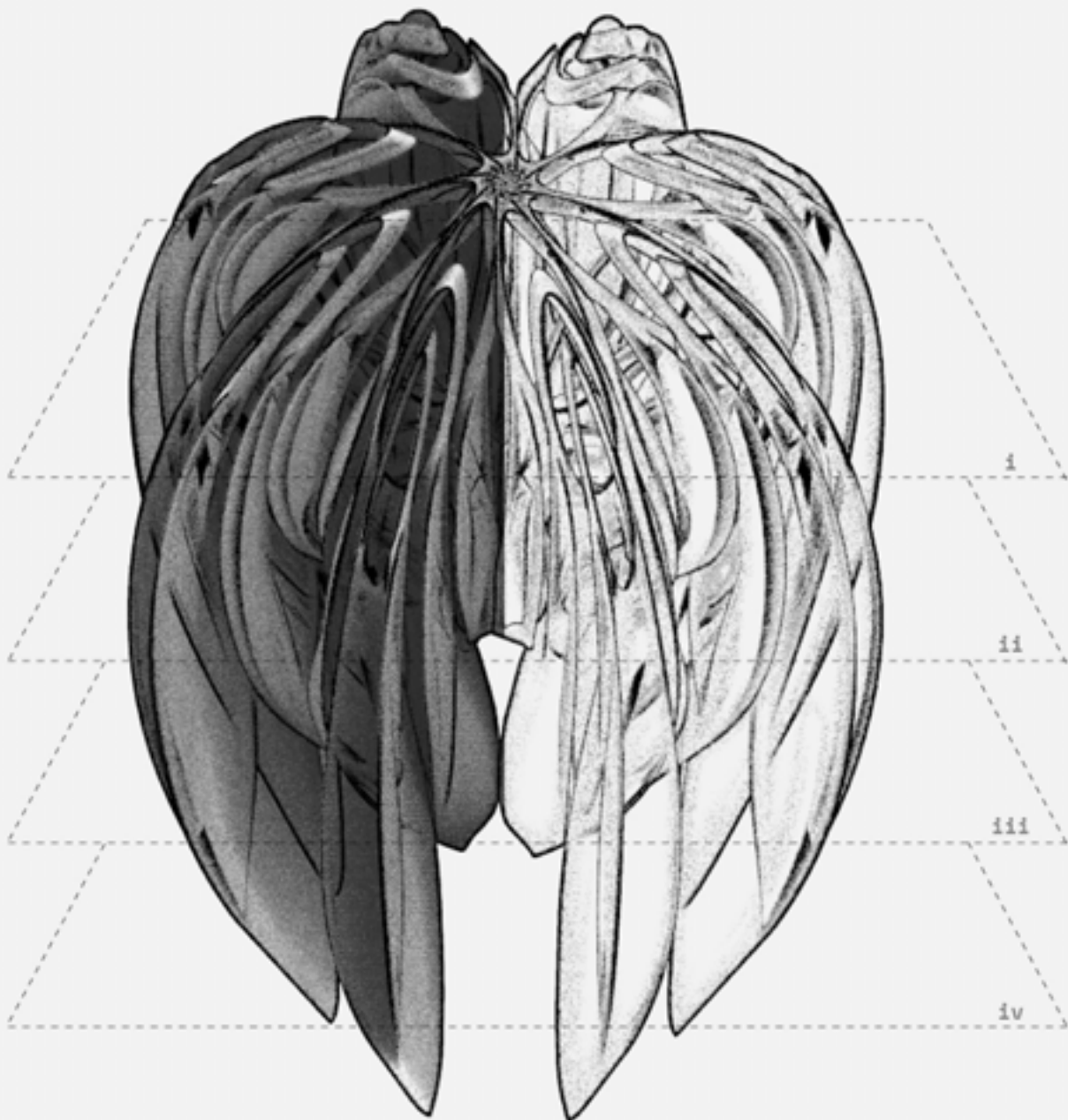


traversing mediums

A visual narrative in search of the ideal design tool, presented
in four chapters as I navigate through various mediums.



01 | Fascination for fiction

a result of dopamine rush

pg 2-3

This chapter explores the initial foray into the realm of digital art and engagement with various modern digital 3d and 2d applications. It reflects the journey from simple sketches to more complex digital creations.

digital morphogenesis

algorithmic and computational
approach in design

Investigating algorithmic and computational methodologies, this chapter delves into how these advanced approaches influence the design process, illustrating a range of explorations in this realm.

pg 10-15

02 | Yearn for formal repertoire

complex surfaces through
constructive modelling

pg 4-9

Focused on expanding formal architectural vocabulary, this section presents works that borrow techniques from the aviation and automotive industries, moving away from conventional architectural forms.

applying embodied knowledge

professional works (sP+a)
and competitions

Showcasing practical applications, this final chapter displays projects where learnings from the previous chapters are implemented in professional contexts.

pg 15-27

alphabet abstractions

july 2021 | summer program *making + meaning*, SCI-Arc

This project presents a visual narrative stemming from a creative exercise at the SCI-Arc Making and Meaning summer program. Each week, participants were introduced to new modeling and rendering software, with the overarching goal of crafting a narrative through visuals. The unique challenge was to deconstruct the simple alphabets A, B, C, and D, and recontextualize them into complex, expressive forms.



b



Through the deconstruction of alphabets, each image captures a moment of transition—where letters are not mere symbols of language but become the building blocks for rich, multi-dimensional landscapes. These visual explorations showcase the potential of digital tools to reinterpret and extend the meaning of familiar elements.



a | deconstruction of alphabet 'A'
b | 'B' blended on top of each other using optical materials

Multitude of C's coagulates to give a sense of celestial organic material | c
'D' imagined a 3d graffiti art | d

quantum coaster

In the final composition of this project, a leap is made from the deconstructed alphabet forms to the conceptualization of a device inspired by the realm of science fiction. The central image is the result of a creative journey influenced by the fantastical elements of movies like "Total Recall," "Star Wars," and "Ant-Man." Dubbed the "Quantum Coaster," this conceptual device is envisioned as a portal to the quantum world, a realm where the conventional laws of physics give way to the probabilistic nature of quantum mechanics. This hypothetical device is crafted through advanced digital techniques, including a series of boolean operations and alpha map compositing. These methods allow for the intricate layering and interplay of forms, creating a complex structure reminiscent of the nesting concept from earlier explorations.

a



a | elevation of quantum coaster
b | view of the quantum coaster



b



In the above image, a vibrant interplay of colors captures the transition from warm to cool tones, symbolizing the dynamic energy of a force field. The visual narrative unfolds through a series of style frames that portray the letter 'A' as it encounters a destructive force, resulting in its fragmentation. The color transition becomes a visual guide, illustrating the trajectory and the force's movement across the frames. The distortion of the grid on the ground plane echoes the force's

c



d

spaceship explosion using letter 'A' | c
celestial twilight using letter 'C' | d



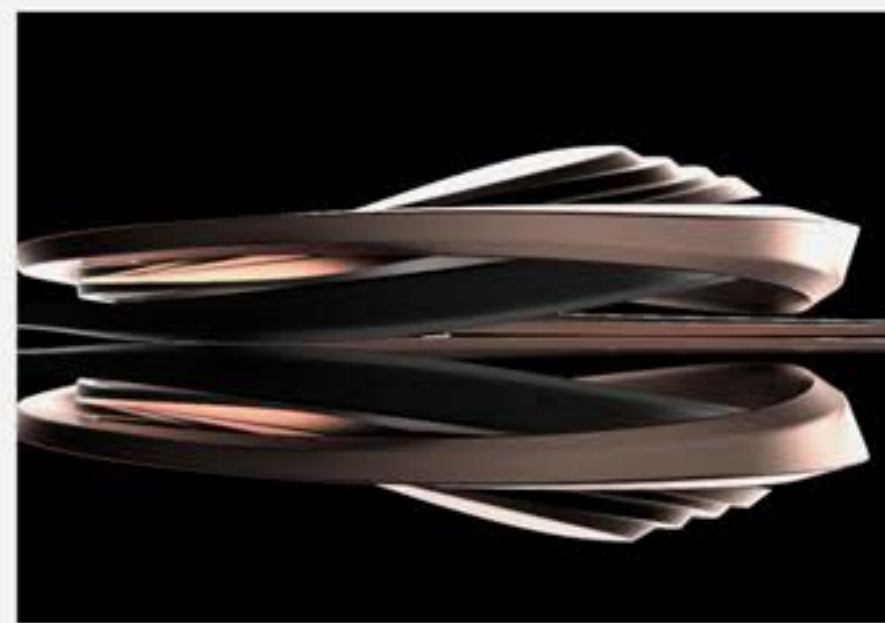
synergetic morphology

october 2020 | workshop fluidity

This segment spotlights the design work emanating from Mariana Cabugueira's workshop. The workshop opened up vistas into the world of automotive and aviation design, inspiring the creation of architectural forms through techniques borrowed from these advanced industries. The focal point of this project is the constructive modeling approach, utilizing subdivision surfaces (Sub-D's) to craft sleek, aerodynamic forms. This methodology places a strong emphasis on mesh topology, underscoring the critical importance of maintaining a consistent edge flow throughout the form. This ensures that the models not only possess aesthetic fluidity but also structural integrity reminiscent of vehicle and aircraft design, where every curve and contour serves a purpose.

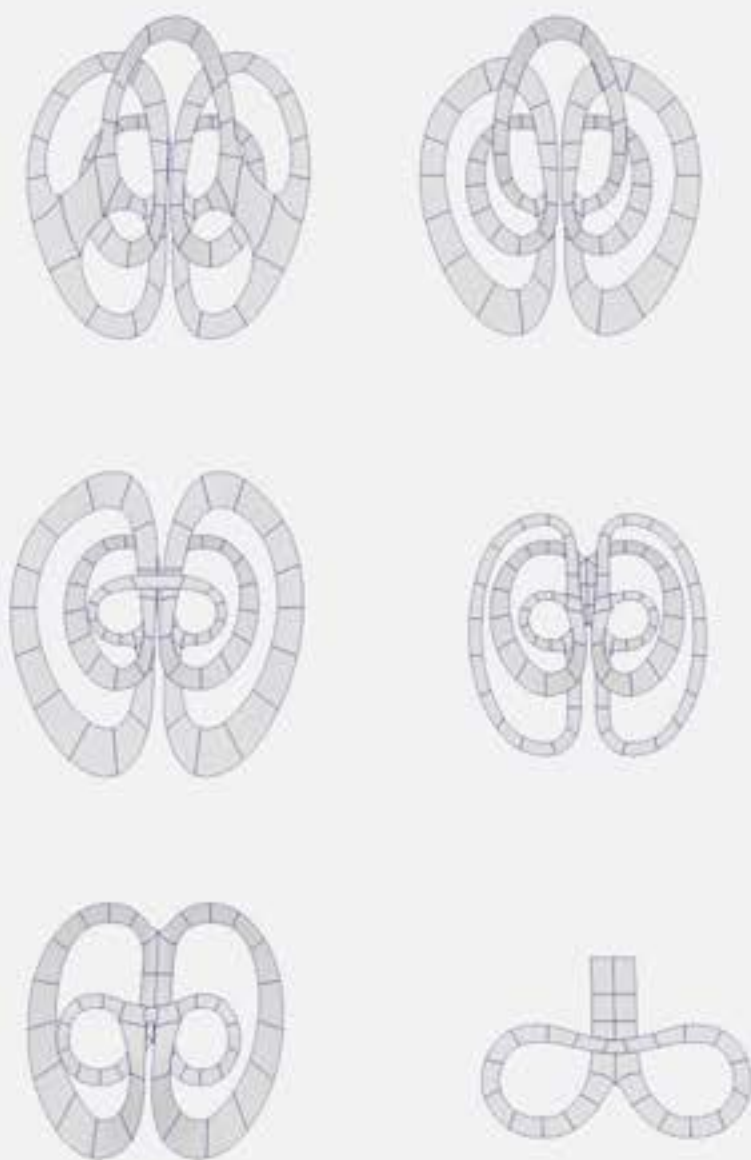


The visuals portray a series of design iterations, where the application of these techniques yields increasingly refined and complex forms. They demonstrate how principles from highly technical fields can inform and transform architectural modeling, resulting in creations that are as functional as they are visually striking.

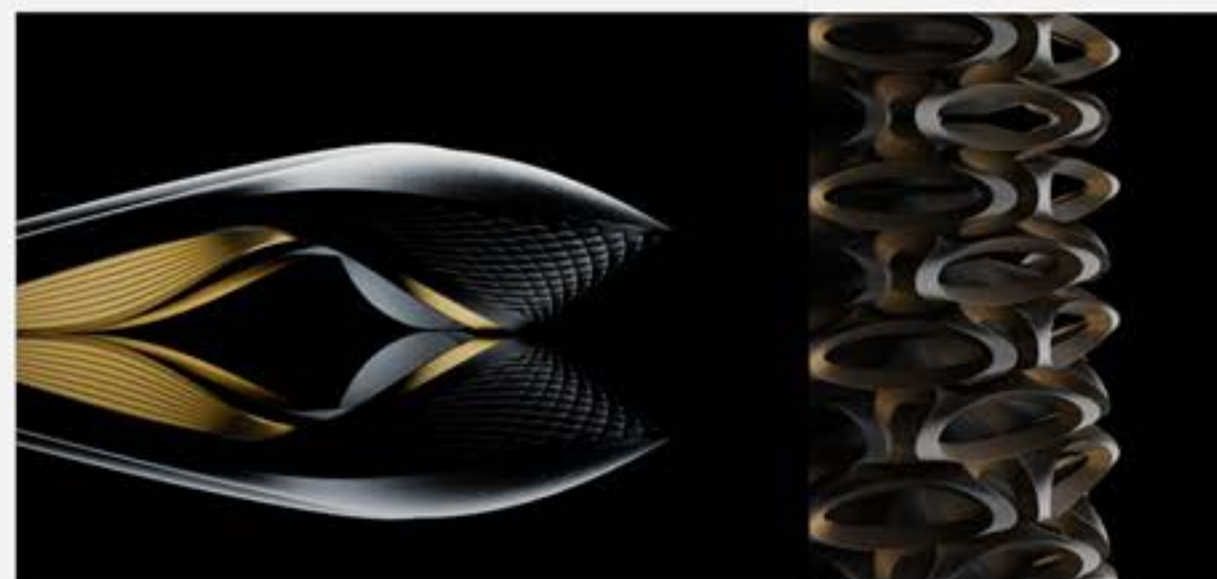
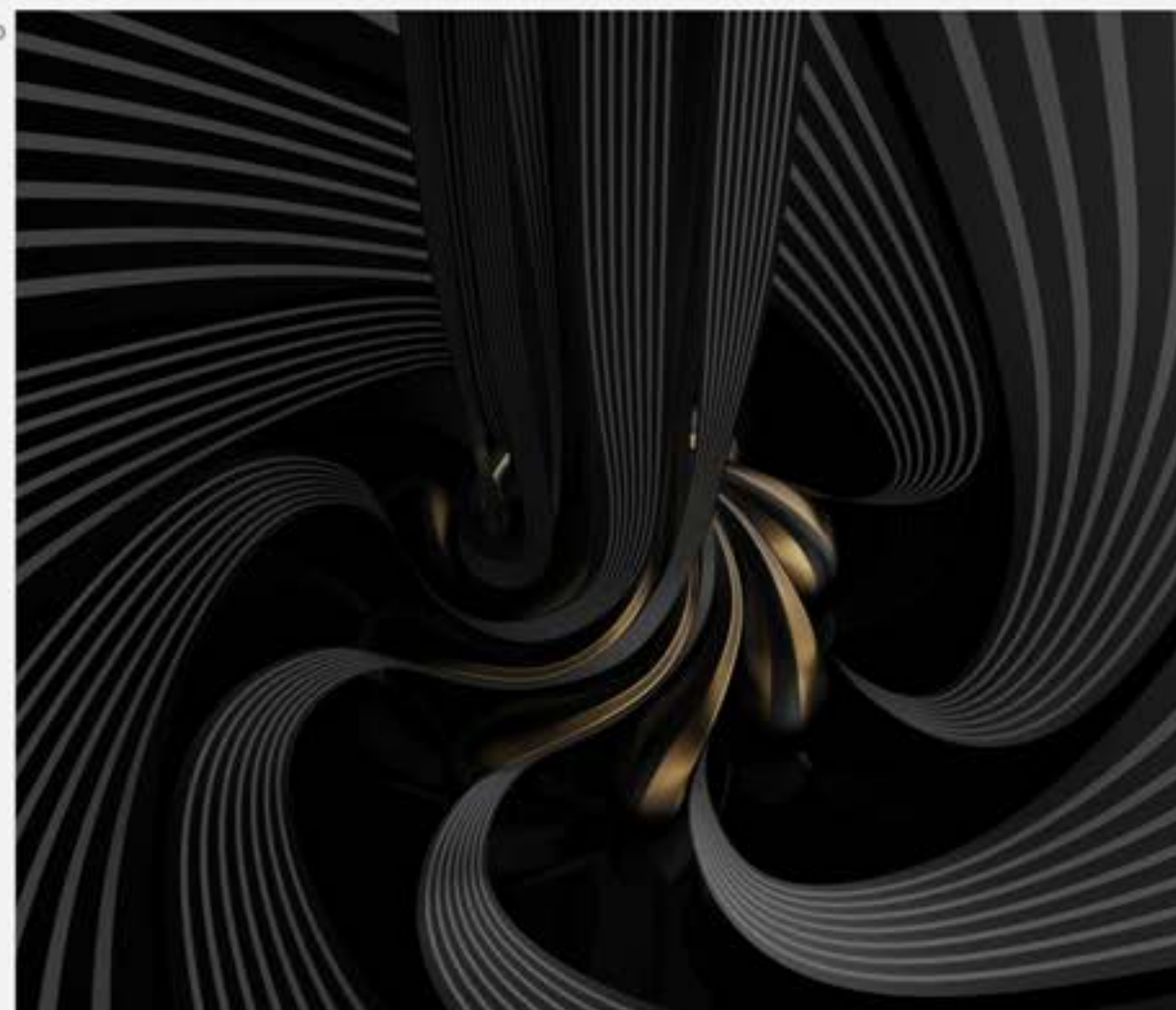


The art of adding complexity to a mesh begins with understanding the fundamental properties of topology—the study of geometric properties and spatial relations unaffected by the continuous change of shape or size of figures. In this design exploration, the act of moving vertices, edges, and faces is not arbitrary but a deliberate and calculated process that adds new dimensions to the form. It is a play of precision and fluidity, where the designer's intent is realized through a series of meticulous modifications that culminate in a complex and harmonious morphology.

a

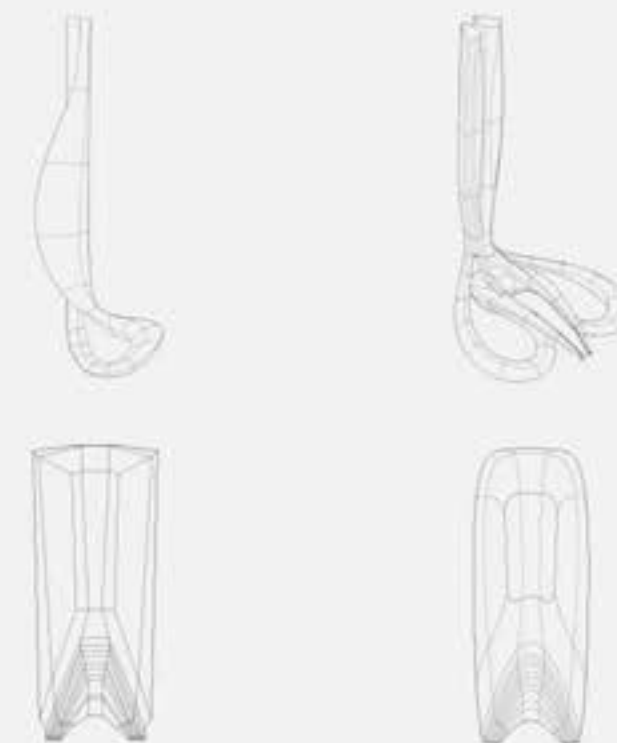


b



Every modification to the mesh influences its curvature and overarching form, realizing the designer's vision through careful and precise alterations that lead to a sophisticated and cohesive morphology. These adjustments permit the formation of organic shapes that seem to ripple and pulsate, extending the boundaries of design with progressive modeling techniques.

c



d

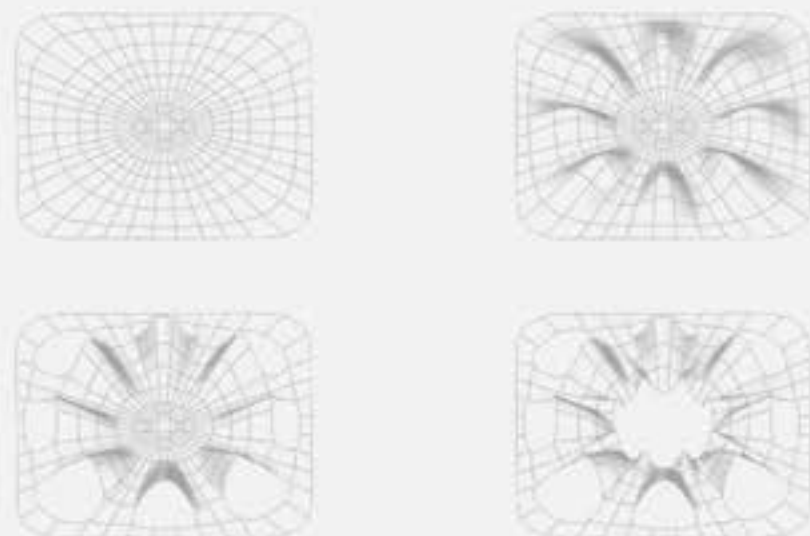


hues of Al'Ula

march 2022 | competition *SP+a*

Considering its significance as a living, breathing museum that encapsulates 200,000 years of activity in the cradle of human civilisation, any dwelling built within this Oasis of Cultural History comes with the responsibility of ensuring that the inhabitants are always aware and immersed in its majesty. With spectacular mountain canyons, fantastical rock formations and open desert plains within tantalising reach, the sheer magnificence of the dramatic, and sometimes enigmatic, landscapes only proves that the dwelling should be windows to the horizon allowing for breathtaking views of the colours and hues that have come to define Al'Ula over millennia.

a



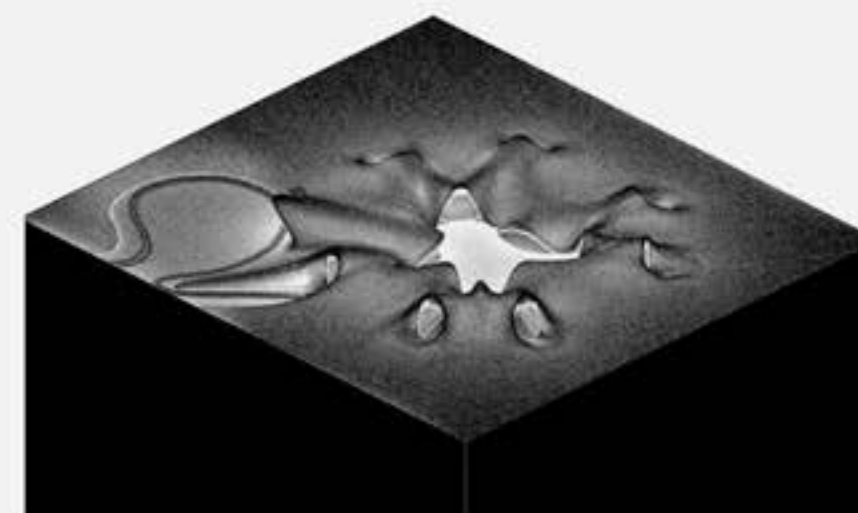
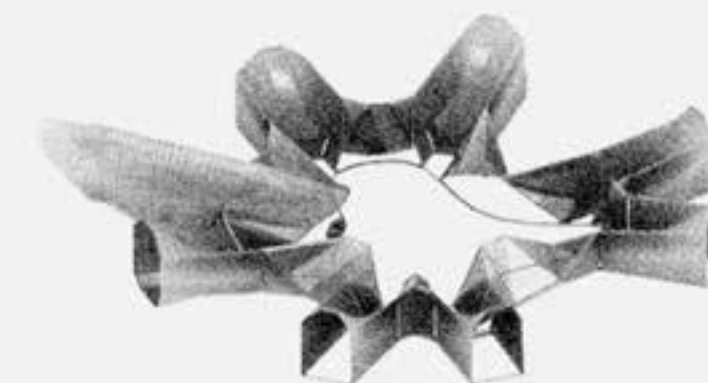
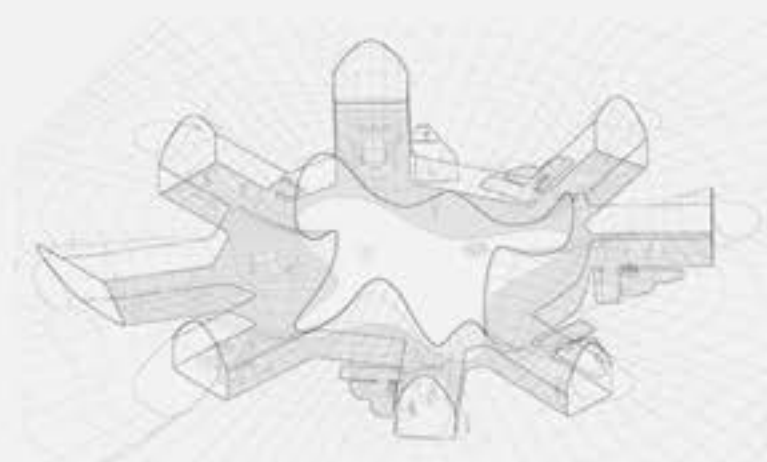
b



Building on the orientation of the many hues that surround this unique atmospheric experience, the radial organisation of the plan is meant to allow each space its own unique view, character, and spatial experience.

By immersing the dwelling into the ground and maintaining a single storey structure throughout, the radial organisation eliminates all hierarchy within the residence, with each of the primary living spaces given equal importance and prominence.

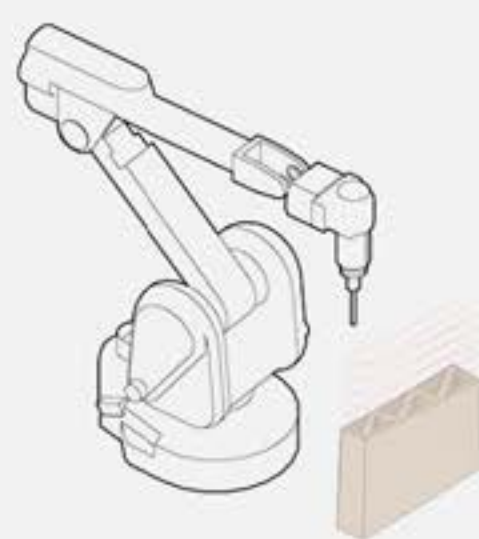
c



a | mesh topology of the dune form
b | view from the exterior - morning hue of Al'Ula

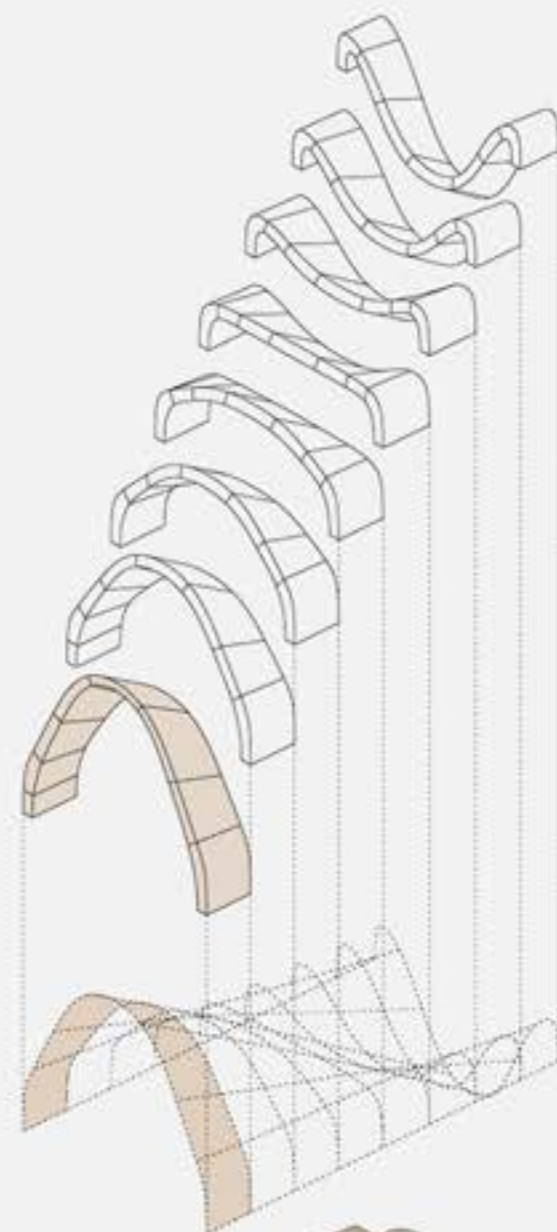
axonometric view of the residence | c

a

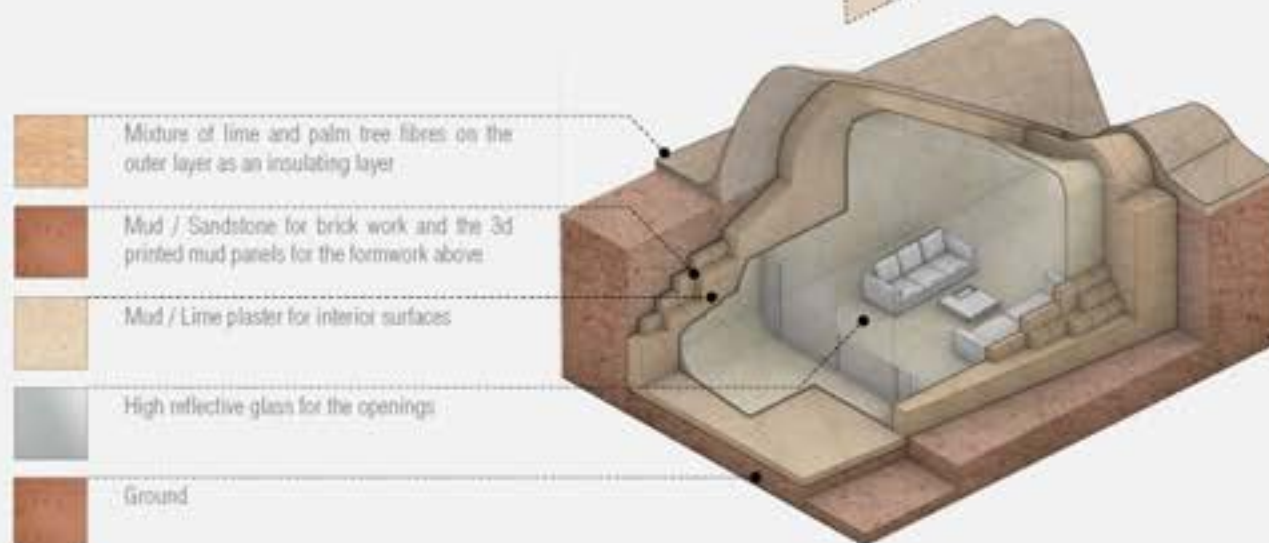


printing the future

With such a notable heritage of Earthen Architecture that surrounds and encompasses the area, even in the Oasis, the structure for the dwelling is an exercise in looking to the future while drawing inspiration from the Materiality and Construction methodology of the past. The Earthen retaining walls of the sunken structure are built from a combination of Mud and Sandstone and support a Vaulted Roof consisting of a series of Mud panels that are themselves made from an Additive Manufacturing process.



b



-  Mixture of lime and palm tree fibres on the outer layer as an insulating layer
-  Mud / Sandstone for brick work and the 3d printed mud panels for the formwork above
-  Mud / Lime plaster for interior surfaces
-  High reflective glass for the openings
-  Ground



c

c



d

Drawing from Indigenous methods, the structure is encased in an Outer layer made up of a mixture of Lime and Palm tree Fibres that act primarily as an Insulating layer, working in conjunction with form of the building to naturally cool the building and reduce the dependency on Artificial means of ventilation.

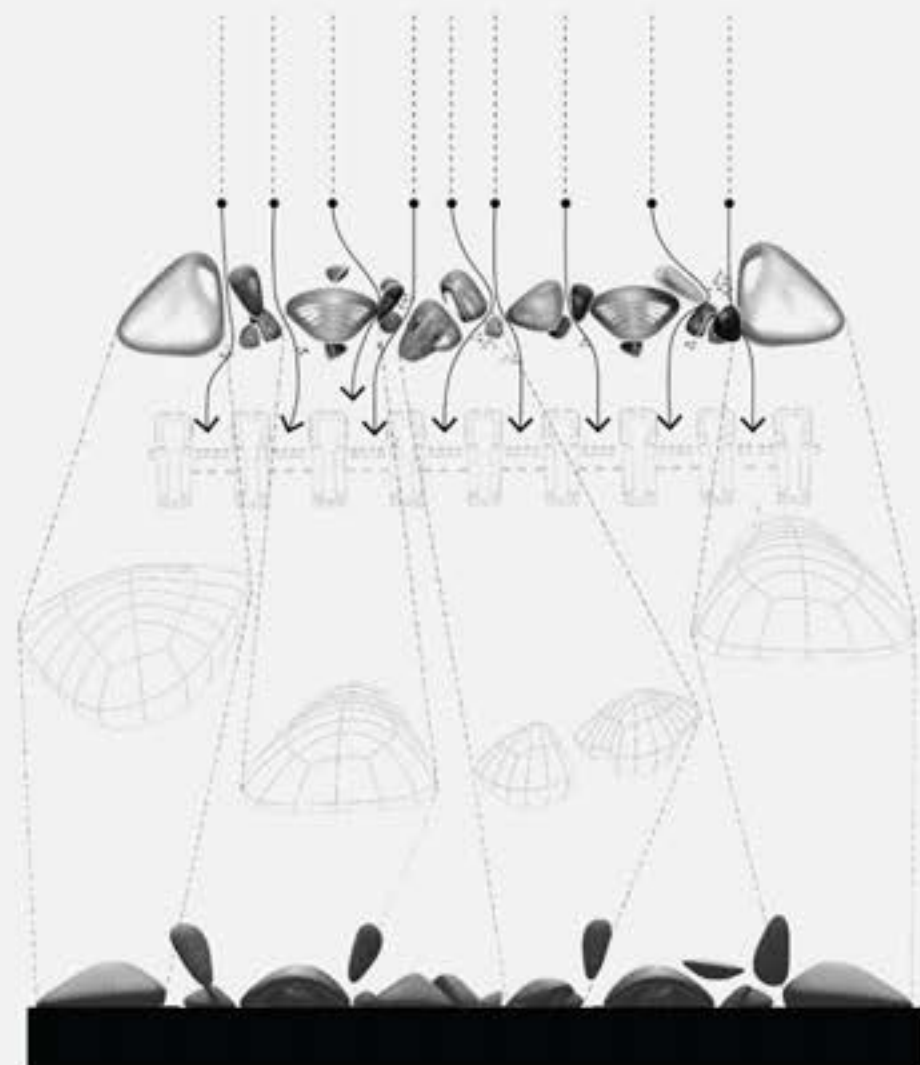
The Interiors are uniformly coated in layers of Mud & Lime plaster giving the spaces their signature monolithic and unvarying aesthetic, thereby reinforcing the notion that the entire structure rises from/is carved from the ground itself.

seven islands of bombay

september 2023 | competition *SP+a*

This project endeavors to reimagine the passenger experience at the bustling airport of Mumbai by weaving the city's identity into the fabric of the airport's design. Mumbai, known for its dynamic evolution from a conglomeration of seven islands into a singular metropolis, serves as the narrative backbone for this transformation. The design reflects the historical tapestry of Mumbai's formation, with formal explorations that echo the merging of the islands. This story of unification and growth is told through the spatial arrangement and structural innovations within the airport, aiming to provide travelers with more than just a transit space, but a place imbued with the spirit of the city.

a



b



c

c

d



a | plan of the proposal showing the meandering queue line between these pebble structure
b | view from the queue lane

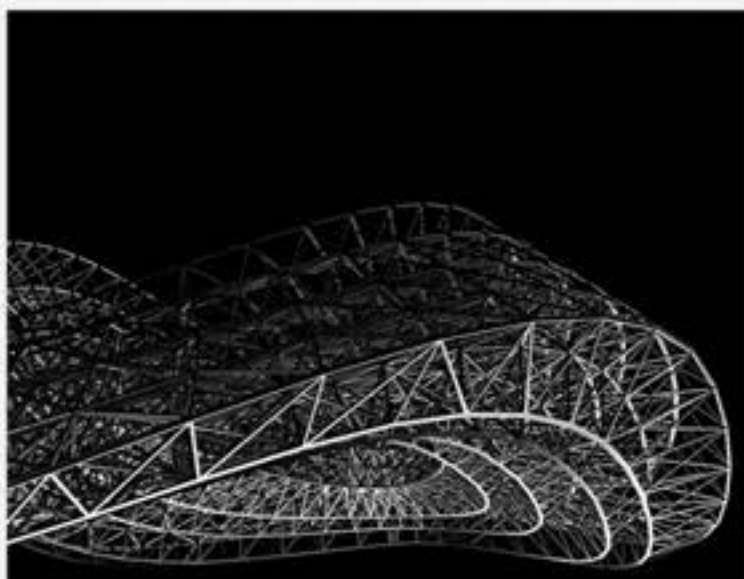
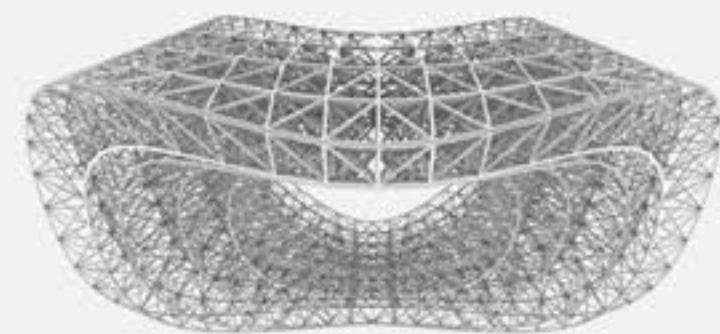
plan of alternate proposal for queue system through series of mounds | c
view from the queue lane with seaters | d

timber tectonics

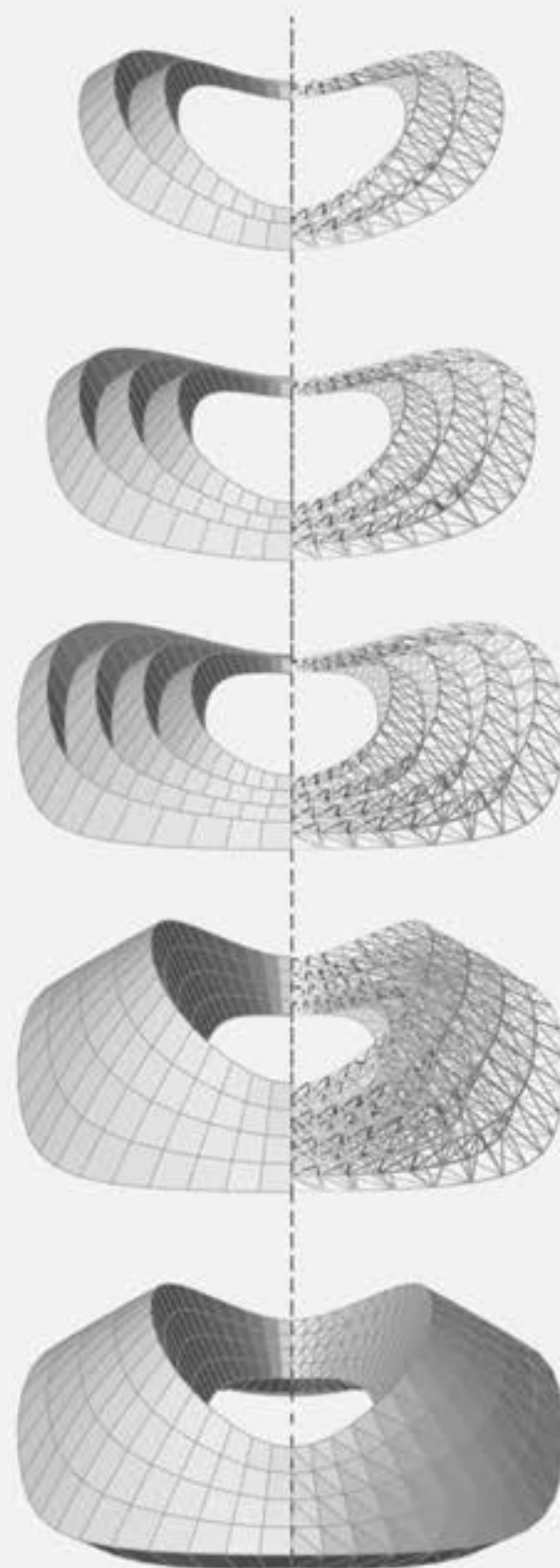
august 2021 | workshop *timber tectonics*, ZHCode

This workshop showcases the intricate interplay between form and function, focusing on the fundamental role of mesh topology in generating structural systems. The left side of the spread details a series of studies where the mesh topology isn't merely a representational tool but the very foundation from which the structure emerges. The images illustrate a progression from a complex mesh framework to the delineation of a truss system, showcasing the potential of meshes to inform and become the load-bearing elements of a design.

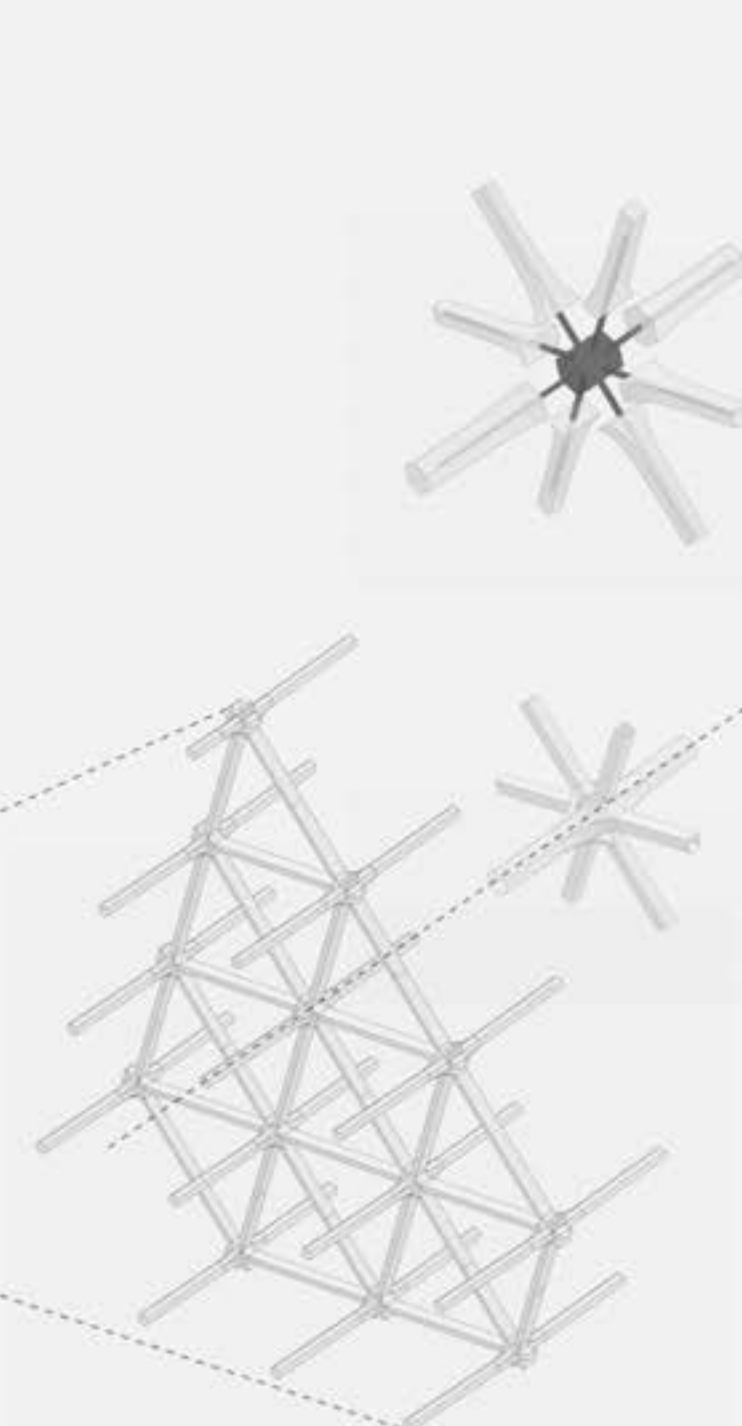
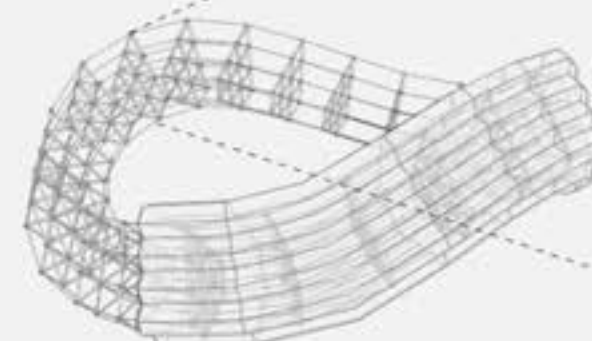
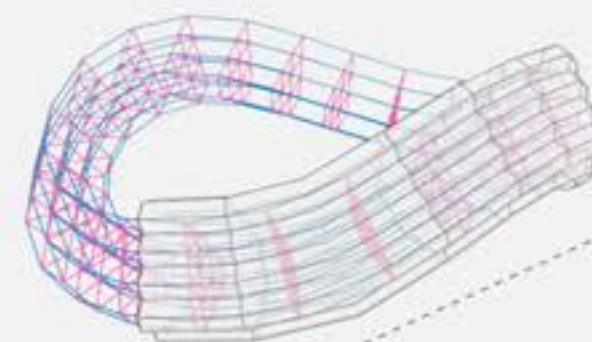
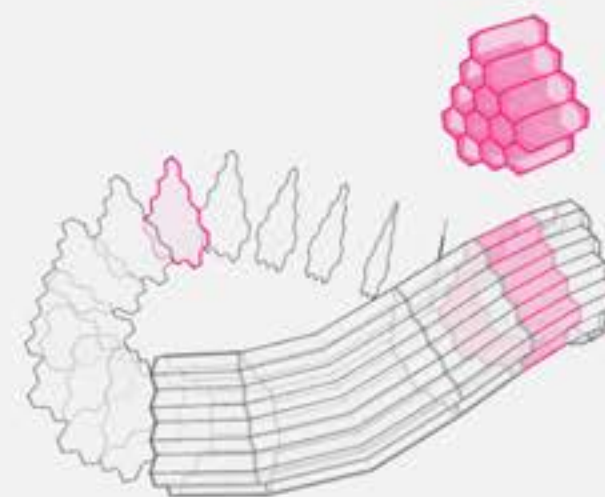
a



b



Below, the workshop transitions into the realm of form finding using the principles of 3D graphic statics—a method that combines the visual simplicity of graphic statics with three-dimensional computational modeling. This approach allows for the exploration of force paths and material efficiencies within the structure, leading to organic forms that are both aesthetically compelling and structurally optimized. Together, these explorations underscore the synergy between computational design and structural engineering, highlighting the innovative potential of parametric tools in contemporary architecture.

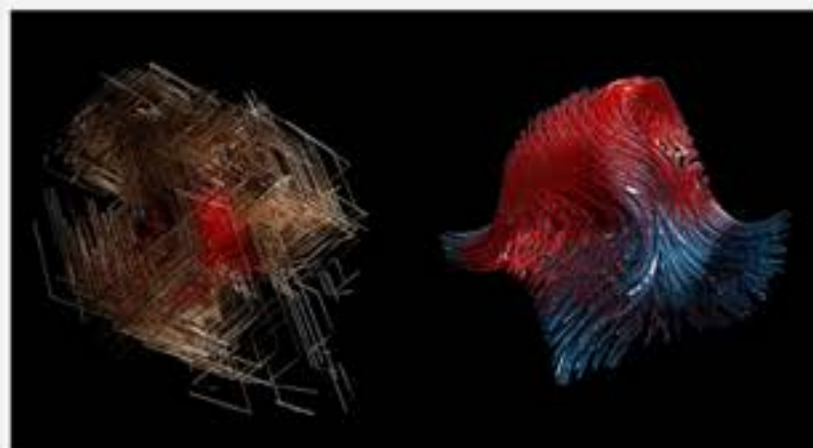
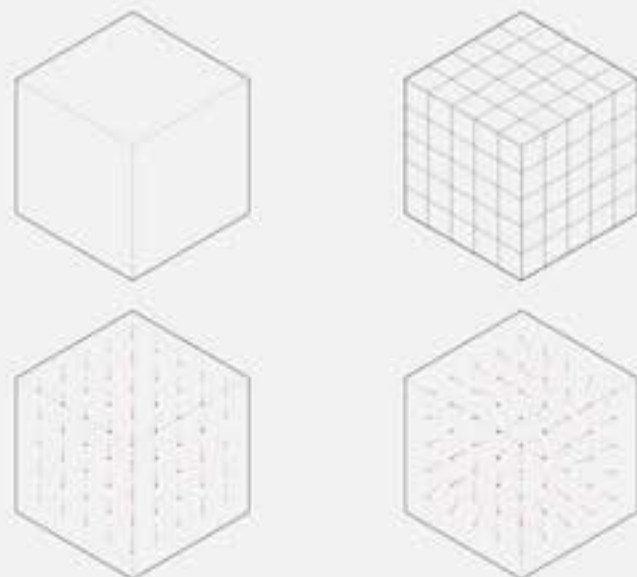


vector flowfields

august, 2020 | personal

In the realm of computational design, vectors are not merely arrows in a static field; they are the guiding forces that shape and define space. This page is dedicated to the exploration of three-dimensional vector fields, a foundational experiment in the manipulation of volumes and the advection of points through time. The process begins with an empty boundary, a digital canvas partitioned into a grid of cubes, each one known as a voxel. Within these voxels reside vectors, directional forces that, although invisible, are the architects of form. To bring life to these vectors, a curl noise function within Houdini is employed, assigning dynamic values and creating a symphony of directional forces. The centerpiece of this exploration is the flow field setup. By scattering points within the voxelized boundary and allowing them to traverse the vector field over time, emergent forms are captured—visual echoes of the invisible forces at play.

a



b



The concept extends into the physical realm, using glulam sticks as a medium. Here, the vectors become paths for these wooden elements to follow, aggregating along a predefined curve, searching for alignment, and connecting tangentially with their neighbors. This exploration not only captures the ephemeral choreography of vectors but also translates it into a tangible, structural language, demonstrating the potential of computational tools.

c



a | vector field setup diagram

b | visual of a simulated vector field using perlin noise

form finding using vector field as logic and building tectonics | c

diffusion ltd aggregation

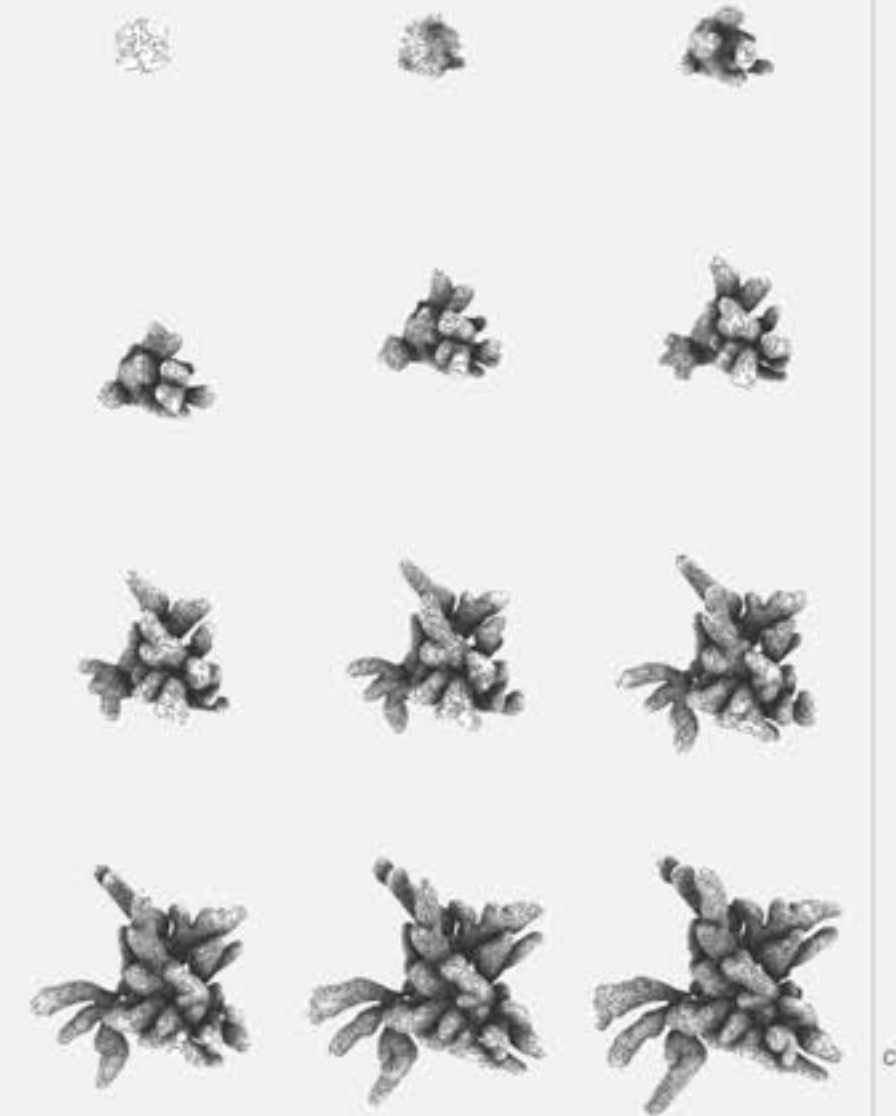
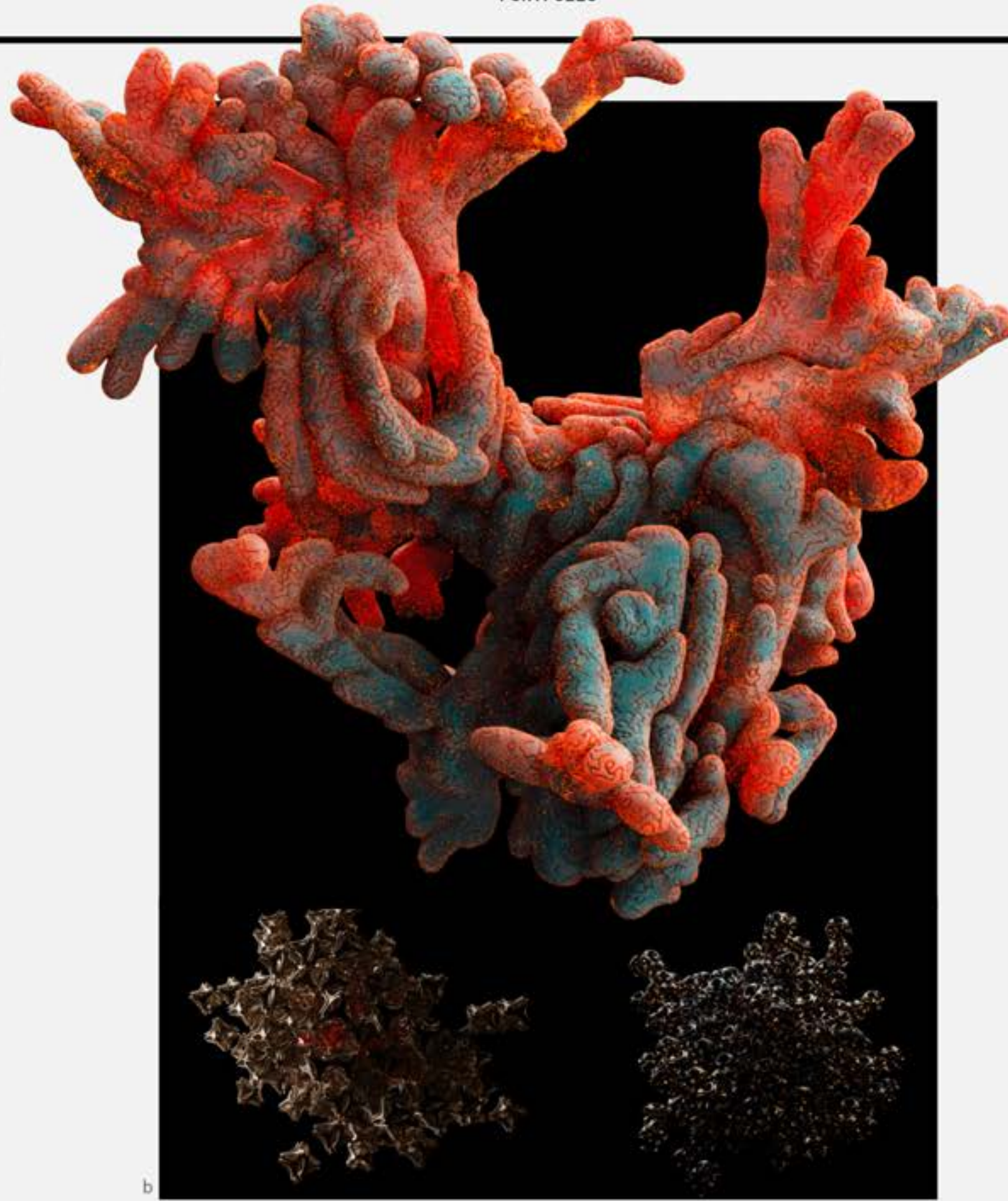
october, 2020 | personal

This exploration delves into the phenomena of diffusion-limited aggregation (DLA) as a method for generative modeling. DLA is a process that simulates the way particles undergoing Brownian motion cluster together to form aggregates of such particles. This method is often observed in natural systems and is here employed as a digital technique to create complex, organic structures.

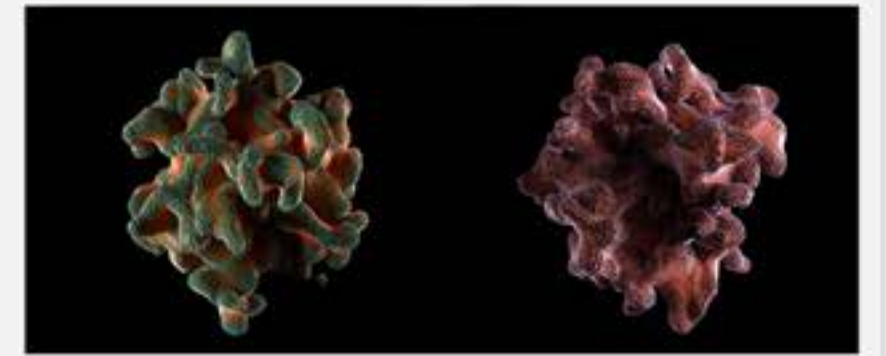
a



b



c



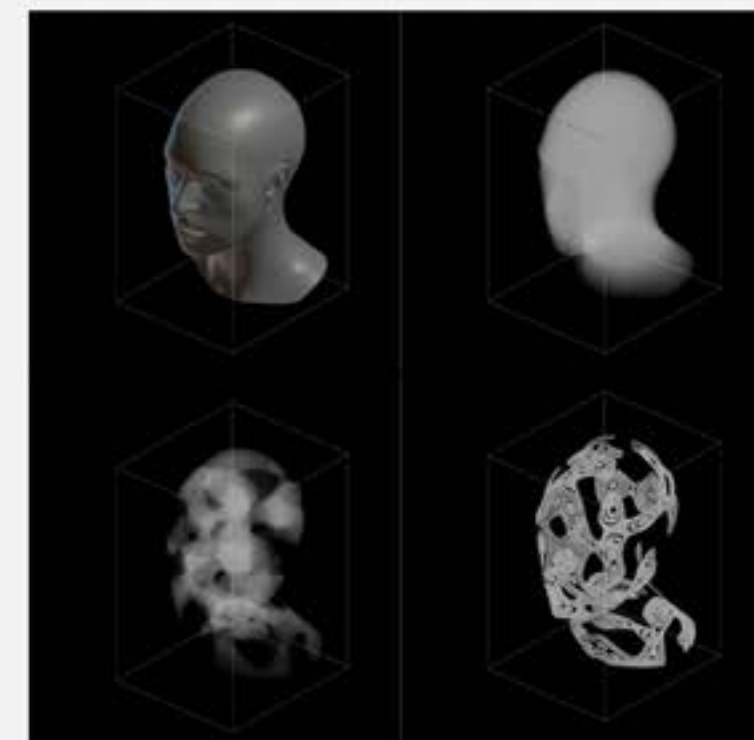
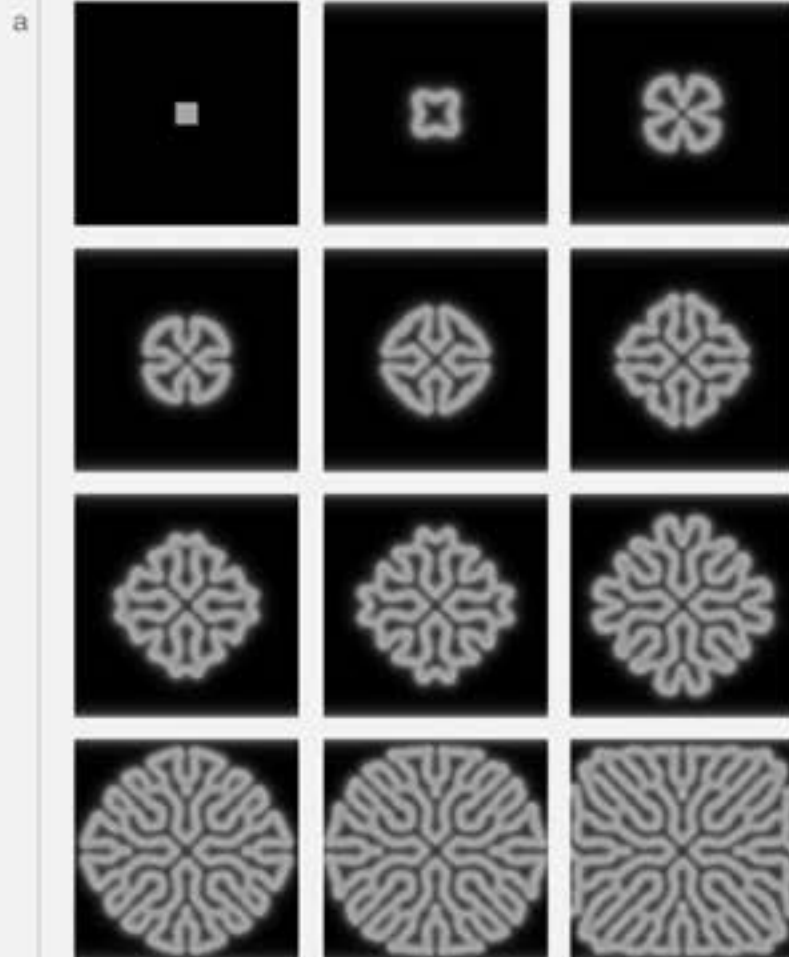
a | schematic diagram showing process simulation
b | visual of simulated growth structures

process of evolution | c

reaction diffusion

2020 | personal work

This project is an exploration of reaction-diffusion, a process describing systems where substances are transformed by local chemical reactions and spread out due to diffusion. Initially studying how these patterns manifest in two dimensions, the exploration then transcends into the third dimension, innovatively applying these principles to create procedural wearables. A series of reaction-diffusion pattern studies, revealing the mesmerizing complexities that can arise from simple chemical interactions. These patterns not only serve as visual artistry but also as the foundational logic for designing three-dimensional objects.



the translation of these 2D patterns into 3D forms is evident in the creation of wearable art. The images display how the intricacies of reaction-diffusion can be harnessed to produce objects that are not only structurally sound but also strikingly ornate. These procedural wearables embody a blend of organic growth patterns and computational design, resulting in pieces that challenge traditional notions of adornment and form.



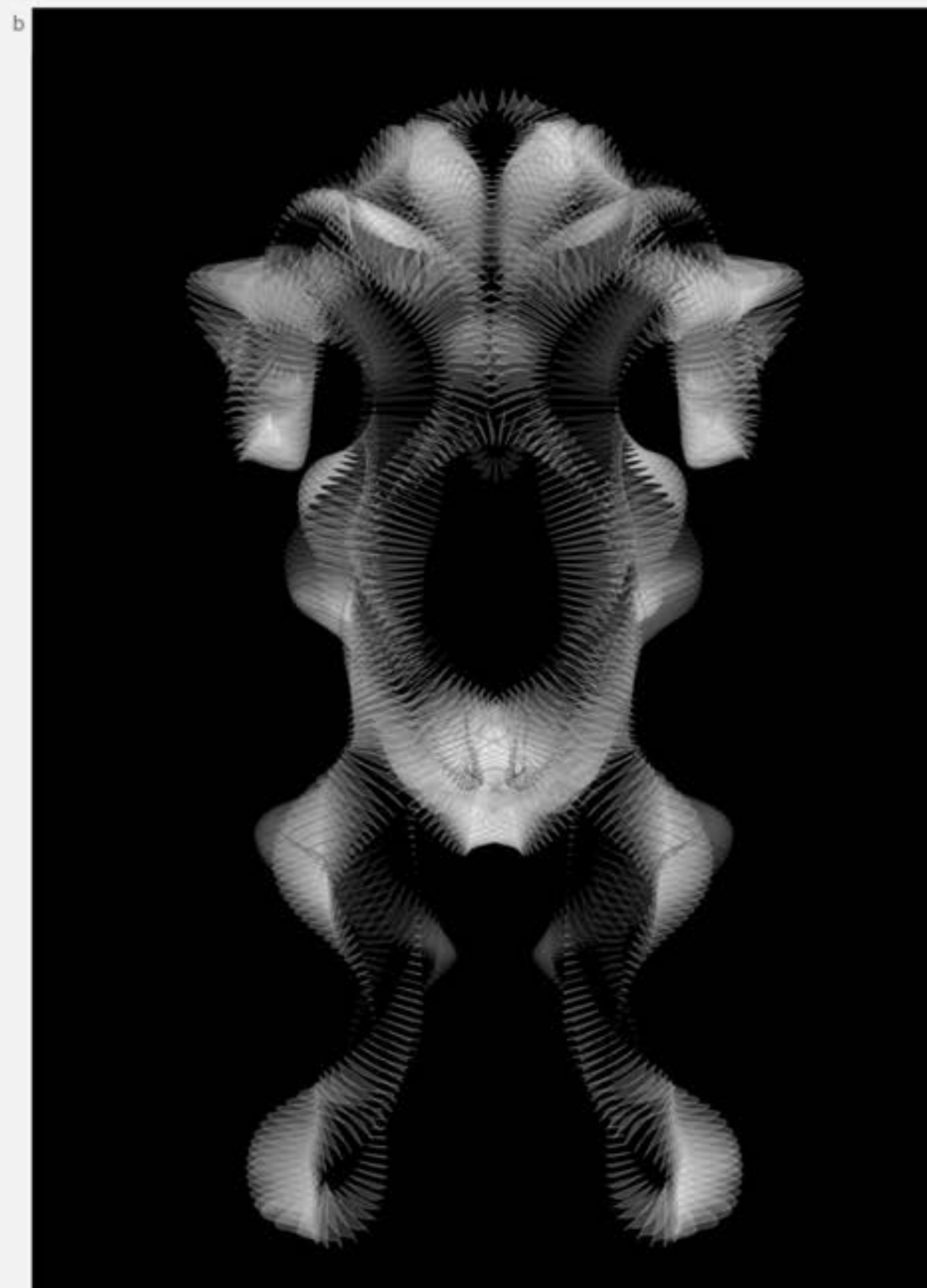
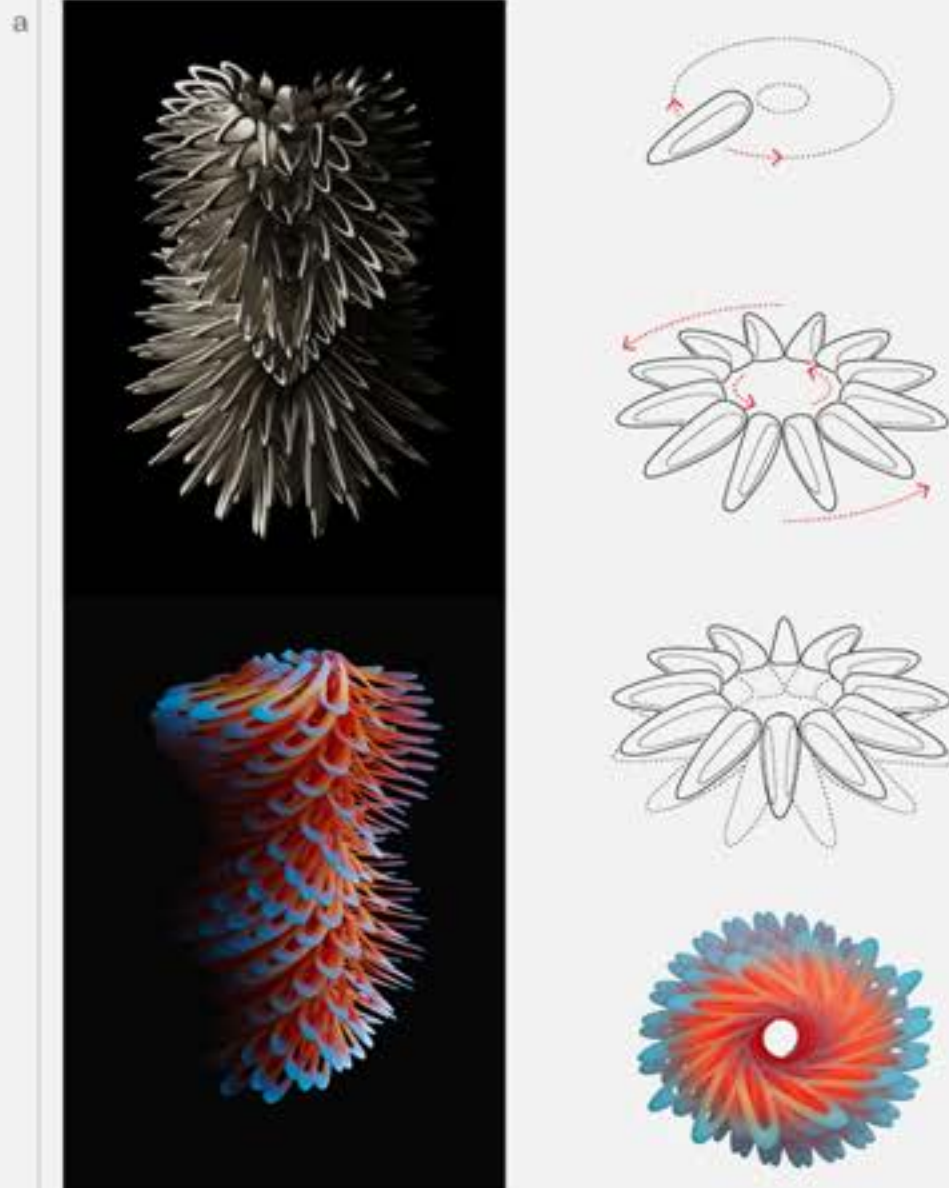
a | study of reaction diffusion in 2d
b | view of the wearables

study in 3d | c
view of the wearables | d

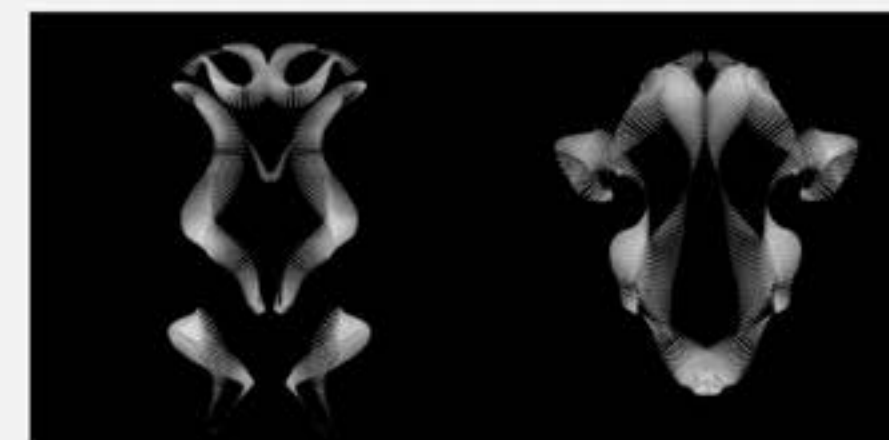
(de)coding iris van herpen

january, 2023 | personal

This project is a deep dive into the creative oeuvre of Iris Van Herpen, a fashion designer celebrated for her sculptural and avant-garde creations. The exploration seeks to decode her design philosophy by applying the principles of aggregation and simple shape rules, which are fundamental to her approach in manipulating textiles and materials into complex, organic forms.



These structures illustrate how the principles of growth and form, drawn from Van Herpen's designs, can be algorithmically interpreted and reconstructed in a digital environment. This not only pays homage to her unique aesthetic but also opens up new possibilities for understanding the intersection of fashion, design, and computational methods.

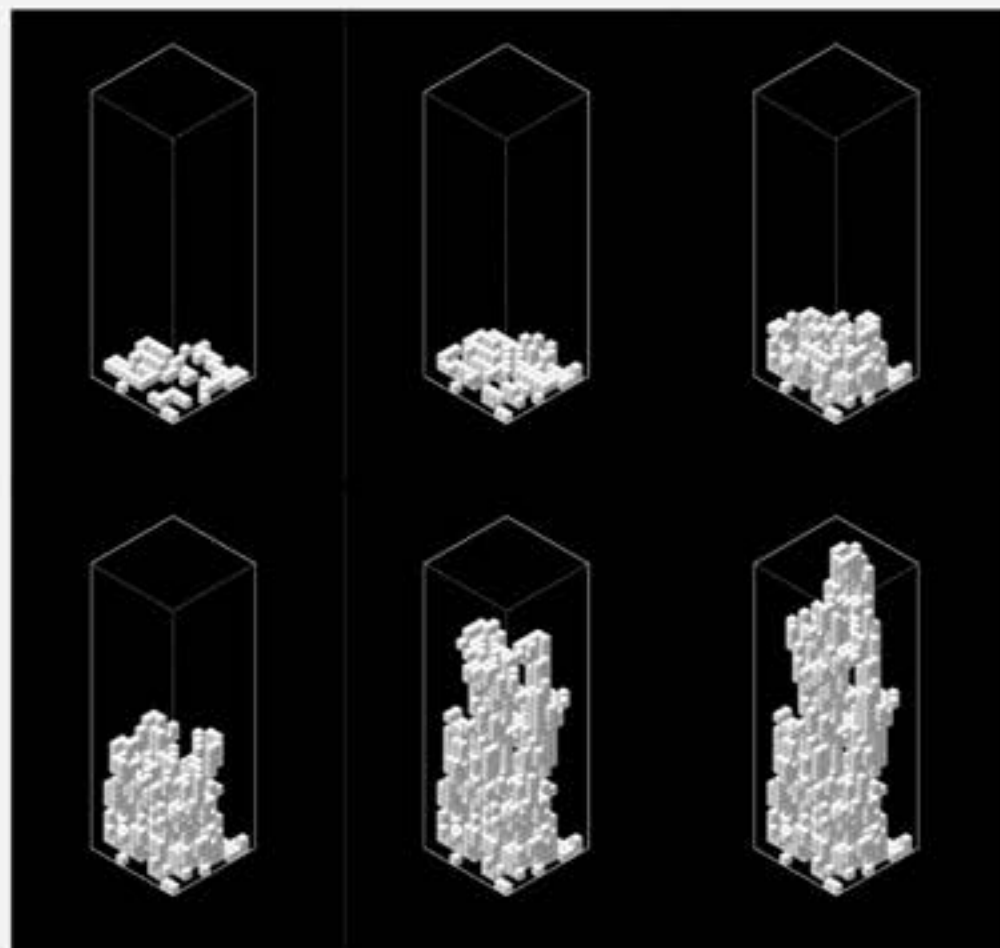


conway's game of life

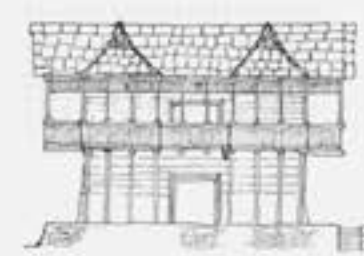
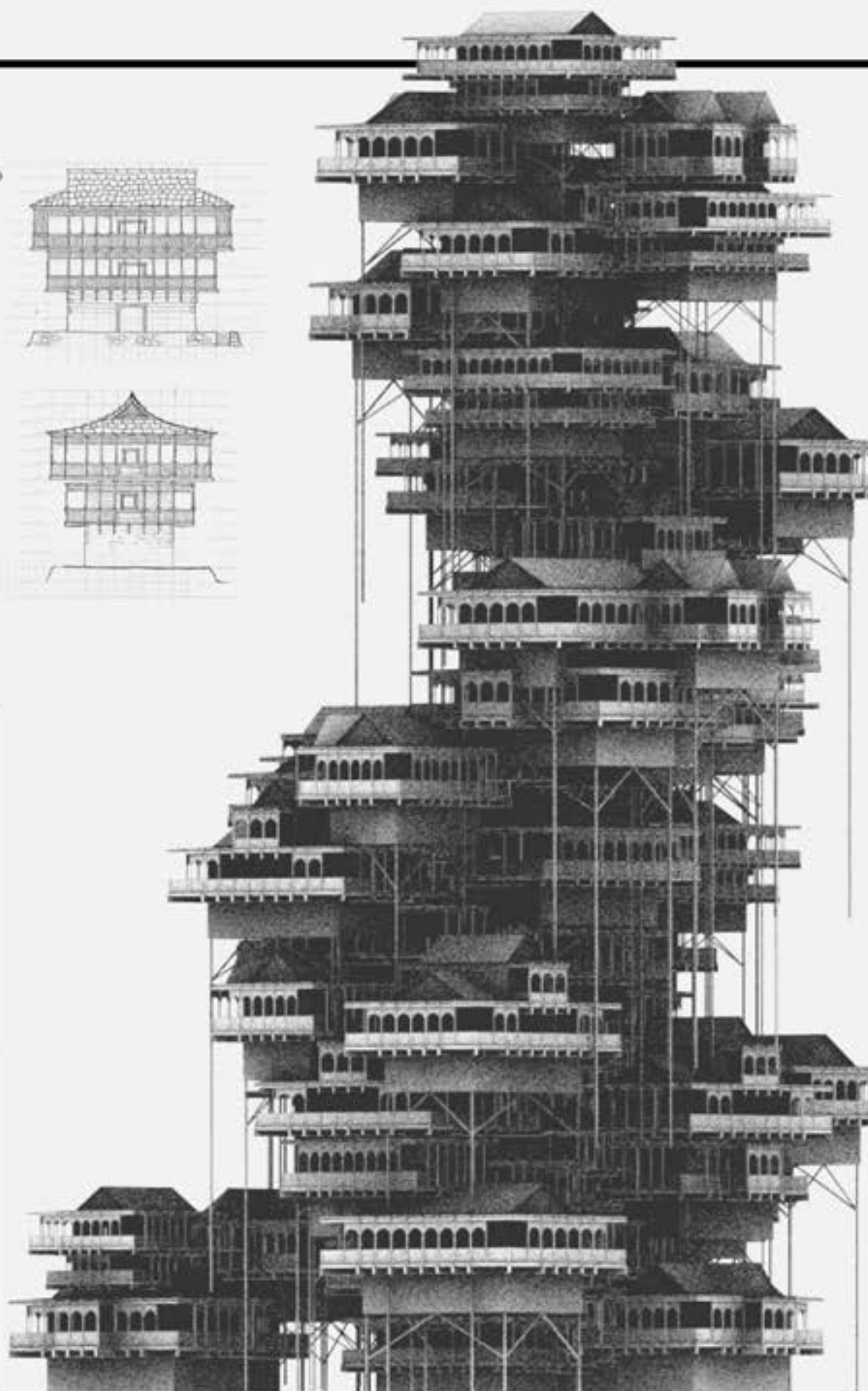
october, 2020 | personal *cellular automata*

This exploration builds upon the foundation of an undergraduate thesis project, delving into the complex world of cellular automata and Conway's Game of Life. The project takes the designed units from the original thesis and subjects them to the rules of the Game of Life, allowing them to aggregate over time. This process is not just a simulation; it's an investigation into the capabilities of cellular automata as a generative design tool for architecture. Through this method, the units interact according to predefined rules, evolving into unforeseen structures that challenge traditional architectural planning. This approach harnesses the unpredictability of cellular automata to explore growth patterns, structural complexities, and the potential for organic development in architectural form-making.

a



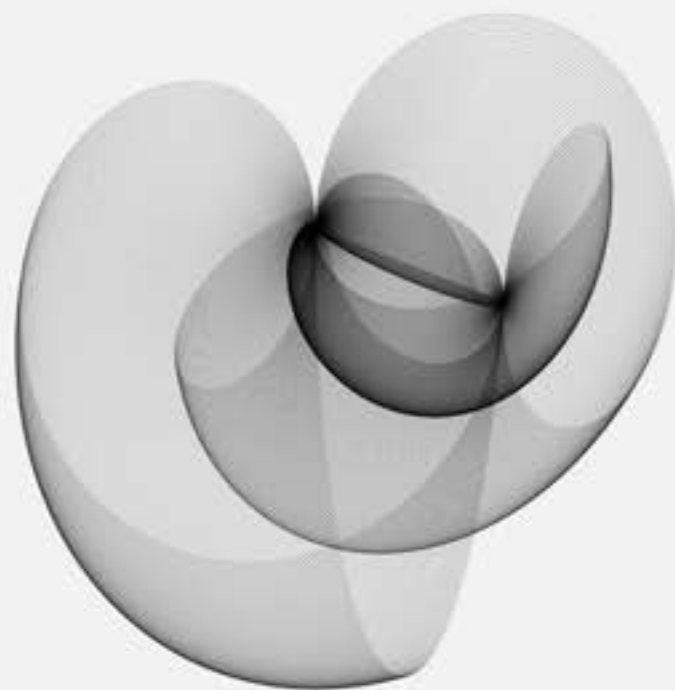
b



materializing mathematics

august 2020 | workshop

This workshop, led by Joseph Chorna, focused on the intricacies of implicit modeling, a technique that defines shapes through mathematical expressions rather than explicit boundaries. By harnessing the power of trigonometric functions, participants learned to translate mathematical equations into complex, three-dimensional forms. The page showcases this synthesis of mathematics and design, illustrating how trigonometric functions such as sine and cosine waves can sculpt intricate, organic geometries. The visual content demonstrates a progression from simple 2D wave patterns to elaborate 3D models that embody the elegance and precision of mathematical logic in physical form.



a



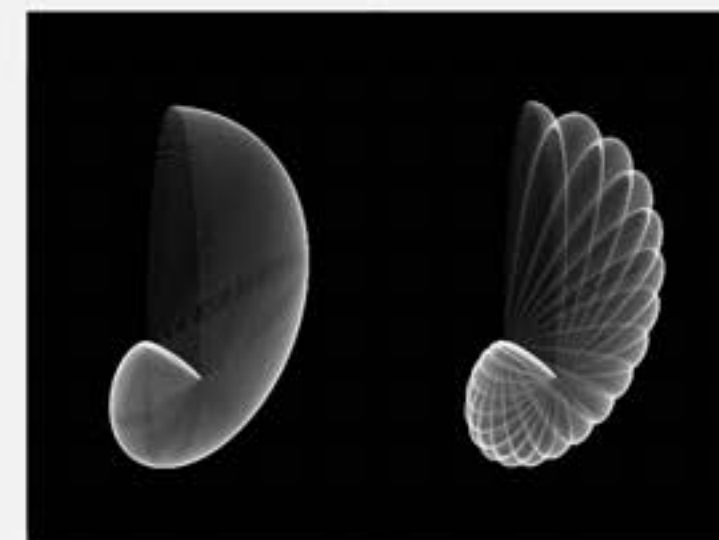
b



$$\{(u,v) \mid 0 \leq u \leq 2\pi, 0 \leq v \leq \pi\} \quad \{(u,v) \mid 0 \leq u \leq 2\pi, 0 \leq v \leq \pi\}$$

$$\begin{aligned} x &= \cos(v) \\ y &= \sin(v)\sin(u) \\ z &= \sin(v)\cos(u) \end{aligned}$$

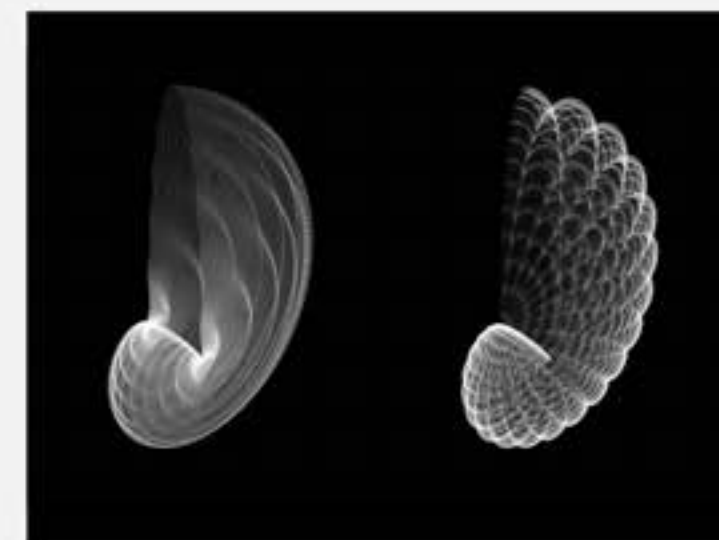
$$\begin{aligned} x &= \cos(v) \\ y &= \sin(v)(\sin(u) + \sin(25u)/25) \\ z &= \sin(v)(\cos(u) + \cos(25u)/25) \end{aligned}$$



$$\{(u,v) \mid 0 \leq u \leq 2\pi, 0 \leq v \leq \pi\} \quad \{(u,v) \mid 0 \leq u \leq 2\pi, 0 \leq v \leq \pi\}$$

$$\begin{aligned} x &= \cos(v) + \cos(25v)/25 \\ y &= u(\sin(v) + \sin(25v)/25)\sin(u) \\ z &= u\sin(v)\cos(u) \end{aligned}$$

$$\begin{aligned} x &= \cos(v) + \cos(50v)/100 \\ y &= u(\sin(v) + \sin(50v)/100)(\sin(u) + \sin(25u)/25) \\ z &= u(\sin(v) + \sin(50v)/100)(\cos(u) + \cos(25u)/25) \end{aligned}$$



c

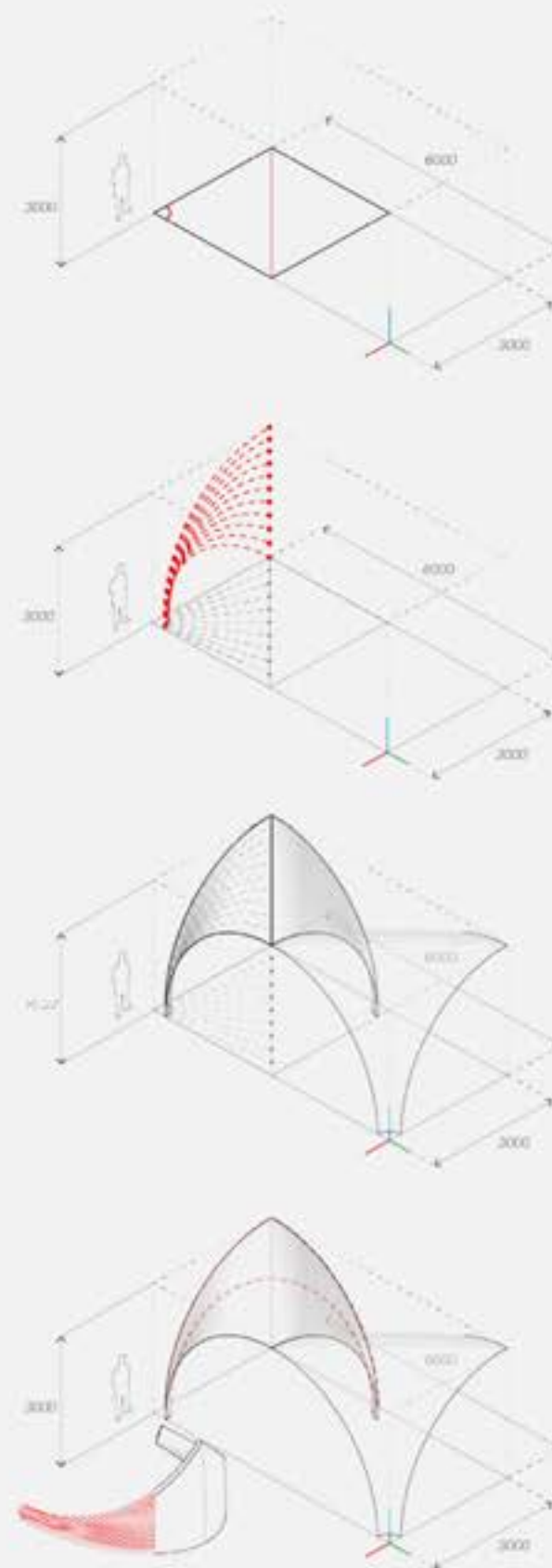
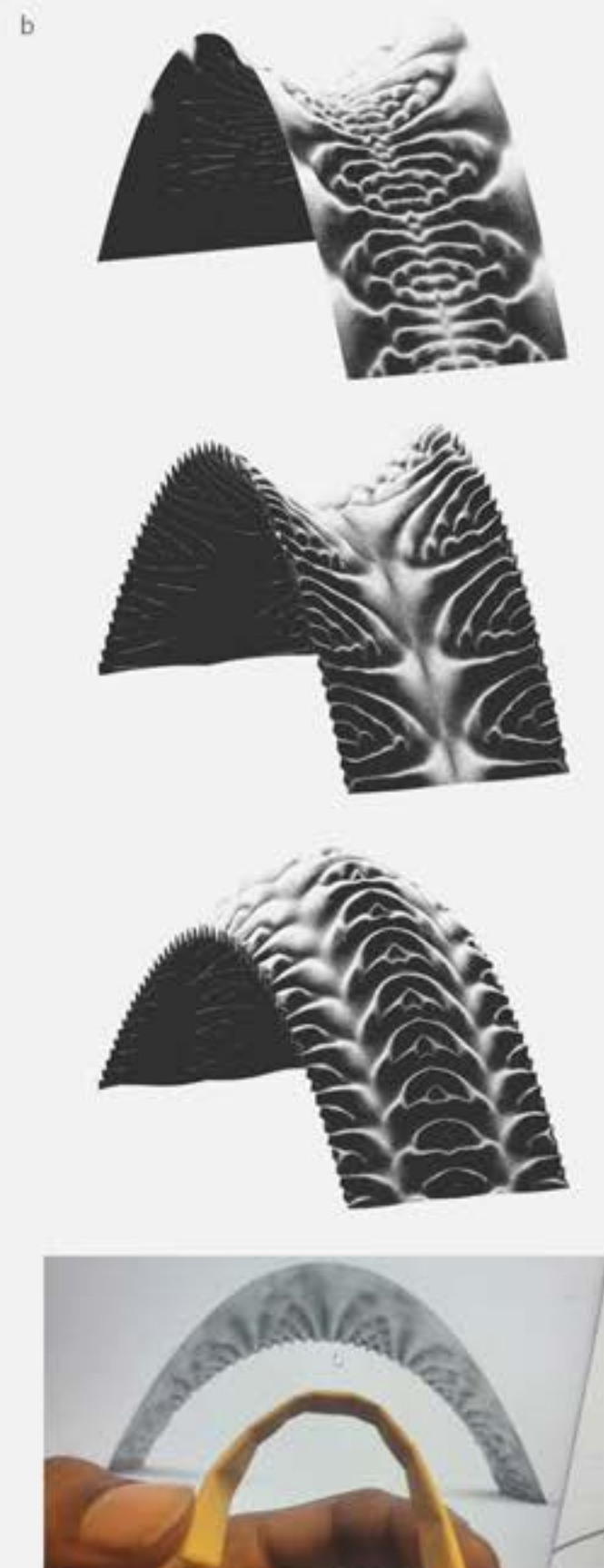
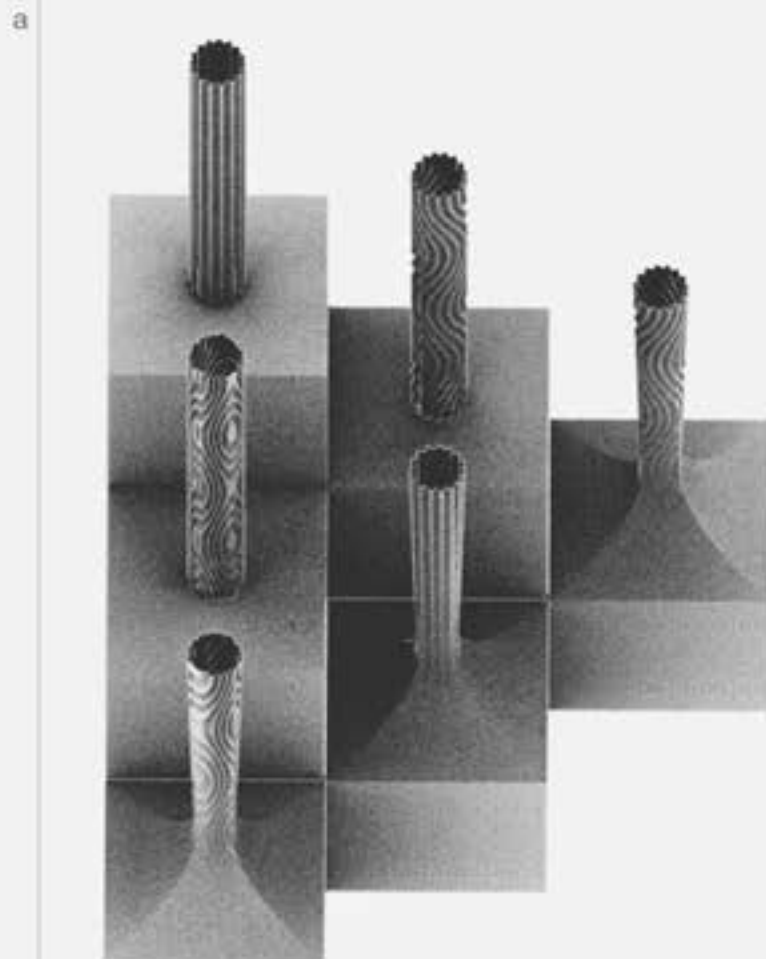
a | study of shapes in 2d - circle - spiral - texturing spiral
b | visual of the final form of the workshop project

manipulation of spherical spiral | c

function of a wave

march 2022 | professional *bus shelter*

This project, centered around the construction of a bus stop in the rural town of Latur, Maharashtra, is a deep exploration into the capabilities of 3D printed concrete. In the design process, various forms and surface articulations were examined, each layered upon a hyperbolic structure, a shape chosen for its natural strength and aesthetic fluidity. The project's illustrations demonstrate the progression from concept sketches to the final printed form. These stages reflect a meticulous study of how the unique properties of 3D printing can be harnessed to create not just visually striking forms but also structurally efficient ones. The surface manipulations, therefore, are not arbitrary; they are carefully calculated to serve as integral structural components of the bus stop's design.



c

below images showcases the prototypes - a tangible realization of this innovative approach. It stands as a testament to how traditional architectural elements can be re-envisioned through modern technology



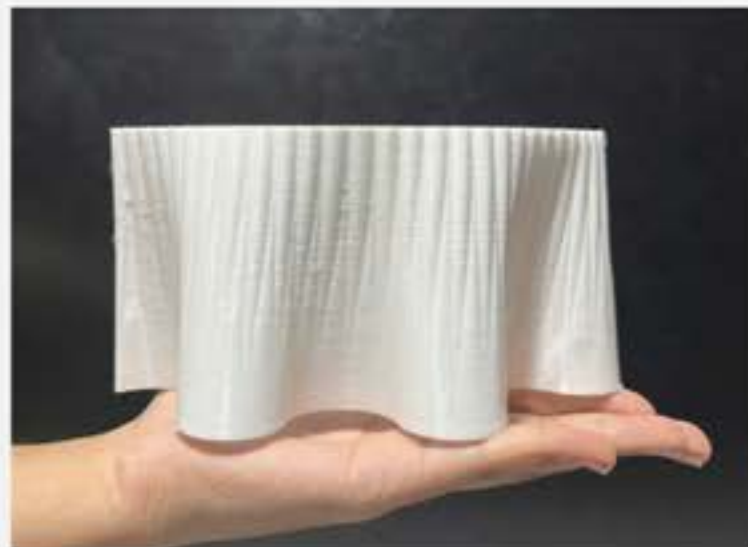
d

concrete ? or cloth?

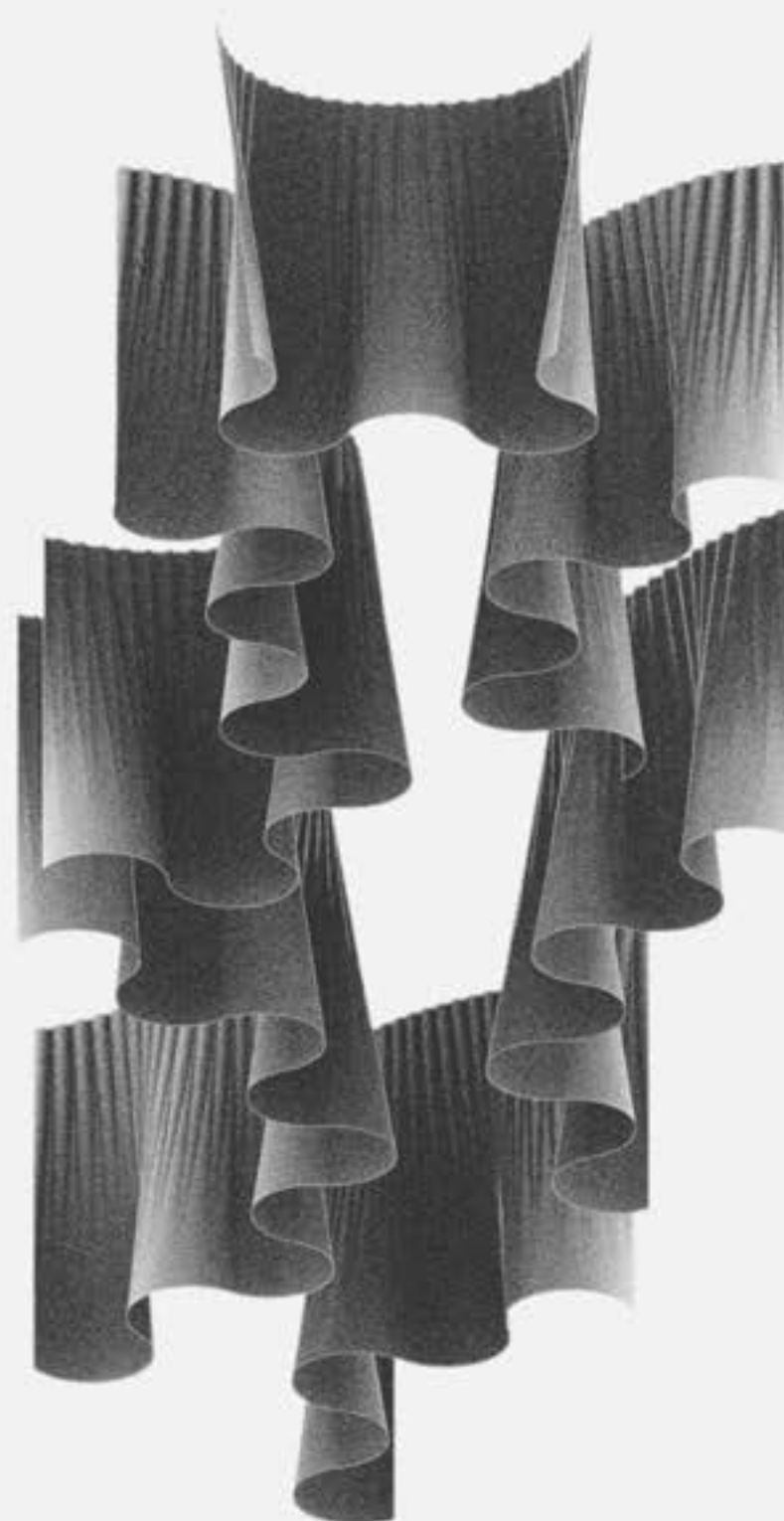
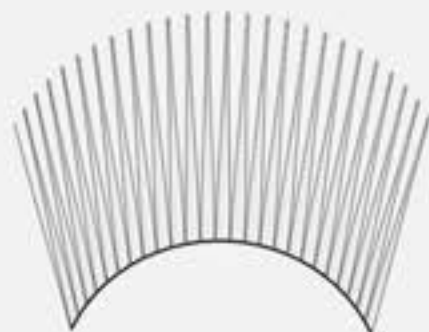
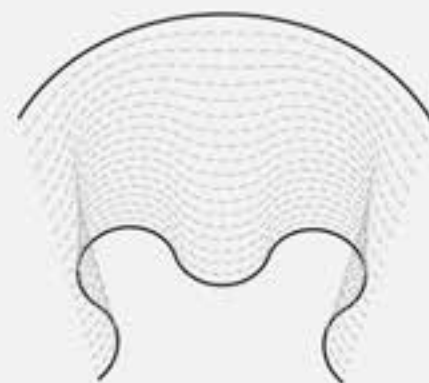
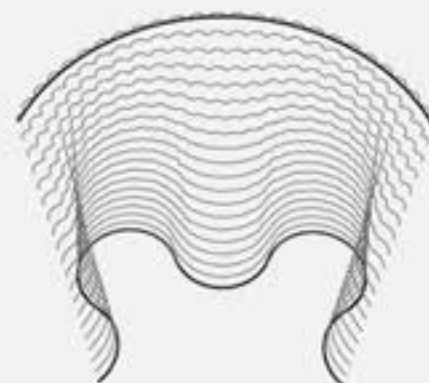
august 2022 | professional *sP+a*

This project for an Indian fashion boutique delves into the innovative use of 3D printed concrete technology, transcending conventional applications to mimic the fluidity and drape of fabric. The exploration focused on treating concrete not as a rigid, inflexible material but as a malleable form, capable of serving as a dynamic backdrop for the store's fashion garments.

a



b



below image shows the prototypes of the wall modules, actualized through 3D printing. These prototypes are a testament to the intricate possibilities of concrete when combined with advanced fabrication techniques. Each module exhibits a unique surface texture, achieved by manipulating the 3D printing process. Moreover, the deliberate integration of pigmentation during



a | 3d printed study model
b | form evolution of the wall module

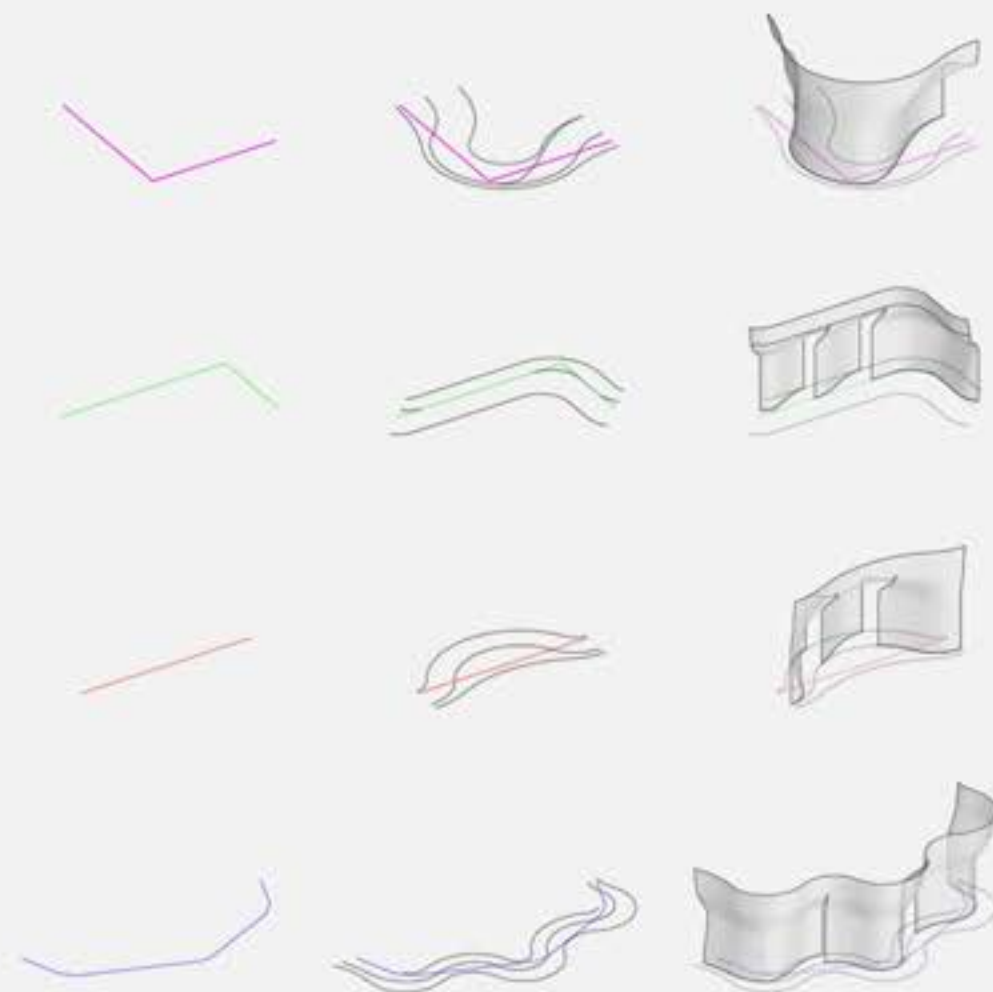
view of the wall modules | c
3d printed prototype (credits - Tvasta 3dp) | d

grammars in action

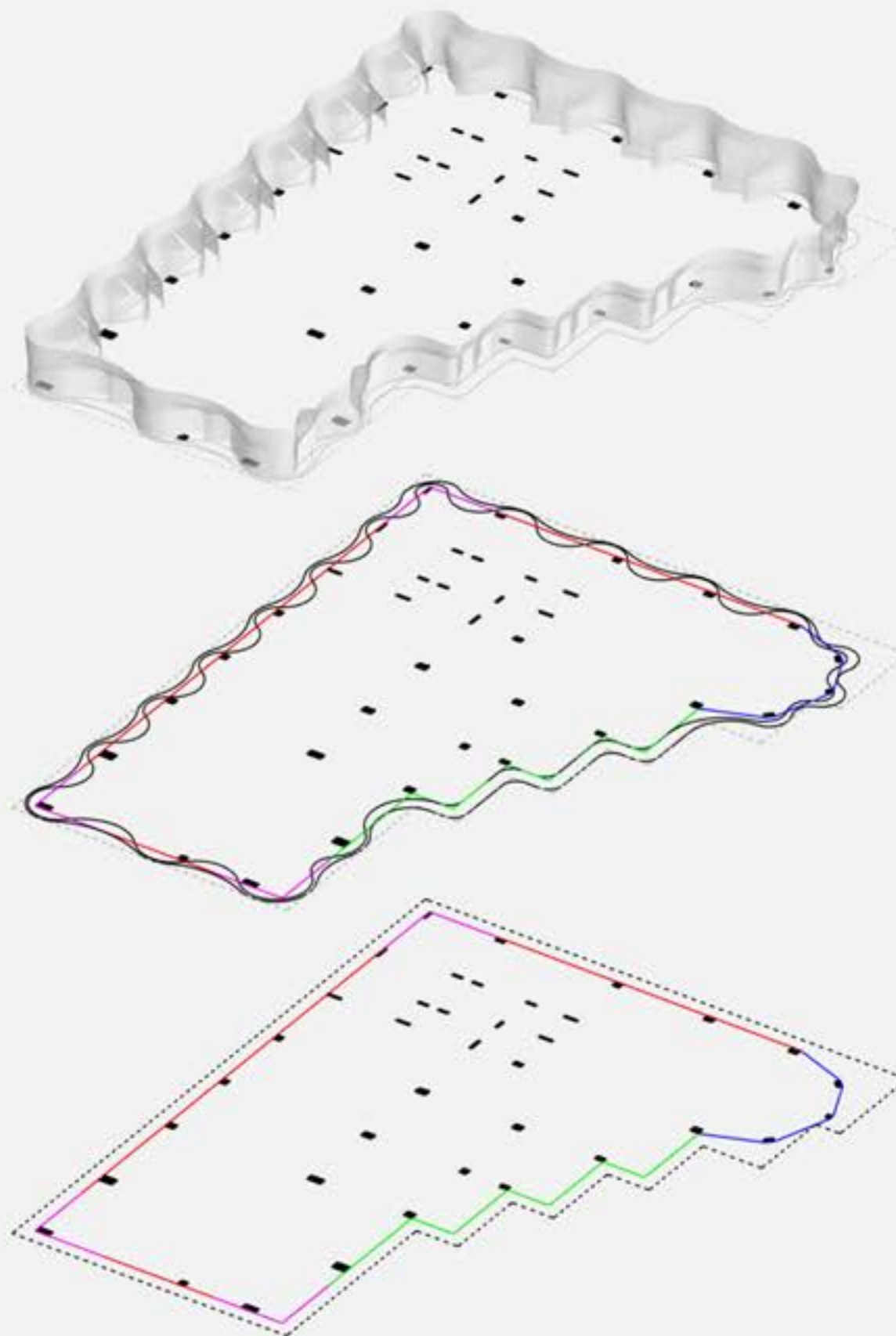
november 2022 | studio *SP+a*

With a careful consideration of the building's setback lines and the placement of columns, the design team developed a logical system for modularizing facade components, ensuring each part harmonizes with the overall structural framework. Shape grammars play a crucial role in this design process. These are sets of rules that dictate the arrangement and articulation of the facade's elements, guiding the transformation of flat surfaces into a textured, three-dimensional composition. This methodological application results in a facade characterized by corbelled bricks—a traditional architectural feature reimagined for a modern context.

a



b



These 3d printed scaled representations serve as exploratory stages, where the abstract concepts of shape grammars are tested and refined. They provide a physical manifestation of the design rules in action, showing how the corbelling technique can be adapted to create a facade that is not only structurally sound but also aesthetically engaging and responsive to its environment.

c



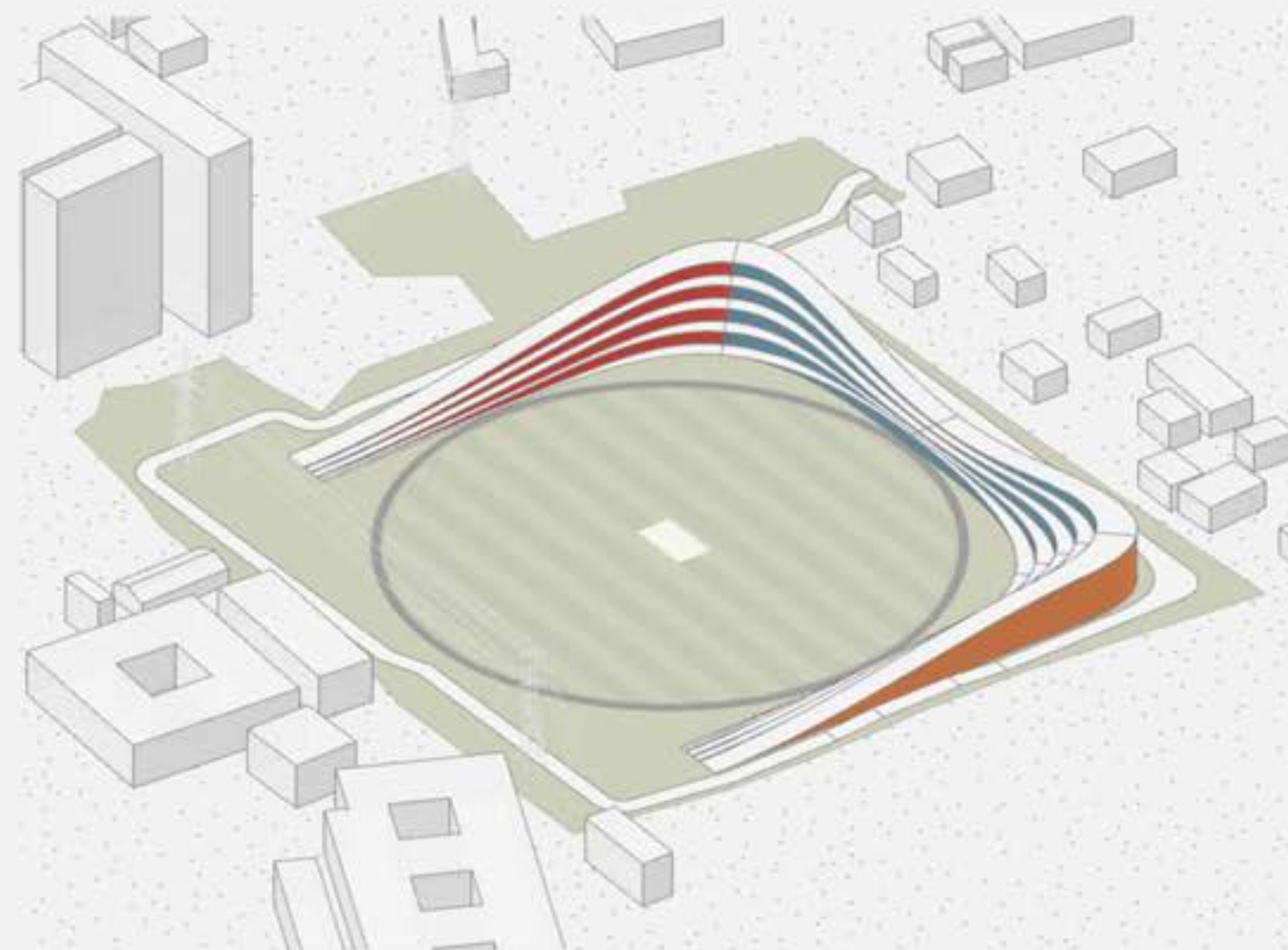
contemporary colosseum

august 2022 - present | studio *sP+a*

The contemporary colosseum is a high performance center for Indian domestic cricket team at Chennai. Center is wrapped as a ribbon around the practice grounds, its design inherently linked to the practice ground and vice versa. There cannot be one without the other. The experience of this kind of integration enables any visitor user to the club to be always visually connected to the pitch and the ground. The three floors rise as ribbons along people to walk on external ramps between floors while internally a serpentine double height hallway connects the three major programs of sport, hospitality and club programs. Center is an enormous living amphitheater, alive with its incredible variety of community activities but focused on the cricket pitch wherever you might be in the building. Through this integration of Club and Stadium, the viewers became participants.



b



SPORTS CLUB



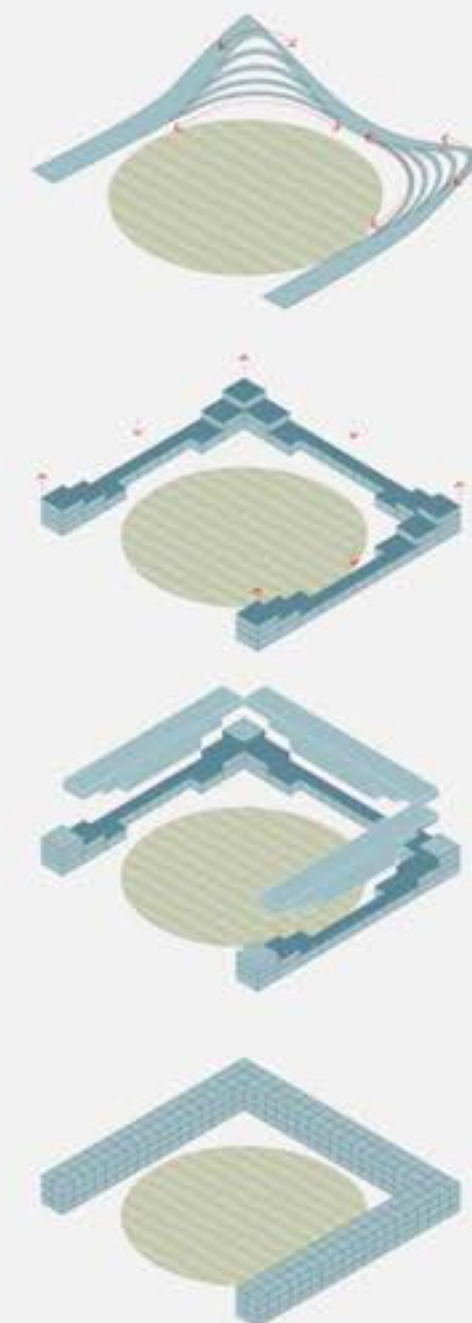
HIGH PERFORMANCE CENTER



REVENUE GENERATION



The form evolution diagram illustrates the systematic process of designing a multi-purpose structure that serves as a vibrant amphitheater. This design journey commenced with the establishment of a solid mass that adheres to the program requirements. As the design progressed, the volume underwent a subtractive process, where specific areas were strategically scooped out to accommodate the various programmatic needs. This meticulous excavation was guided by the volume required for each function. The final stages of the design saw the articulation of the roof, which was carefully draped over the programmatic elements beneath it.



a | view of the center from the ground
b | overall zoning and aerial view of the center

integrating spaces and structures

The central feature is the main entry lobby, which is defined by a sweeping spiral ramp. This architectural element elegantly unifies the building's multiple levels, providing seamless access to the terrace areas. The ramp intertwines with the undulating bands of the roof, each layer offering a distinct spatial experience.

a

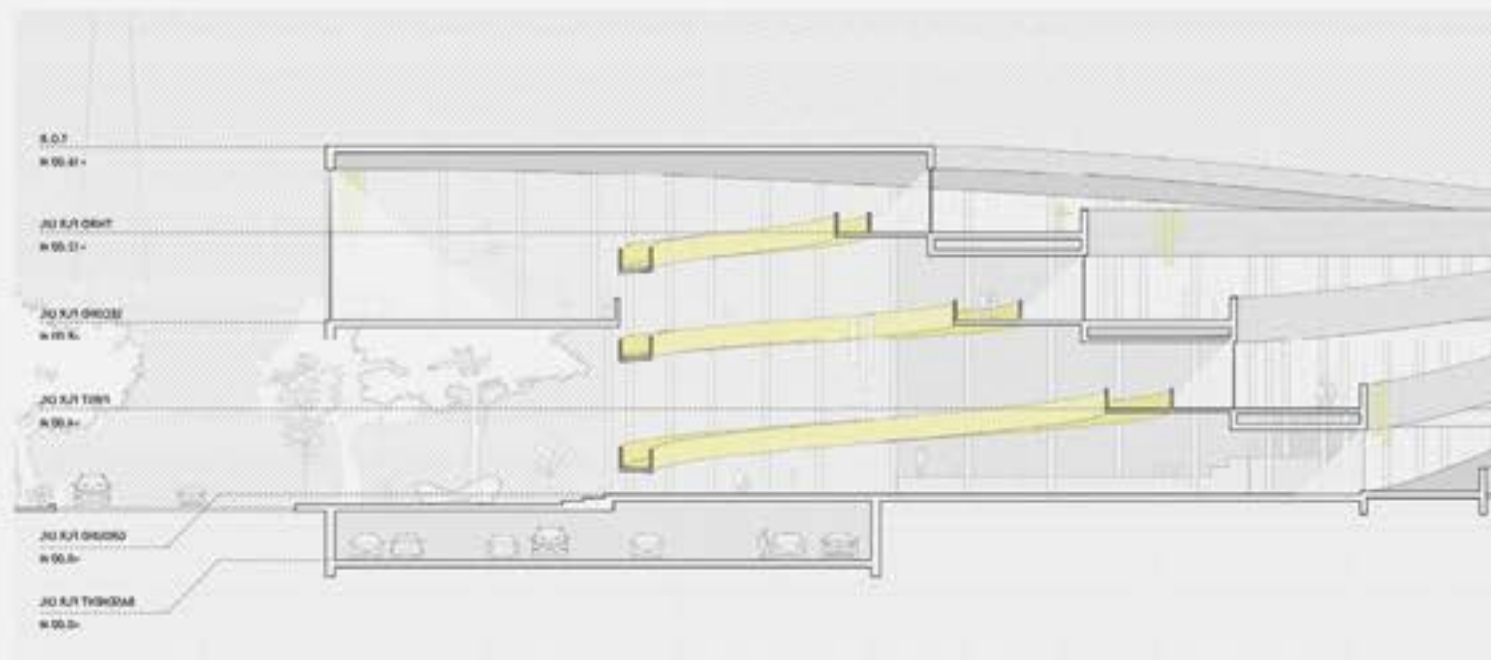


b



The strategic scooping and shaping of the internal volumes facilitate a dialogue between the building's dynamic form and its users, ensuring that the spaces are not just passed through but are lived in and engaged with. The design articulates a vision where structural innovation and user experience converge, redefining the essence of communal and accessible architectural environments.

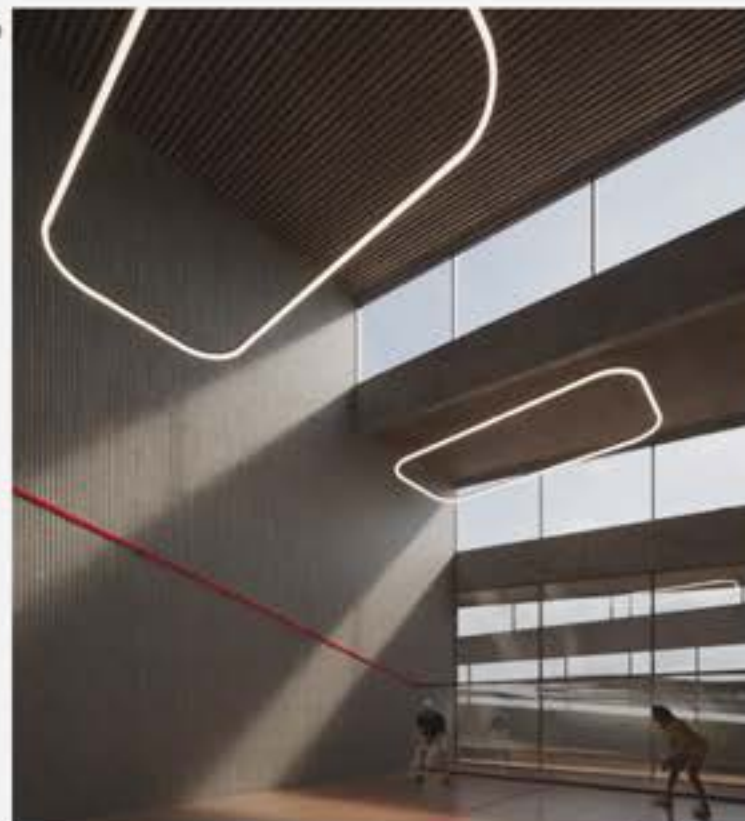
a



kinetic synergy

The section view illustrates the strategic layering of spaces, allowing for clear visual connections between different sports areas, enhancing the interactive experience. The facilities are designed with a focus on versatility, catering to a range of activities while ensuring each sport's unique spatial requirements are met.

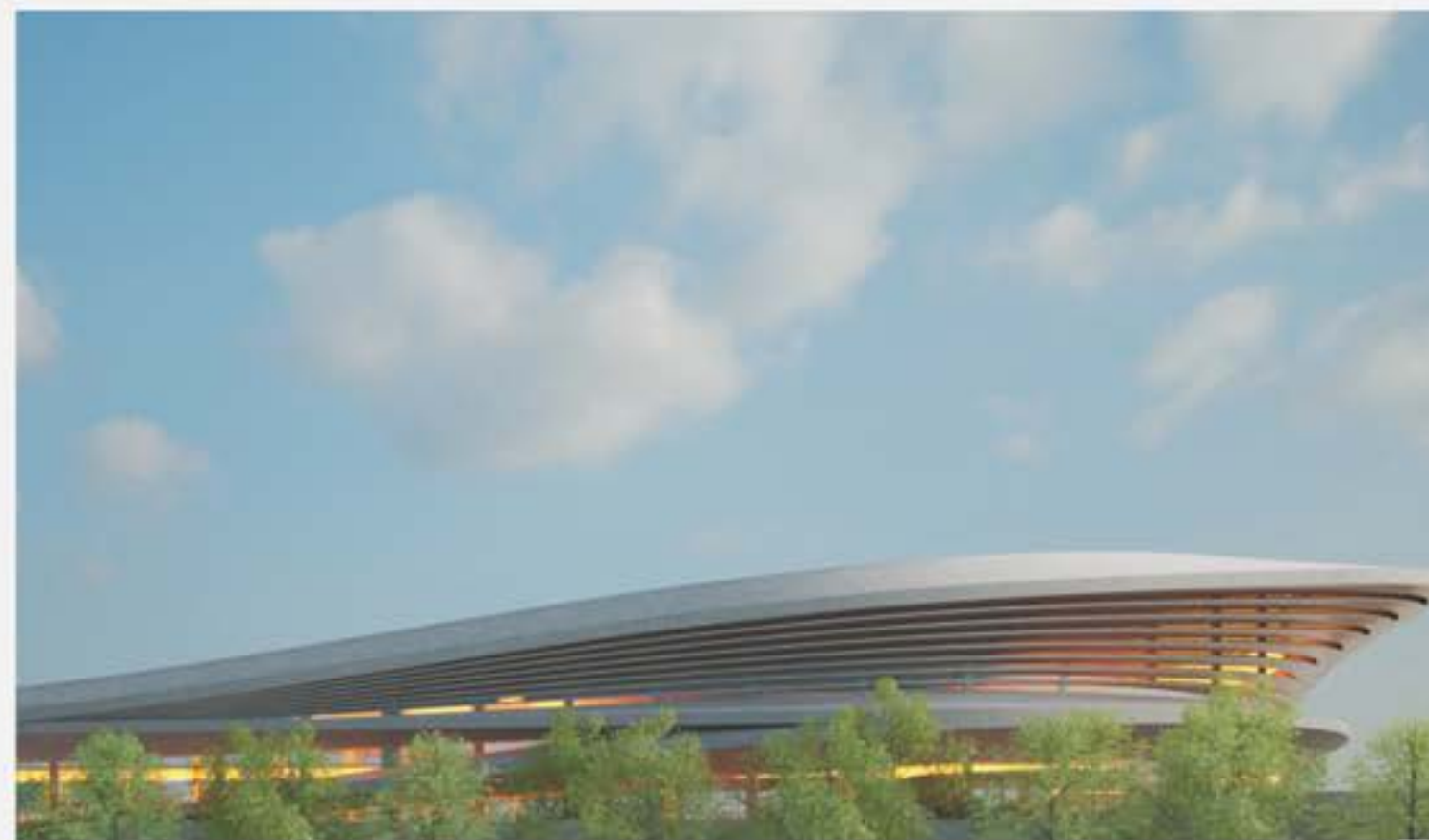
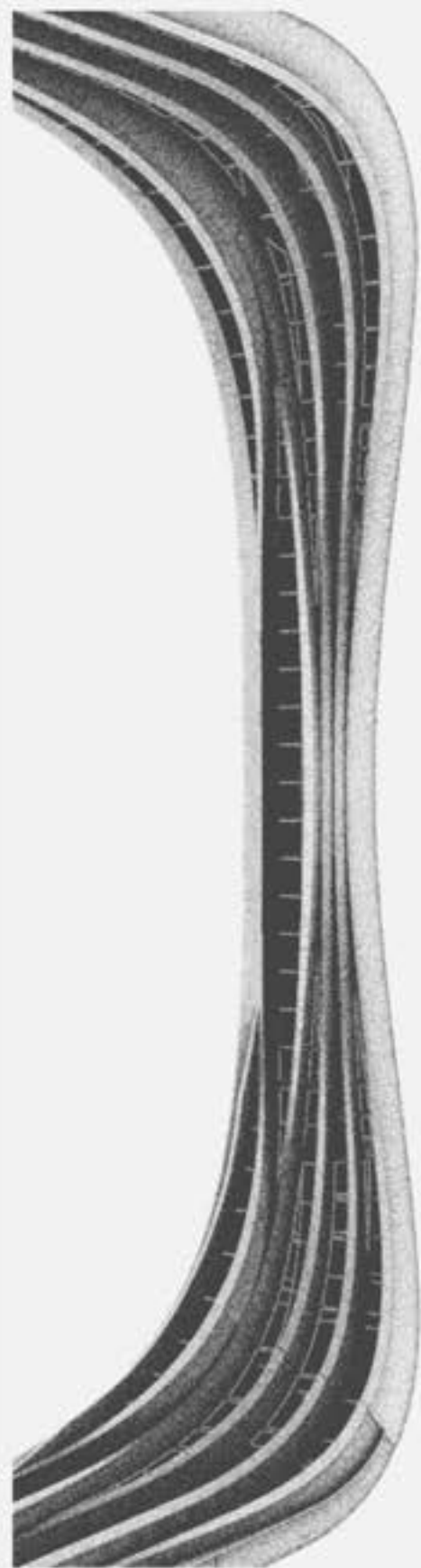
b



The sports facilities within the center is conceived with an emphasis on fluidity and movement, reflective of the athletic activities they house. Natural light floods the spaces, offering expansive views that contribute to an inviting and energizing environment essential for physical activity.

camouflaging with context

The design narrative for the outdoor spaces and facade of the center is one of harmony and seamless integration. The facade, articulated with rhythmic undulations, mirrors the fluidity of the surrounding landscape. It extends beyond mere aesthetics, serving as a mediator between the built environment and the natural setting. The structure's exterior is not just a boundary but a dynamic interface that engages with the ambient environmental elements.



The outdoor spaces are envisioned as an extension of the center's ethos, prioritizing accessibility and interaction with nature. Recreational areas such as tracks and water bodies are strategically positioned to encourage active engagement, inviting visitors to not only observe but participate in the landscape. The overarching design principle is to create a symbiotic relationship between the center and its natural context, fostering an environment where architecture and landscape coalesce to enhance human experience.

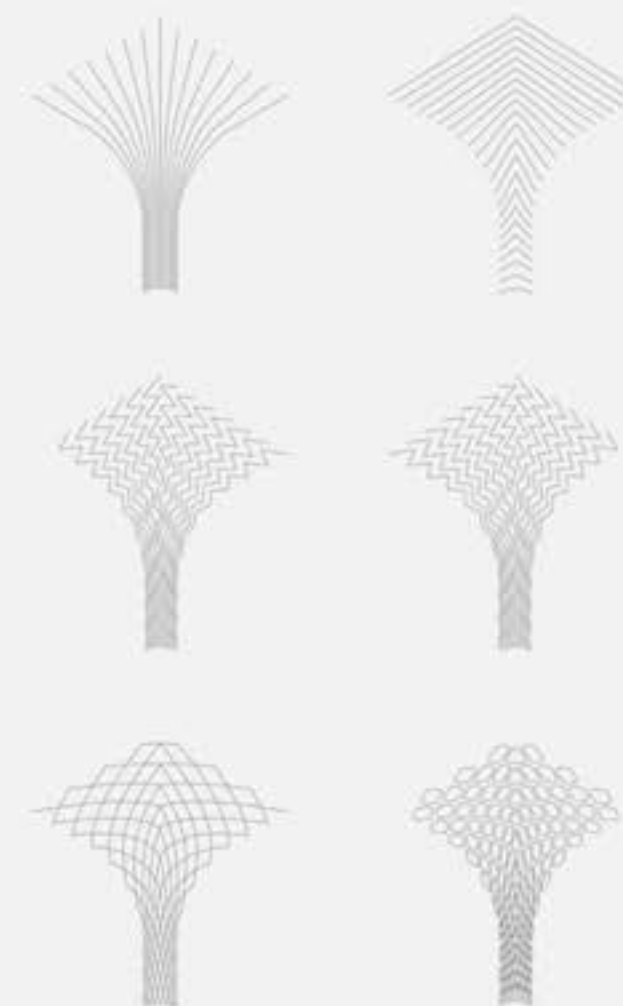
olakh - the identity

september 2023 | studio *SP+a*

Reimagining the PESC-Zone of T2 Terminal at Mumbai. 'Olakh' marathi word translates to identity. Questioning the concept of what is our identity, we drew inspiration from the local landscapes of India responding to the larger idea of dharti. The textile panel roof embodies the idea of identity through its materiality that is the cloth, kapda. The grand gates, makaan metaphorically speaking act as a portal to newer places across the globe that one goes to. The juxtaposition of these three- land, cloth and home invite people of Bombay to form a personal association with art and the environment around it.



The design strategy focuses on the interstitial space between the floor and the roof, leveraging the airport's existing patterns and columns as a canvas for intervention.



a | collage explaining the design concept (credits - Dhanvi Shah)

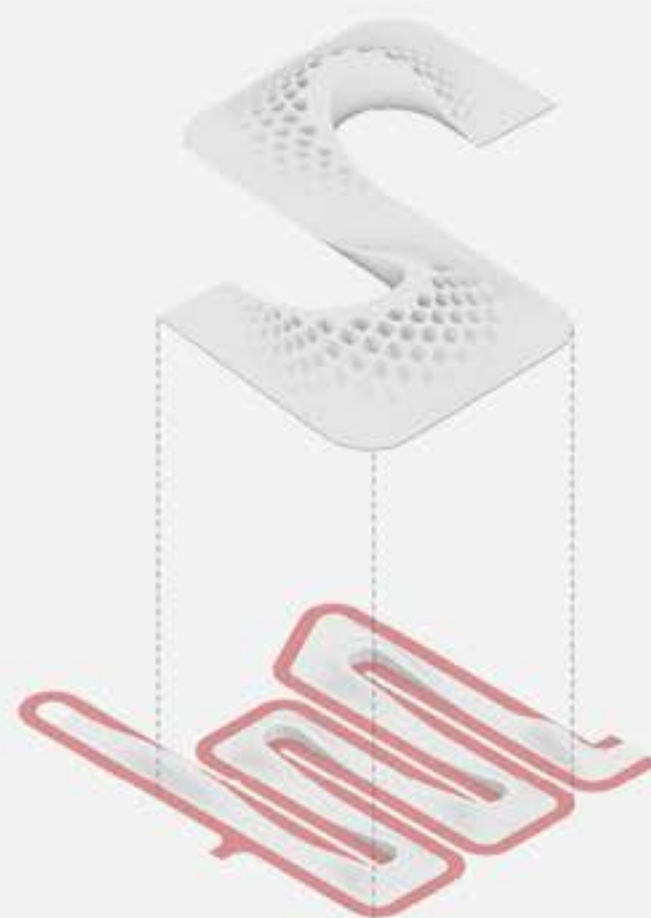
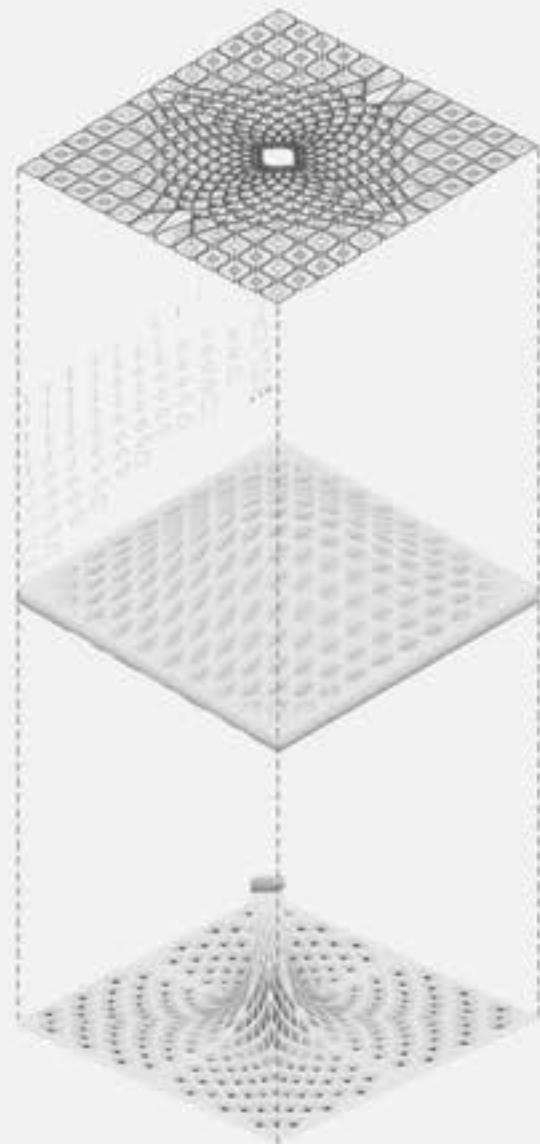
b | left - existing, right - proposed

framework of the design (credits - Rivka Roy) | c

deconstructing the column pattern | d

identity via landscapes

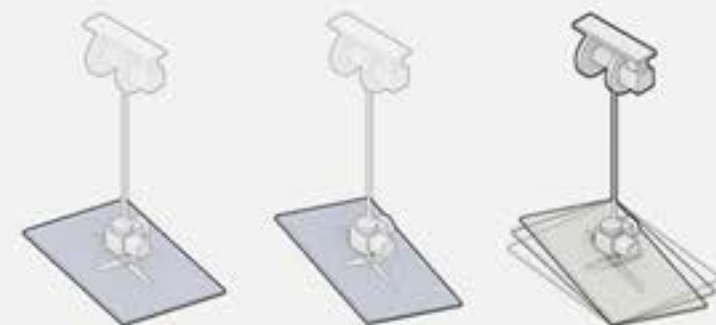
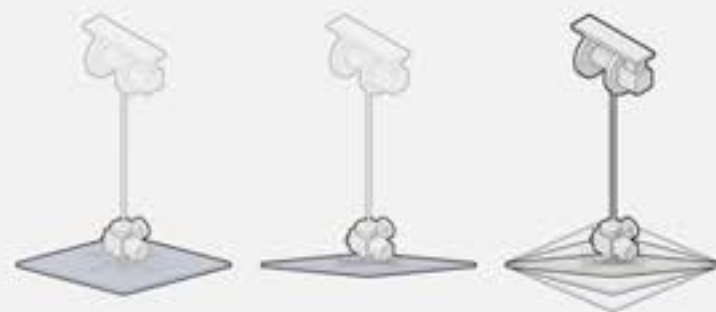
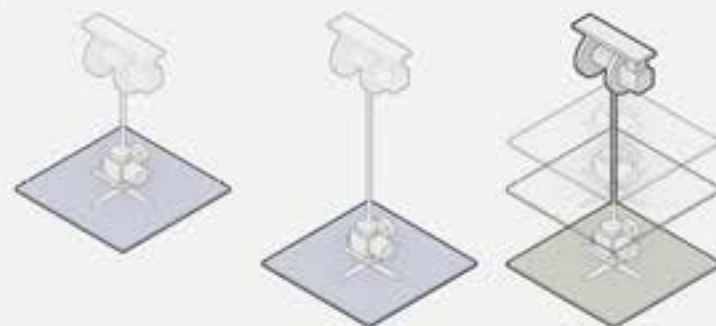
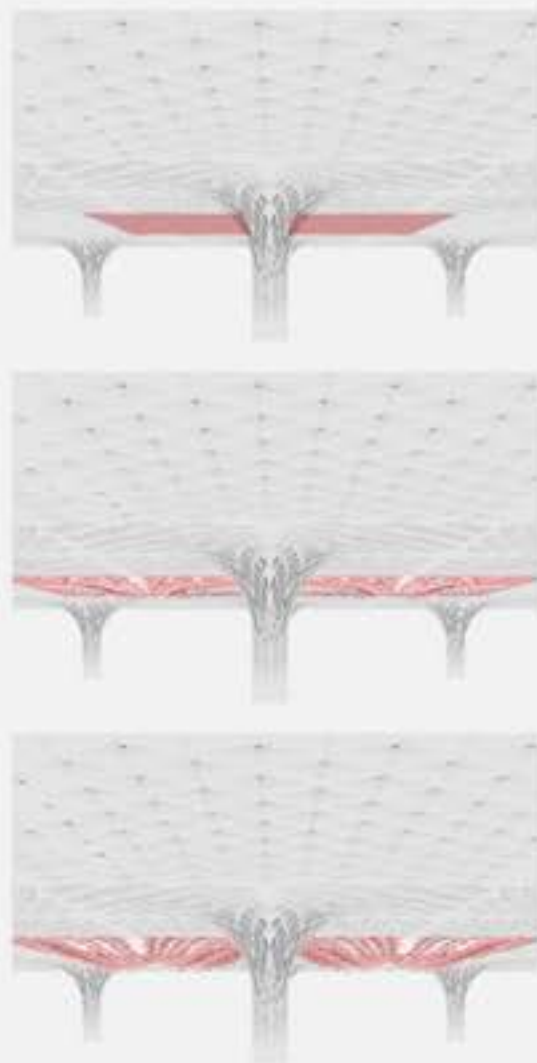
As passengers queue and traverse the terminal, the experience is enhanced through mobile device interaction. This digital layer allows passengers to scan the mounds, which activates visual content showcasing the landscapes these seeds originate from. It's an immersive learning experience, where each seed's story is unveiled, offering insights into the country's diverse flora and the significance of each species to its native region. The visuals demonstrate the design's evolution: from the existing architectural motifs to the final mounds, highlighting the seamless integration of form, function, and interactivity. This interplay between the physical and the digital creates a space where travelers can engage with the land's identity, fostering a connection with the natural heritage amidst their journey.



choreography of the roof^b

The diagrams sequentially illustrate the mechanism of kinetic panels, highlighting their transformational capabilities. The roof's movement is choreographed to offer different spatial configurations, a dance of light and shadow that responds dynamically to the needs of the terminal.

a



The kinetic panels are shown in various states, from flush alignment to expanded formations, demonstrating the range of interactions they can perform.

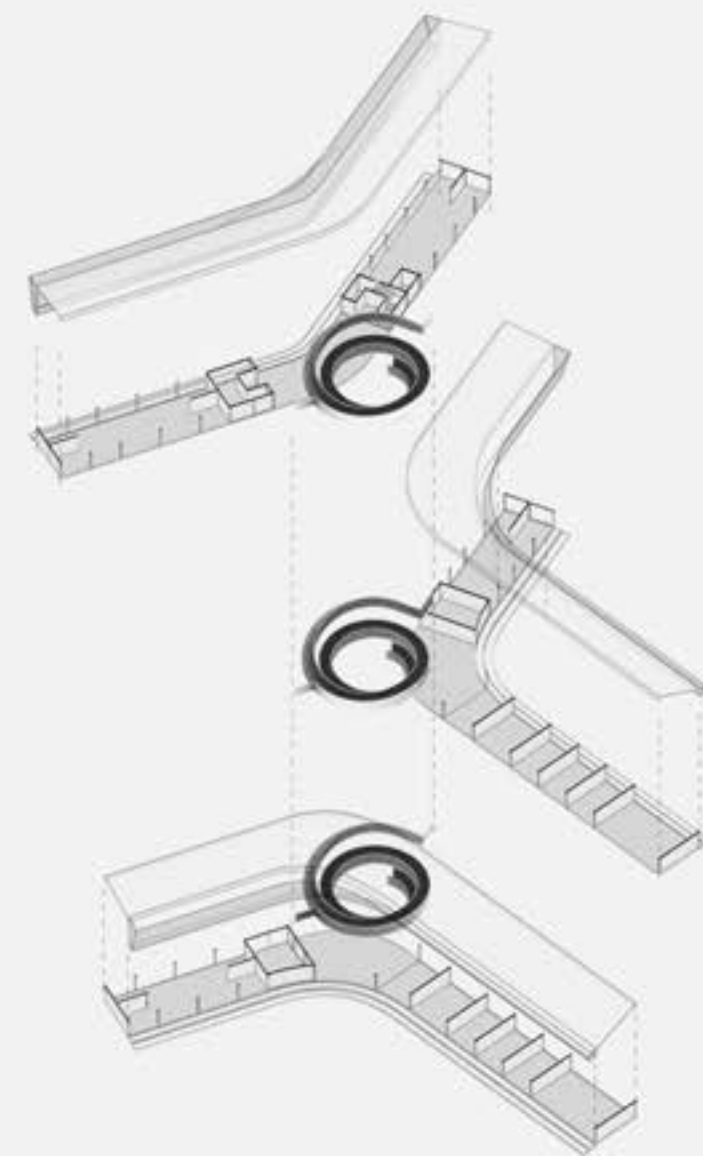
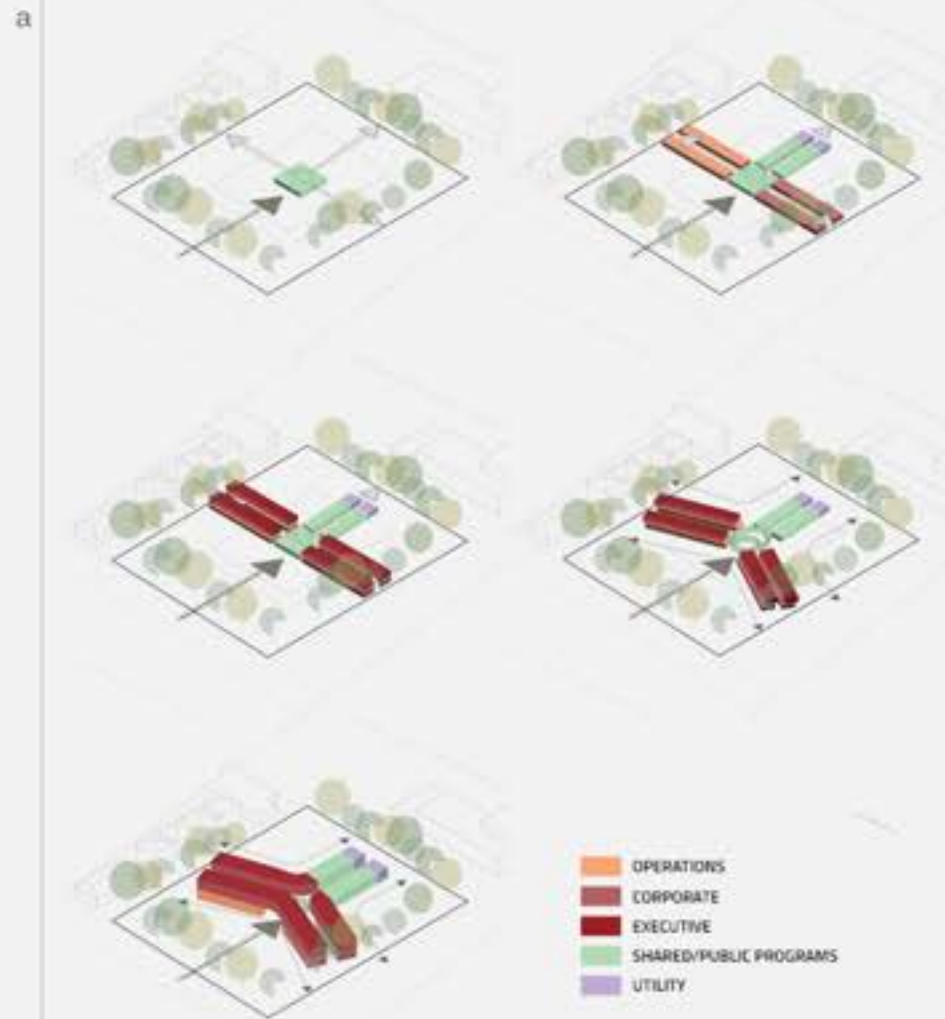


The proposal is a dialogue between static and dynamic elements, between the grounded identity of the region and the fluid identity of its visitors. The design intervention serves as a living, breathing embodiment of India's diverse heritage, offering passengers a moment of reflection and connection as they traverse the threshold of the country's gateway.

intersecting trajectories

may 2022 | studio *sP+a*

In this Ahmedabad-based project for a real estate developer's office, the design aims to capture the essence of street-like dynamism within a corporate setting. The central ramp serves as the main node, a focal point that not only provides vertical circulation but also acts as a diverging point, guiding visitors through the space. The design strategically organizes public programs along the central corridor, creating a lively and interactive spine that mimics the energy of a bustling street. This central artery is flanked by the staff's work areas, distributed across the left and right wings to ensure optimal flow and accessibility. By situating the executive programs on the first floor, a clear distinction is made between public and private zones, providing executives with a discrete space for focused work while maintaining a visual



a | zoning and circulation (credits - Dhristi Gandhi)
b | view from the central spiral ramp

exploded axo of the structure | c
view of the entry | d

The exterior skin is constructed as a solid barrier, providing protection from the intense heat prevalent in the city's climate. This design choice not only mitigates thermal gain but also contributes to the building's thermal mass, stabilizing interior temperatures. A strategically placed slit in the roof serves a dual purpose: it acts as a light well, funneling natural light into the interior spaces, and promotes cross ventilation, thereby enhancing air circulation within the building. This thoughtful design element is critical for maintaining a comfortable indoor atmosphere without reliance on mechanical ventilation.



The roof's form is another key aspect of the sustainable design. From the first floor, it gradually slopes down towards the public corridor, creating double-height volumes that enhance the spatial experience. This sloping design also contributes to the building's natural ventilation strategy, as the higher volumes allow for hot air to rise and escape, thus drawing in cooler air from lower levels.

traversing mediums

• CONCLUSION •

Digital modeling methods lie at the heart of modern creative workflows. Nevertheless, as these tools have grown in complexity, designers have increasingly found themselves investing substantial time in mastering these “black boxes,” diverting attention from the act of design itself. Consequently, these Windows, Menu, Icon, and Pointer (WIMP) modality-based interfaces promote premature design idea fixation and may stifle designers’ potential for innovation. The challenge at hand is to simplify these tools without compromising their sophistication.

The advent of Generative Adversarial Networks (GANs) and their capacity to materialize visual concepts from verbal descriptions demonstrates the power of intuitive interfaces. My particular interest lies in brain-computer interfaces (BCIs), specifically non-invasive methods for capturing Electroencephalographic (EEG) signals. These signals, translated into digital commands, hold the potential to revolutionize design processes, akin to the seamless transition of thoughts into sketches. BCI methods have the potential to replicate this high-level engagement by eliminating the need for mastering complex interfaces, now delegated to machine learning algorithms. These ML models learn to classify our brain signals and translate them into digital commands.

I am particularly interested in developing such an interface to investigate the potential applications of this synergy between neuroscience and design. How might this direct bi-directional communication, devoid of muscular activity, inform and expand our creativity? What might the future of design look like?

• DEEBAK TAMILMANI •
