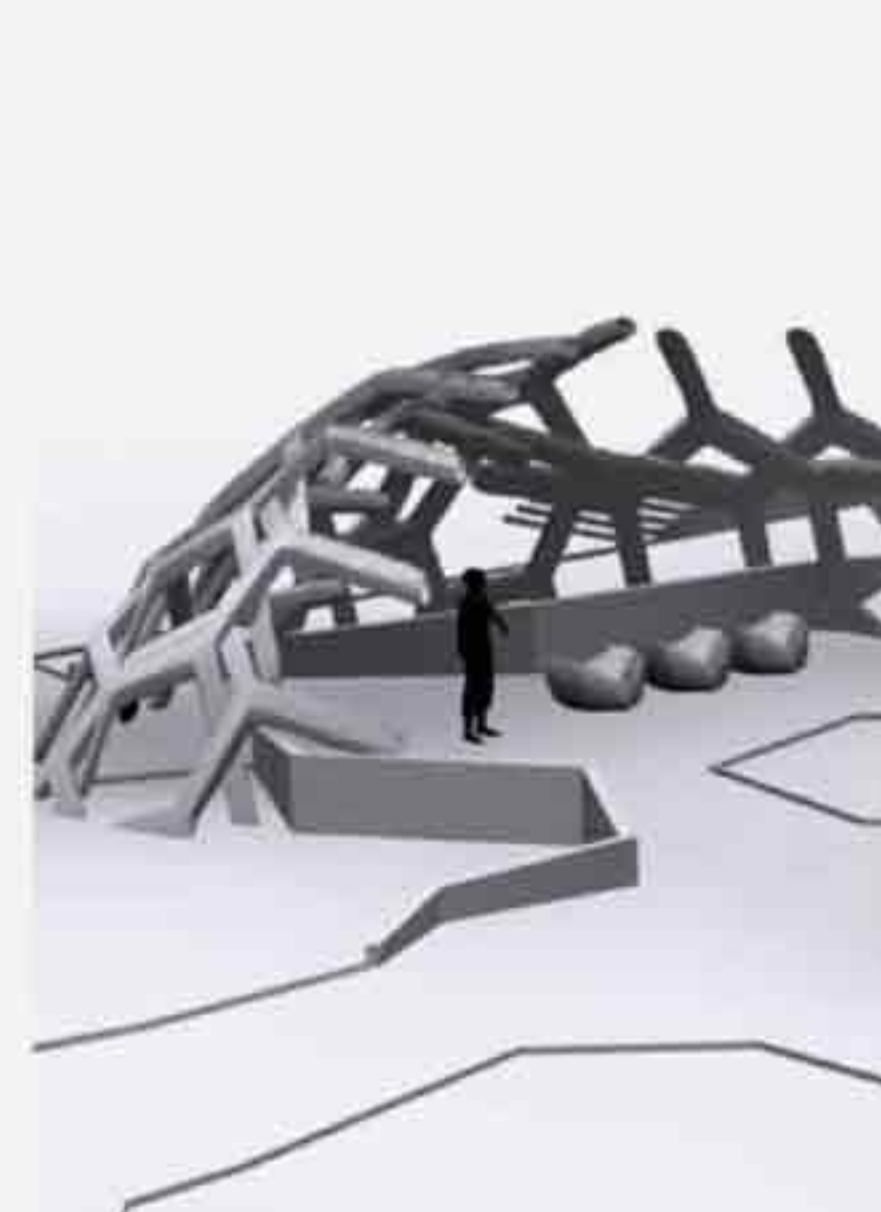
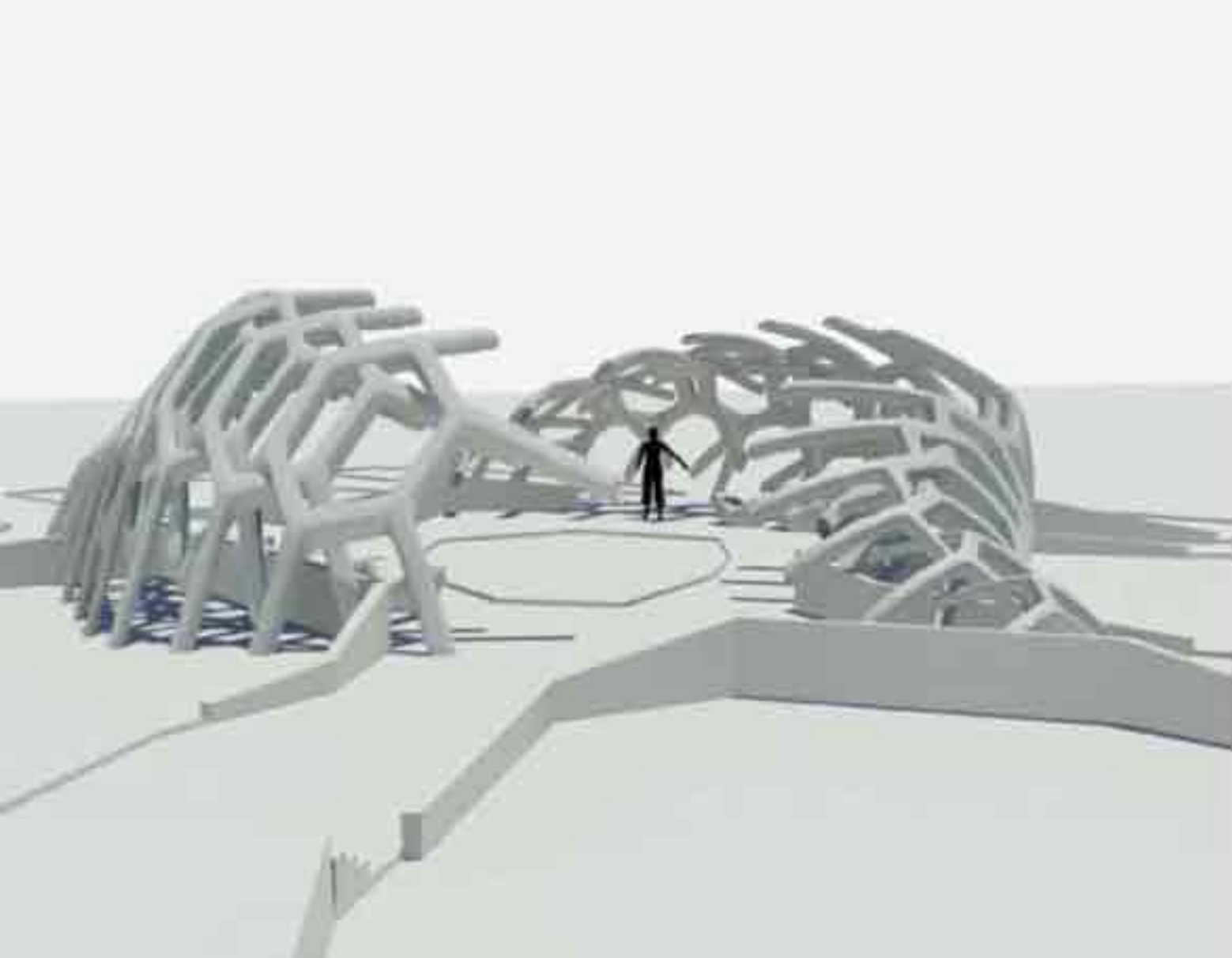
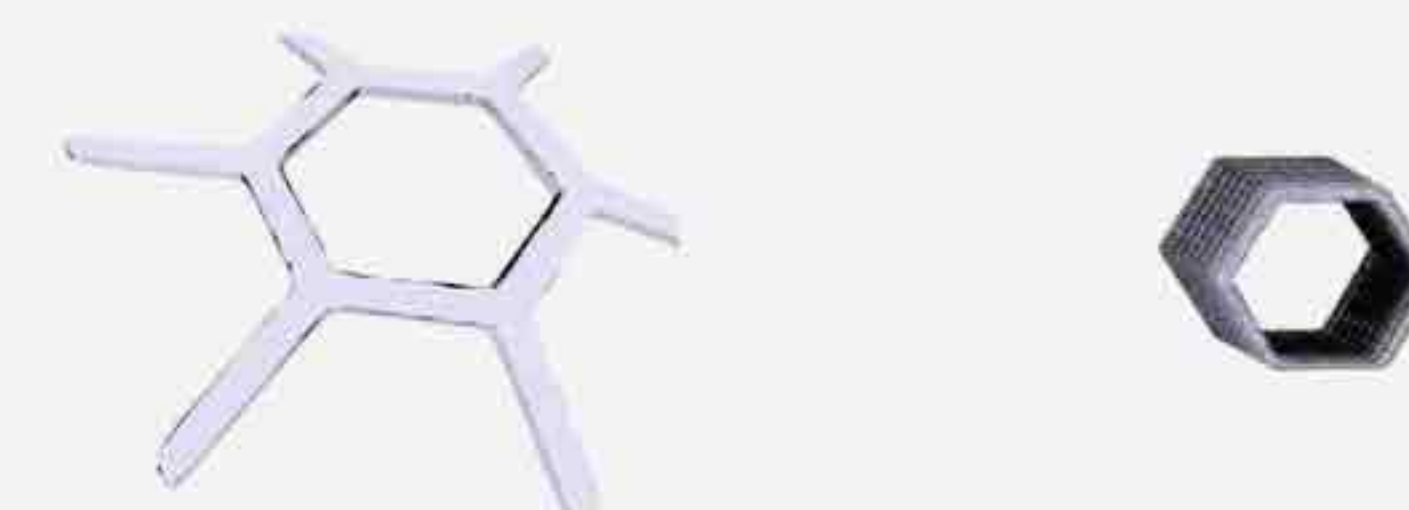
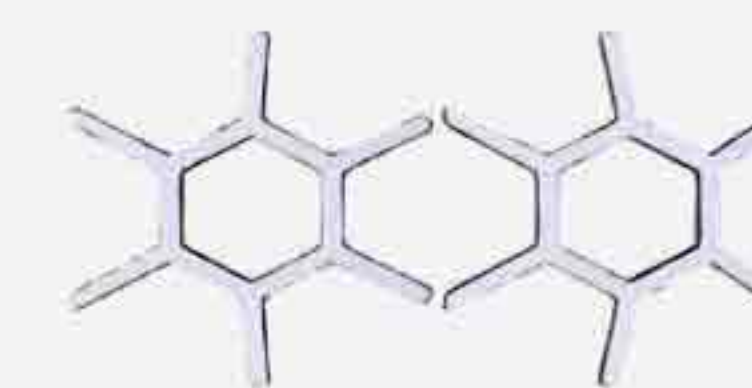
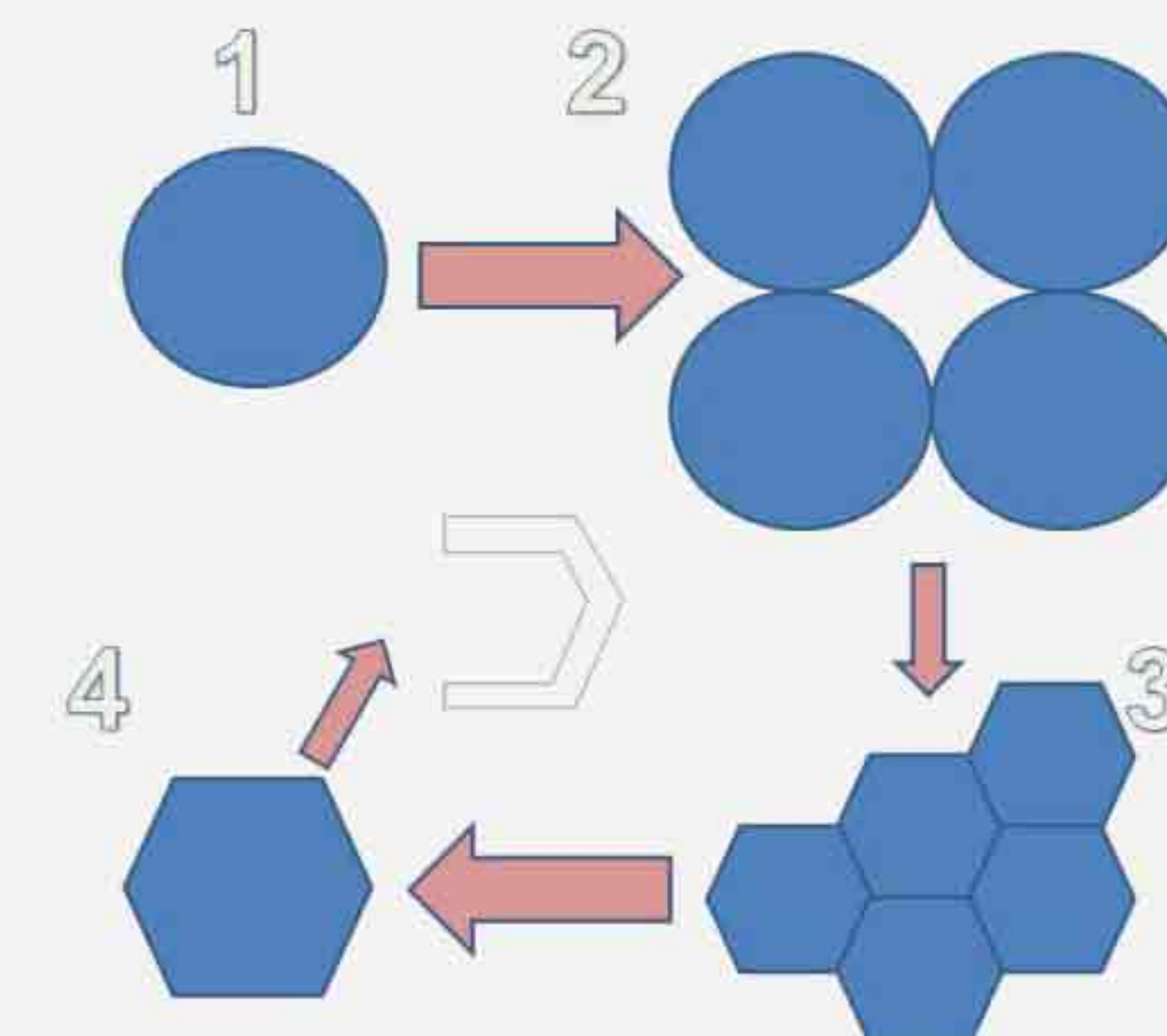
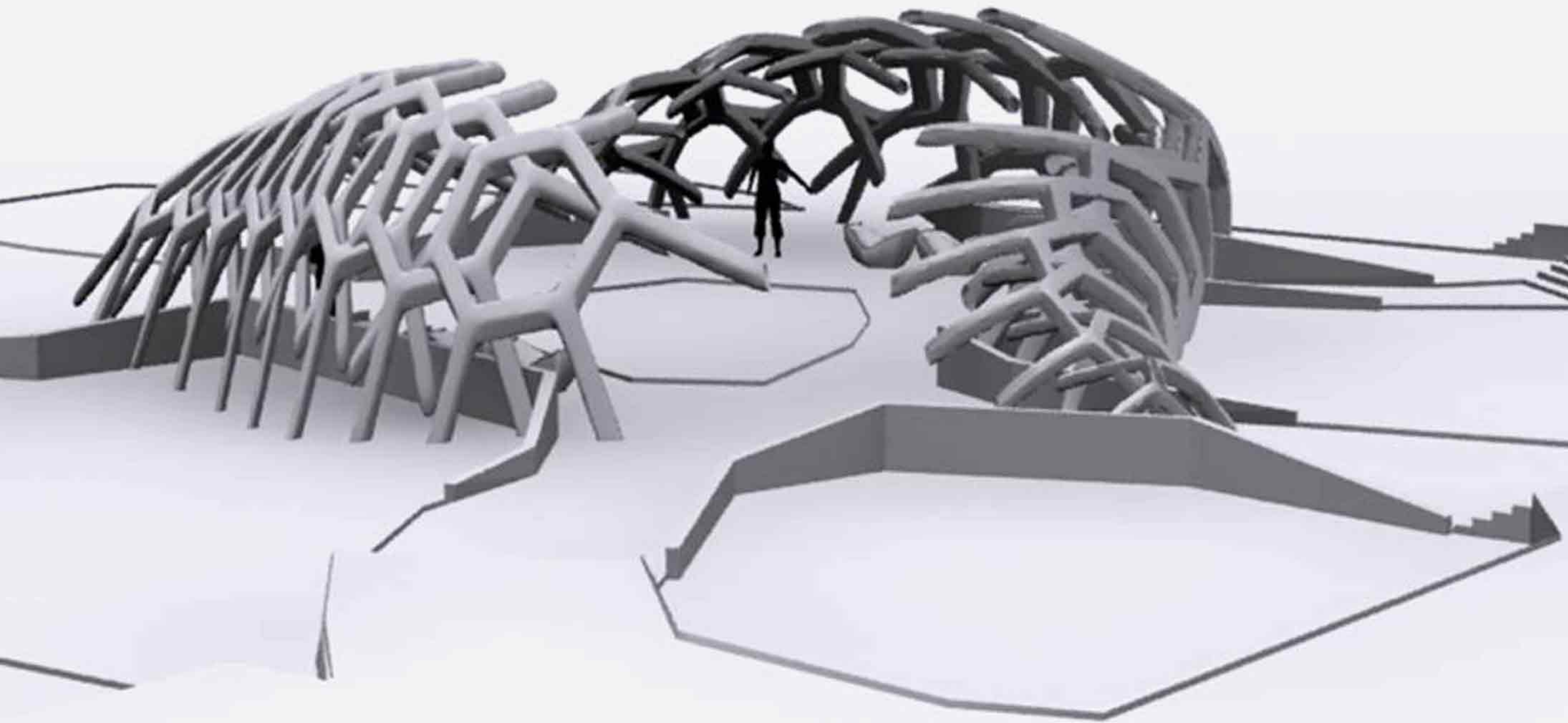
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MATERIELLS



Waves

- TAREK ALI
- JANET RAMADAN
- YAMEN RAAE
- RAHAF MURAD

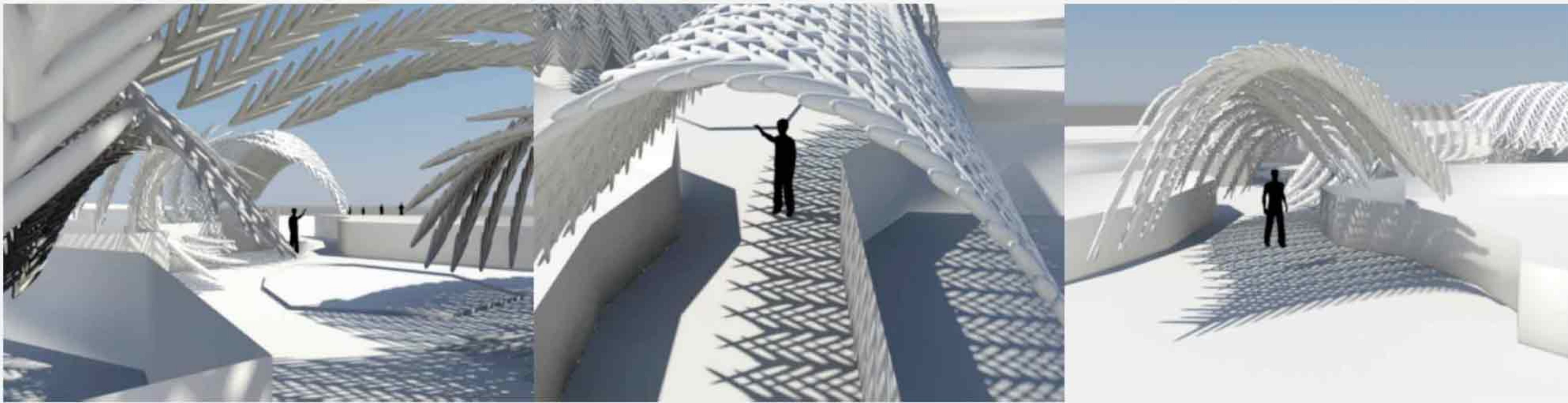


FREE NATURE



Freedom

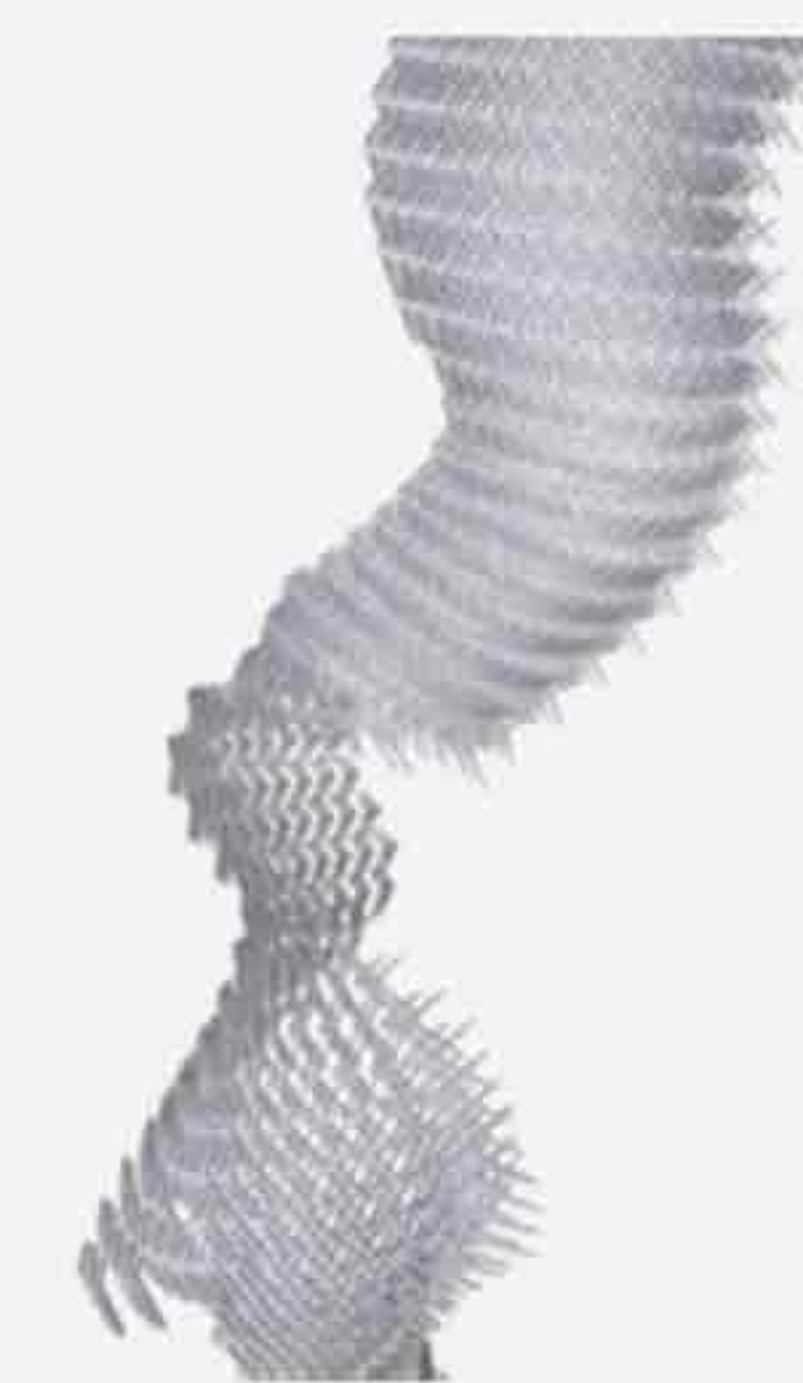
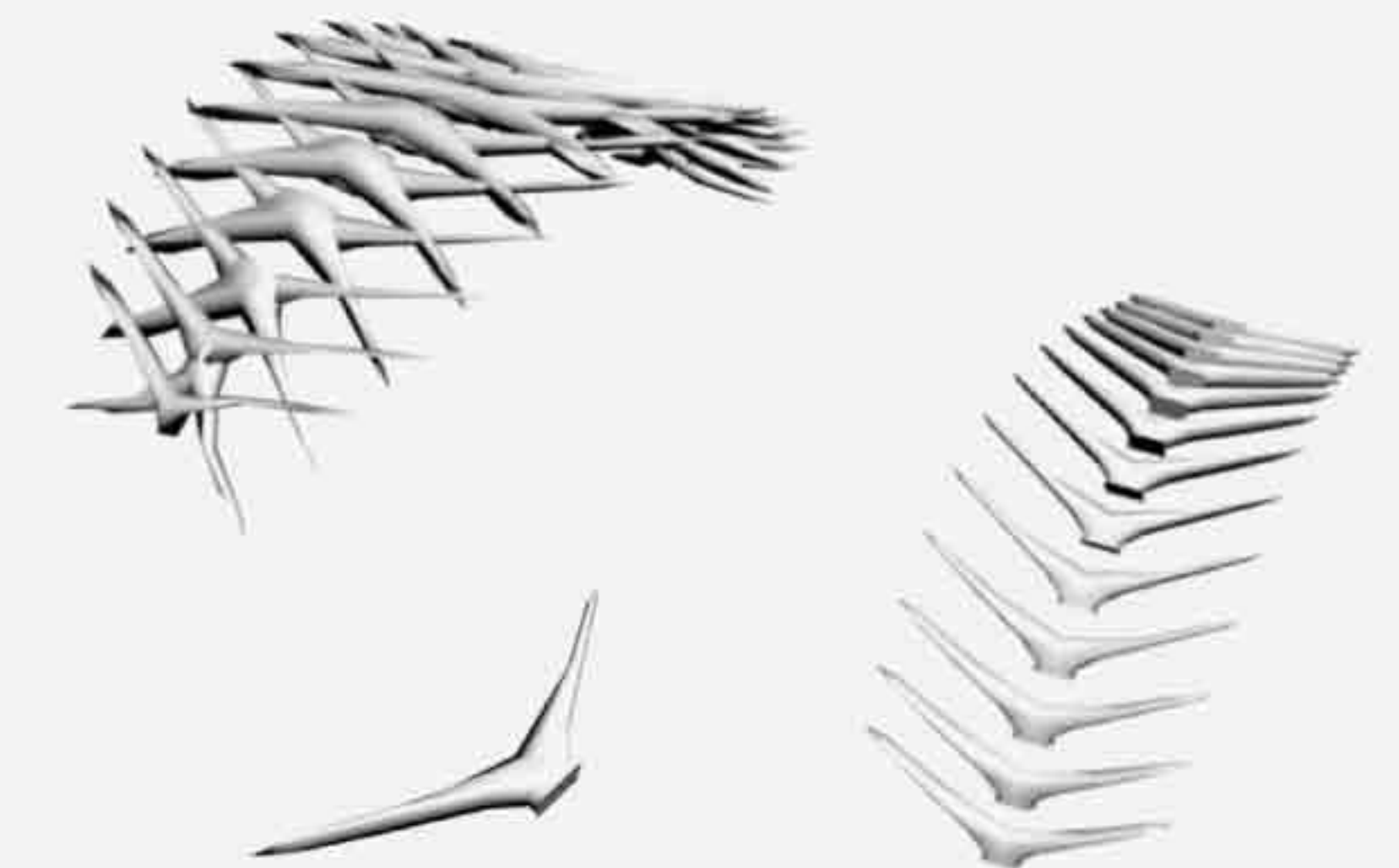
- Ahmad Nasab
- Jehad Masalmeh
- Nagham al Kurdi



Digital Tools as Strategy for Architectural Design



<project name> - <group name>



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Acknowledgment:

we would like to acknowledge the following people:

- . The students, for their amazing dedication and the great effort showed throughout the whole five intensive days of the workshop
- . the final jury members:

Arch. Prof. **Muhsen Maksoud** (AIU – Arab International University - Chairman)

Dr. Prof. **Paul Shenyara** (AIU dean – Faculty of Architecture)

Dr. Prof. **Hala Tuffaha** (AIU vice dean – Faculty of Architecture)



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