

**S E L E N A   Z H E N**

## EDUCATION

### Carnegie Mellon University

Bachelor of Architecture, 2020

Minor in Human Computer Interaction

### Indiana Academy for Science, Mathematics, & Humanities

Academic Honors Diploma, 2015

## SKILLS

### Digital

Rhino 3D

Revit

Sketchup

AutoCAD

3DS Max

V-Ray

Grasshopper

### Adobe Suite

Photoshop

Illustrator

InDesign

Premiere Pro

After Effects

Dreamweaver

### UI/UX Design

Sketch

InVision

Figma

Prototyping

User Research

HTML/CSS

Python

### Analog/Fabrication

Drawing/Drafting

Model-Making

Laser Cutter

Woodshop

3D Printing

Photography (Digital)

## RECOGNITION

### Stewart L. Brown Memorial Scholarship, 2019

Recognized for professional promise as measured in both attitudes and scholastic achievement. Juried by AIA PGH.

### AIA Pennsylvania Student Award, 2019

Recognizes the exceptional scholastic achievement and future architectural promise of a graduating student.

### Alpha Rho Chi Medal, CMU School of Architecture, 2020

### Andrew Carnegie Society Scholar, 2019-20

### Senior Leadership Recognition, 2020

### Indiana Architectural Foundation Scholarship, 2017

## EXPERIENCE

### Freelance Work

#### Data Mechanics, Dover, tech.soa Jun 2019 - Present

Worked as a freelance designer and front end developer in branding, graphic design, and implementation of various UI/UX and design projects.

### UX Designer

#### MediaMath New York, Jun 2019 - Aug 2019

Worked with the UX Design & Research team to define a new visual design system, including desirability study research and stakeholder interviews.

### Experience Designer

#### BlueCrew San Francisco, Jun 2018 - Aug 2018

Redesigned and refocused BlueCrew's user experiences. Aligned with the app developer team to iterate on user interfaces and user interactions.

### Teaching Assistant

#### Carnegie Mellon University Pittsburgh, Spring 2018, Spring 2019

Provided in-class instruction and assistance to students for each course: Architecture Digital Media (2018), Learning about Learning (2019)

### Front End Developer + Designer

#### Zinc Technologies San Francisco, Jun 2017 - Aug 2017

Redesigned Zinc.io, PriceYak, Subtotal, and Lionfish product websites, as well implemented all changes.

## LEADERSHIP

### American Institute of Architecture Students (AIAS)

2015 - Present

Served on the CMU Executive Board as Treasurer, Vice President, Chapter President, and AIA/YAF Liaison as a student advocate and leader. Developed a podcast platform as an AIAS National Advocate (2019-20) focused on forming an awareness of "empty activism" and its potentially negative impacts.

### Beaux Arts Ball

Aug 2017 - May 2020

Directing and overseeing the planning of the Spring 2020 Beaux Arts Ball for the College of Fine Arts as an initiative to positively impact the arts community. Previously also served as Associate Chair for the 2017-18 Ball.

### Carnegie Leadership Consultant (CLC)

Aug 2019 - Jan 2020

Collaborated with fellow CLCs to improve and empower student leaders, and facilitate peer-led leadership training to students across campus.

### Conference - Technology Track Chair (AIAS)

Aug 2015 - Mar 2016

Planned and organized a national architecture conference with 500+ attendees.

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**NEW EXPERIMENTAL THEATER FOR NYC**

*An experimental theater for the World Trade Center Performing Arts Center, tackling the same site, program and constraints as those of the professional design team, with a focus on human experience and sequence.*

5

**HIGH RISE ‘UNTITLED’**

*A project looking at the role of the architectural promenade and how it can be adapted to the typology of the high rise, using Donald Judd’s writings and artistic outputs as intellectual and inspirational ideas for concept.*

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**HARDCORIST LECTORES**

*A studio which reconsiders the relationship between pure form, radical pedagogy, and the creation of spaces for the exploration and development of critical forms of architecture.*

13

**BIOTECHNOSPHERE BATHROOM**

*A built installation space that fosters mutualistic interactions between human and fish.*

15

**H<sub>2</sub>OME**

*An activity book designed for learning about water in the Anthropocene.*

17

**MEDIAMATH**

*An overview of the Design System created for MediaMath during Summer 2020. Includes typography, page interaction, form components, and mockups to test the Design System.*

19

**LUNAR GALA 2020 - COATED**

*A 8-piece fashion line for the Lunar Gala 2020 Fashion Show. Coated explores the combination of British outerwear and fringe edging techniques.*

# NEW EXPERIMENTAL THEATER FOR NYC

*Fourth Year | Spring 2019*

*48-601 Advanced Synthesis Option Studio: 4-D Architecture - Narrative, Hierarchy, Procession and Rhythm in Design*

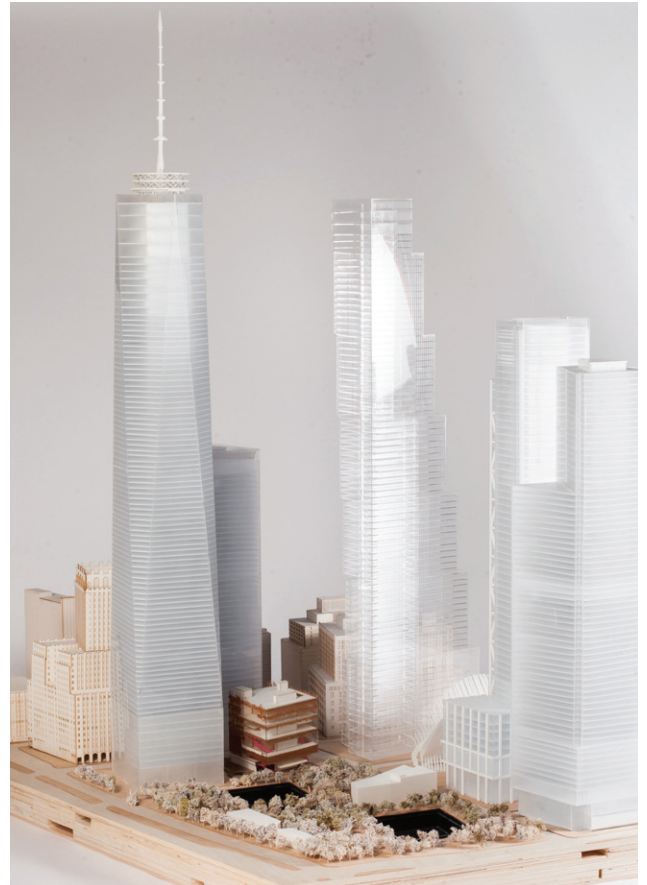
*42-408/418 Theater Architecture I & II*

*Studio Coordinator/Professor: Hal Hayes, Assisting Professors: Dick Block, Cindy Limauro*

## STUDIO INTRODUCTION

*"The site is immediately adjacent to the 9/11 Memorial and One World Trade Center megastructure. The World Trade Center Performing Arts Center (PAC) is the most anticipated, and controversial, addition in a generation to Manhattan's rich performing arts ecosystem. This 1200-seat three-theater complex is a real project currently in design and planning. This studio tackles the same site, program and constraints as those of the professional design team, which required us to develop mastery of the technical realities of performance productions, construction methodologies, structural & mechanical systems and community/stakeholder activism."*

In addition to developing technical and construction skills, the project is also largely about understanding occupancy and human experience. The design of a theater is particularly unique, as movement, occupancy, and experience are amplified and exaggerated.



Model in Built Context  
Scale: 1"=32'



## NARRATIVE + CONCEPT

The project is focused on reinforcing the significance of the theater in the area, by using water (from the memorial) as a material, both literally and figuratively, to cleanse and transform the experience of the guest.

When researching philosophies in Ancient Greece, where theater and stages for theater originated, I was interested in how I could use the 5 basic Greek elements to define my approach into the theater. The 5 basic Greek elements; **EARTH, WATER, AIR, FIRE, AND AETHER**, provide a basis for how different parts of the design interact with each other.

1. **EARTH - THE HEAVIEST ELEMENT, BASE.**

Represented by the Plinth as the basis for all matter.

2. **WATER - THE ELEMENT OF EMOTION, PROTECTION.**

Represented by the reflecting pool surrounding the building and the waterfall over the marquee, as an interpretation of a moat of protection surrounding the 'castle' or 'gem' in the downtown area.

3. **AIR - SPIRITUAL ENERGY AND MOVEMENT.**

Represented by the entry lobby and public area surrounding the plaza.

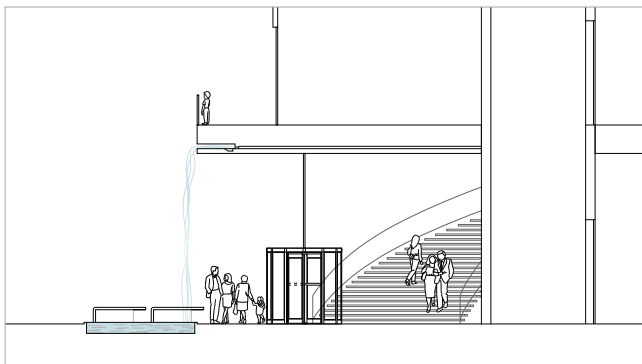
4. **FIRE - ENERGY AND PASSION.**

Represented by the public circulation of the building, as an interpretation of the supply of energy for the performance halls.

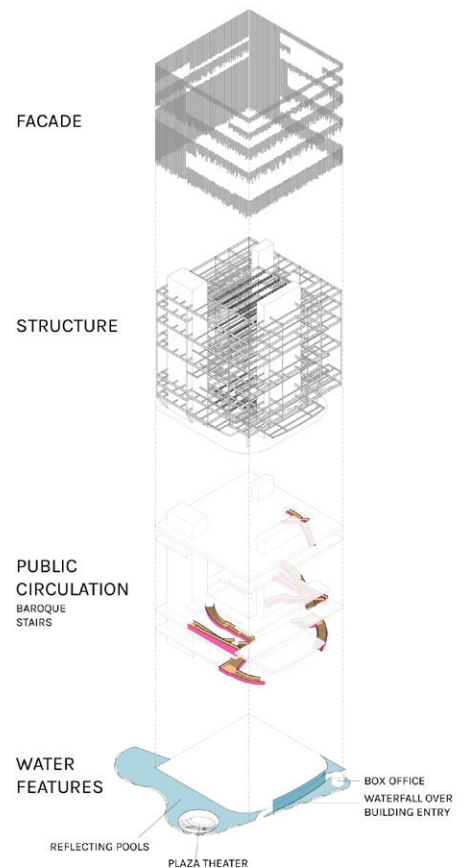
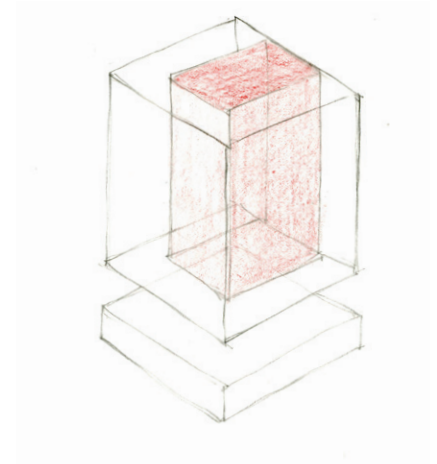
5. **AETHER/SPIRIT - THE HEAVENS, THE ESSENCE THAT THE GODS BREATHE.**

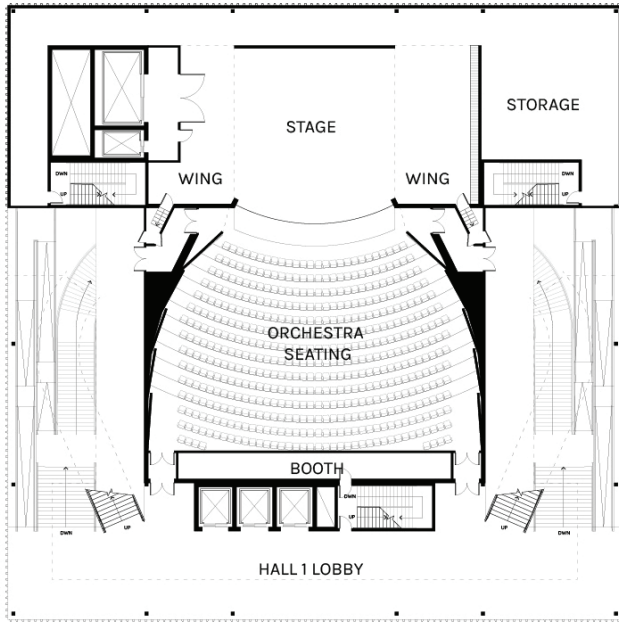
Represented by the performance chambers as the heart of the gem of downtown New York City.

I was also interested in the idea of the Baroque stair, and how it has become an icon of the sequence and procession of entering a theater. I wanted to use the experience of landings and the winding diagram of the stair to introduce guests to important parts of the program.

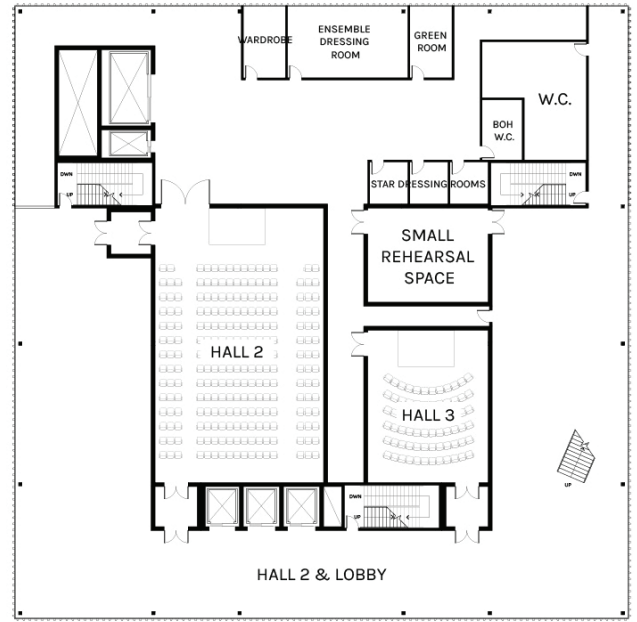


Entry Section

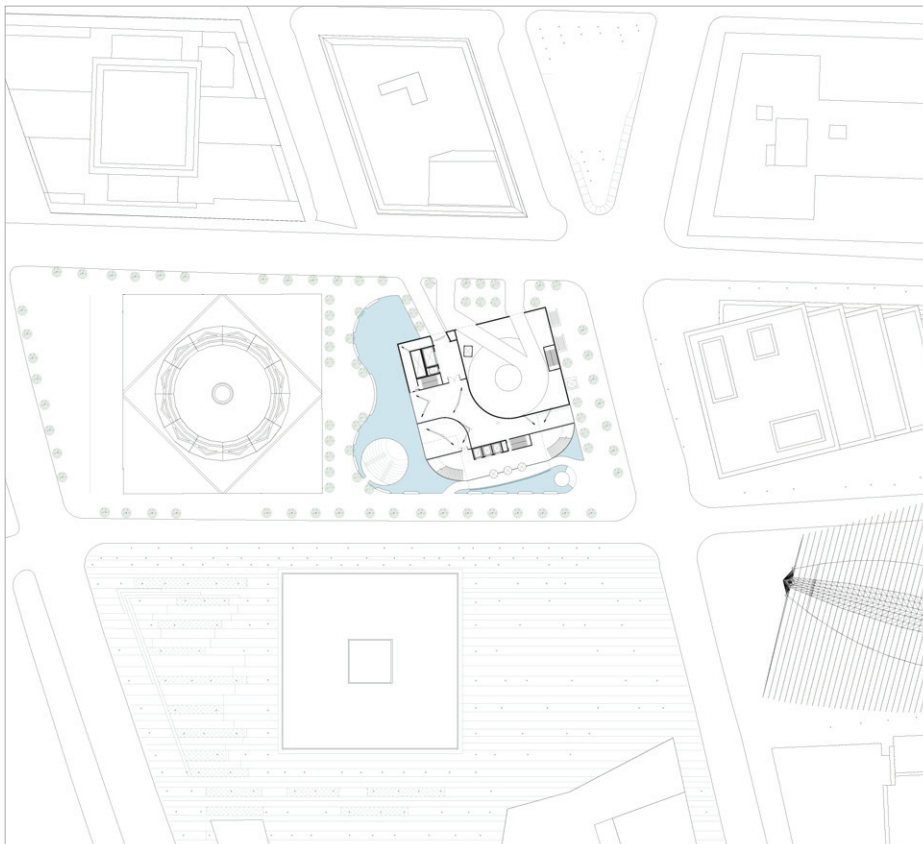




**LEVEL 4**  
HALL 1 ORCHESTRA SEATING



**LEVEL 8**  
HALL 2 & 3



**LEVEL 1**  
Ground Entry and Site Plan





Top: Render

Bottom Left/Right: Large Spatial Sectional Model, Scale: 1" = 8'

# HIGH RISE ‘UNTITLED’

4th Year | Fall 2018

48-400 Advanced Synthesis Option Studio: High\_Rise ‘Untitled’ 2018, New York, NY

Studio Coordinator/Professor: Gerard Damiani

## STUDIO INTRODUCTION

The program will focus on a urban high-rise structure located in SoHo in New York City directly across from the Judd Foundation. The building is to be a high-rise construction (75 feet or higher) consisting of vertical galleries, a museum store, studio workspaces for visiting artists, and apartments.

## MOMENTS

When visiting Marfa, I was struck by the incredible scale of each work in the 15 Untitled Works In Concrete series. Each concrete piece cast and assembled on the site is of the same dimensions, making the layout of these pieces the varying factor in the designs. The potential habitable scale of these works left an impression on my experience at the Chinati Foundation, which I used as inspiration for creating habitable moments within my building.



15 Untitled Works In Concrete - The Chinati Foundation

## FACADE

For the exterior facade of the building, I chose to use a 10 x 3 bay system, as a reference to the same bay system as the adjacent 101 Spring St. This allowed the building to fit in with the rest of the Soho context, as well as draw a visual connection to the neighboring Judd Foundation. I saw this extrusion piece as a representation of what Judd would perhaps consider a ‘detailed’ piece in his design studies, and used it as inspiration for a Miesian, modernized, neo-classical facade system.



15 x 105 x 15 Installation of 12 Extruded Aluminum Pieces

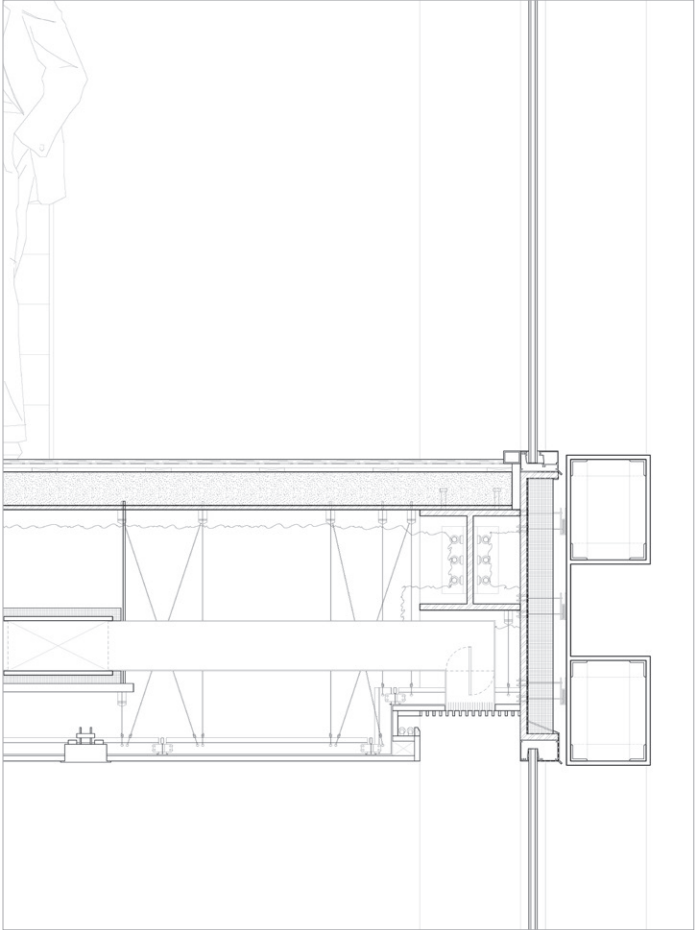
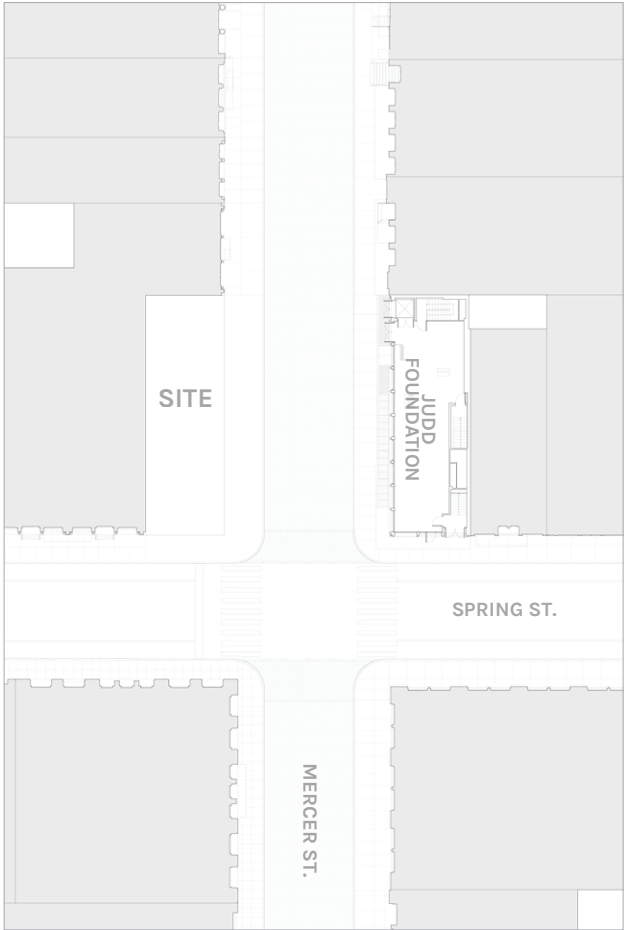




Mercer St. Elevation

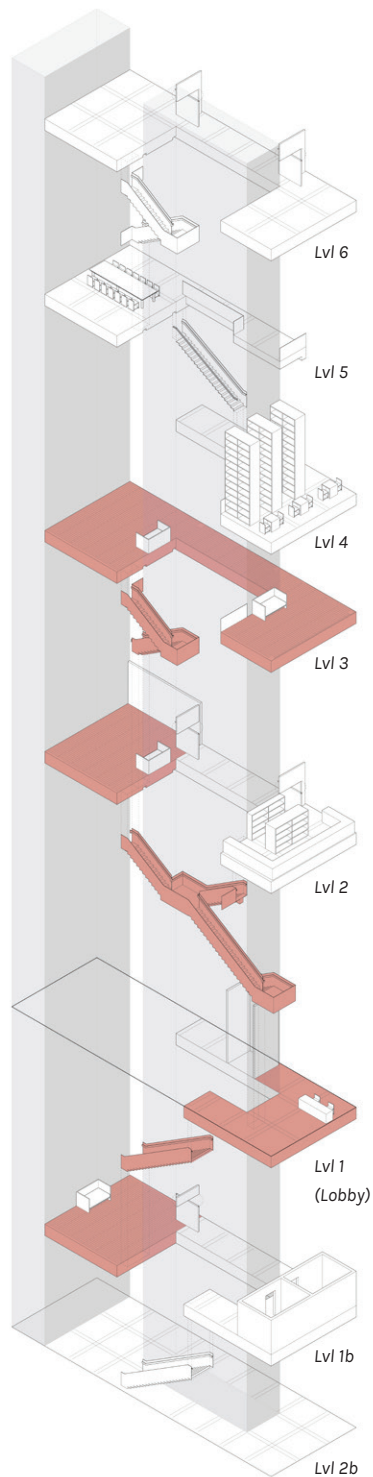


Spring St. Elevation

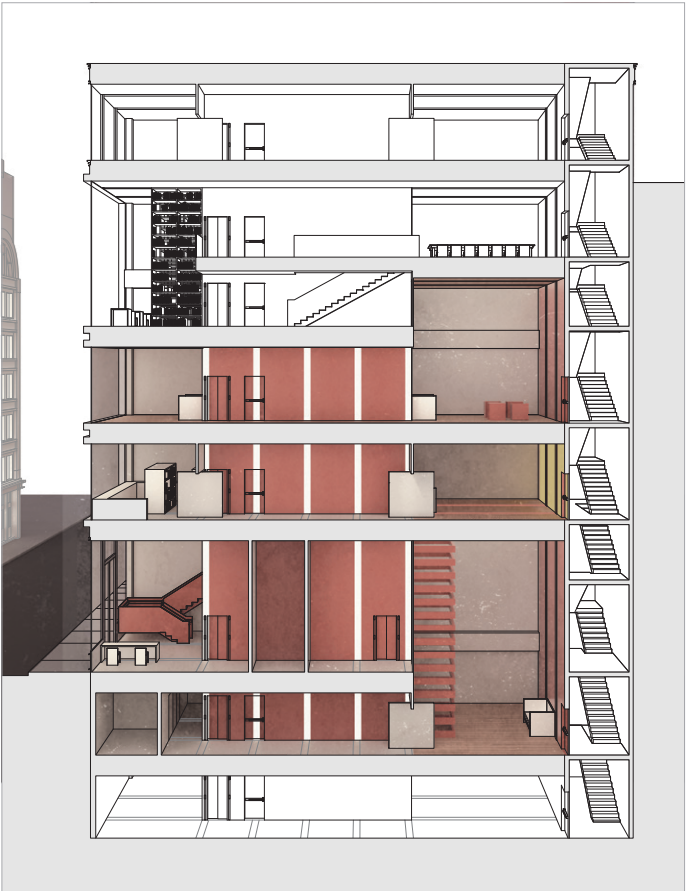


# MUSEUM ANNEX

This mixed-use tower is to provide additional exhibition space for artists curated by Flavin and Rainer Judd. The spatial container provided must allow for artwork to be presented in a number of formats.



Gallery Sequence Diagram



Section Perspective: Gallery Program Highlighted



Neutral Gallery Render: Dan Flavin Inspired Artwork

# RESIDENTIAL TOWER

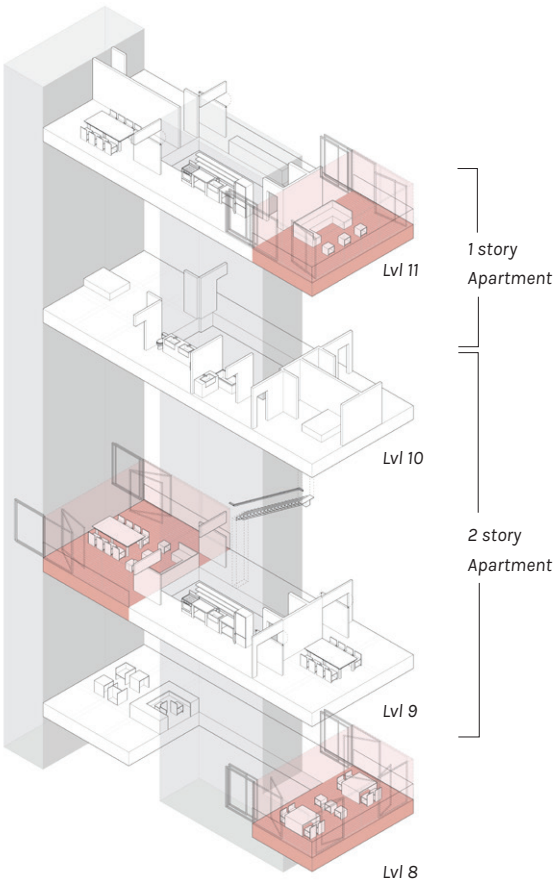
The residential tower is to accommodate a number of residences while creating an understanding of Donald Judd’s residential spaces.



1 Story Apartment Render: Flexible Living Room



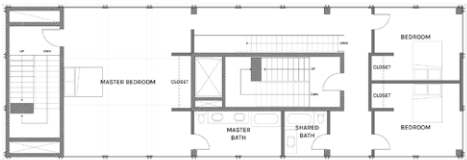
2 Story Apartment Render: Flexible Living/Dining Room



Residential Sequence Diagram

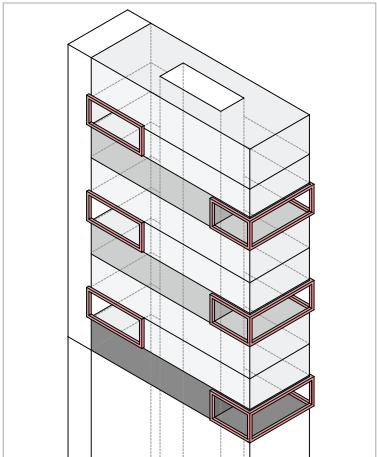
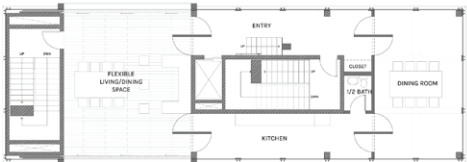
## LEVEL 10 Residential 2 Story Apartment

Repeated on Levels 13, 16



## LEVEL 9 Residential 2 Story Apartment

Repeated on Levels 12, 15



Residential Moments Diagram



# HARDCORIST LECTORES

*Fifth Year | Spring 2020*

48-510 Advanced Synthesis Option Studio: **HARDCORIST LECTORES & their worldmaking laboratories**

Studio Coordinators/Professors: Cruz Garcia and Nathalie Frankowski (WAI Think Tank)

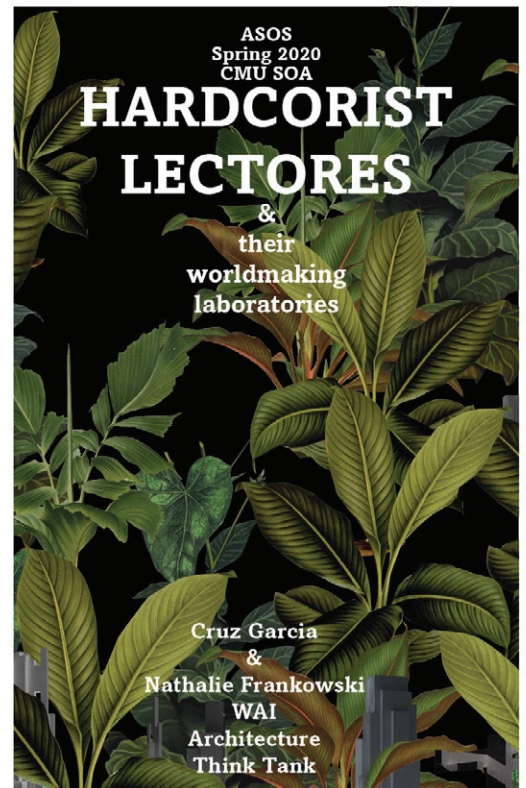
## INTRODUCTION

The introduction to the studio was initially written by Studio Professors Cruz Garcia and Nathalie Frankowski, and is paraphrased here.

*In a drive for human emancipation, the last hundred years witnessed the creation of various avant-garde schools, workshops, and laboratories that strived to blur the boundary between art, architecture and life. Starting with the People's Art School in Vitebsk in 1918, and followed by the Bauhaus(1919), Unovis (1919), Vkhutemas (1920), GINKhUK (1923) and Black Mountain College (1933), a century of turmoil paved the way to a series of transcendental institutions set to liberate architecture from the constraints of previous epochs.*

A hundred years after the foundation of Unovis, Bauhaus and Vkhutemas, 'HARDCORIST LECTORES AND THEIR WORLDMAKING LABORATORIES' reconsiders the relationship between pure form, radical pedagogy, and the creation of spaces for the exploration and development of critical forms of architecture. HARDCORIST LECTORES AND THEIR WORLDMAKING LABORATORIES' explores the possibility of Universal Workshops and Architectures of Emancipation.

Divided in two main parts, the studio will go from pure research, while designing multimedia installations (drawings, storyboards, film, collages, and models) not only the buildings and the relationship to their surrounding landscapes, but the stories of these WORLDMAKING LABORATORIES FOR HARDCORIST LECTORES.

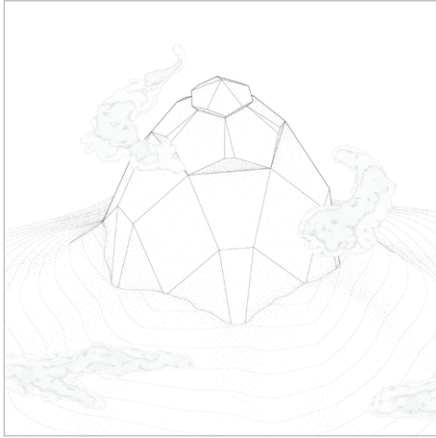




## PART 1: ARCHETYPE RESEARCH

### Peaks / Speleothems

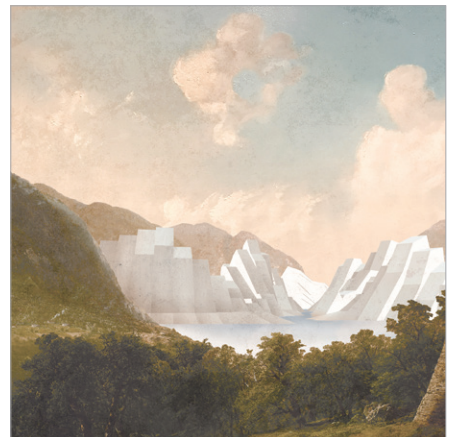
#### Crystal Mountain, Alpine Architecture, Bruno Taut



#### City of the Sun, Leonidov



#### Hualien Hills, BIG



## PART 2: LABORATORY FOR VIRTUOUS TEXTILE PRODUCTION

Laboratorio para la Producción Textil Virtuosa

### MY VISION

The Laboratory for Virtuous Textile Production aims to create a transformative and alternative educational experience regarding fashion and textile production. The Laboratory will provide a deep disciplinary knowledge of the history of textiles; understand the societal or political impacts of the industry; explore environmental problem solving; provide critical ways of communication; and regard art as a form of criticism and speculation. The program serves as a forum for brands, designers, eco-conscious consumers, and raw material makers to contemplate and discuss virtuous textiles. The campus programs and spaces provide opportunities to experience physical textiles in all cycles of its life - from raw material - to repurposed. Any and all forms of material are available for study here, and are integrated into every part of the buildings.

### SITE

The project reclaims the former naval base Roosevelt Roads in Ceiba Puerto Rico.

### FILMS

Because this studio project uses a variety of media to illustrate concepts, please see the following links to view important films that provide the full experience of the Laboratory.

Advertisement

<https://youtu.be/7dCEEU2CGkg>

Campus

<https://youtu.be/gJtNEJZ6PQg>

Pedagogy

[https://youtu.be/n\\_UOXyTrjDs](https://youtu.be/n_UOXyTrjDs)

### CAMPUS PROGRAMS

*Studio-Factory of Decolonial Cotton*

*Studio-Factory of Liberated Silk*

*Studio-Factory of a Dye-ing World*

*Forum of Fleeting Fancies*

*School of Textile Disruption*

*Plaza of Potential*

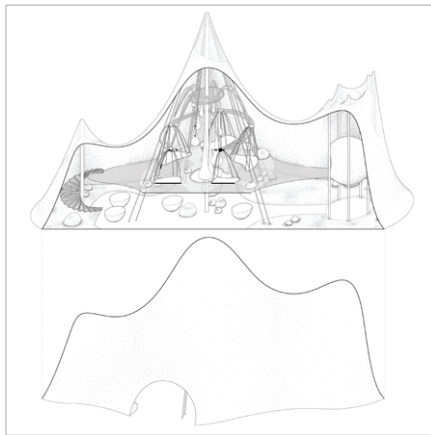
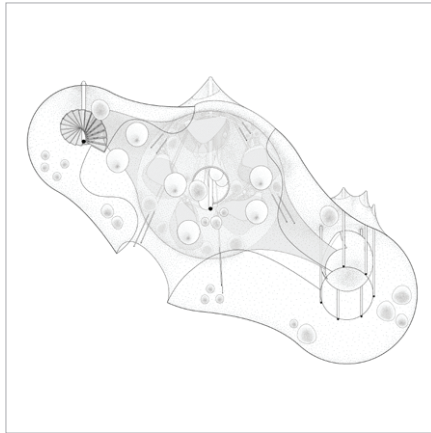
*Gallery for Art*

*Gallery for History*

*Runway of Reclamation*







# BIOTECHNOSPHERE BATHROOM

Fourth Year | Fall 2018

48-734 Reactive Spaces and Media Architecture

Professor: Jakob Marsico

## INTRODUCTION

With hopes that the future of mankind will live in greater integration in the natural world and coexistence with its creatures, our team used this foresight to create a space that exercises telepresence in both the natural world and our own. We decided to foster our own space of integration, using fish as models to better envision the mutualistic interactions we foresaw between creatures of the natural world and humans.

The Bathroom is a bathroom in which a fish tank houses its own fish-scaled replica of our human-scaled bathroom. In The Bathroom, the usual consequence of a person's action is amplified by one that affects the fish's world and vice versa. Brightness tracking and basic circuitry were employed to facilitate three main interactions.

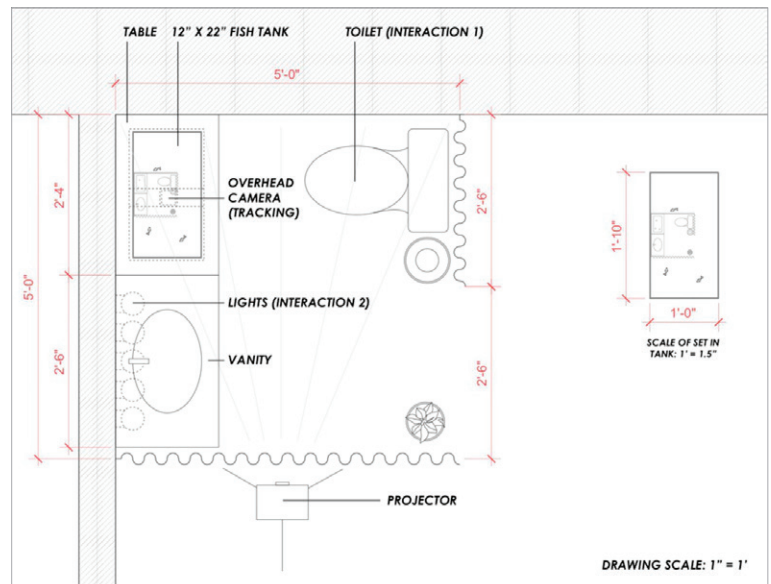
Program: Touchdesigner, Arduino

In collaboration with Soonho Kwon, Miranda Luong, Johanna Mcallister, and Nicole Matis.

Photos by Soonho Kwon.

## PROTOTYPE VIDEO

<https://vimeo.com/307090090>







**KNOCK** A knock on the fishs' tank produced an echo of a knock in the human bathroom.

**LIGHTS** A fish entering their own bathroom turned on the lights of the human bathroom.



**BUBBLES** A human sitting on their toilet caused bubbles to emerge from the fish's toilet.



# H<sub>2</sub>OME

Fifth Year | Spring 2020

05-292 Learning in Museums

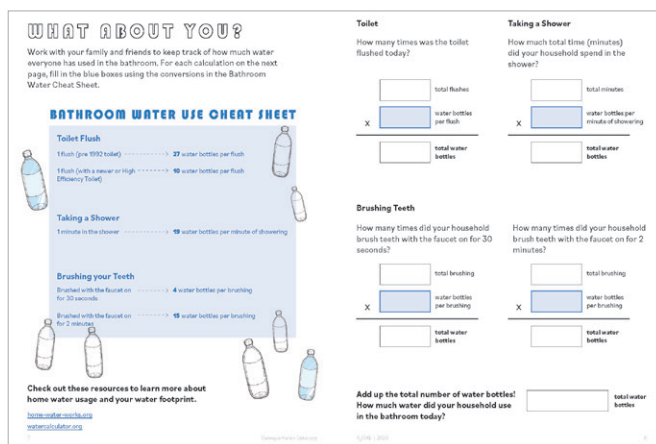
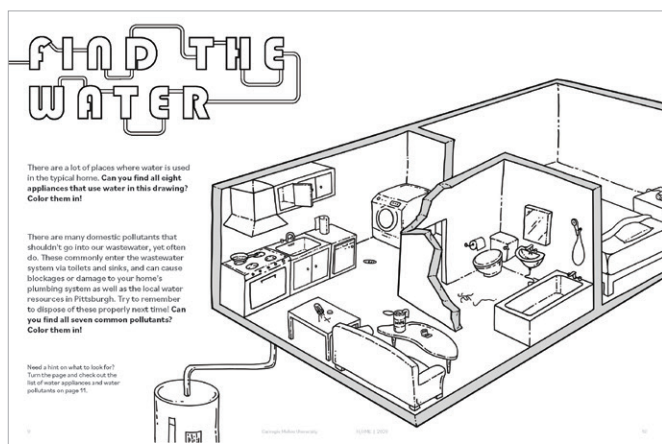
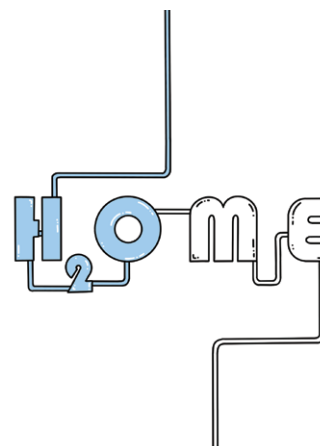
Professor: Marti Louw, In collaboration with the Carnegie Museum of Natural History

For our Learning in Museums project, we have created an activity booklet called H2OME, which is designed and written about the topic of Water.

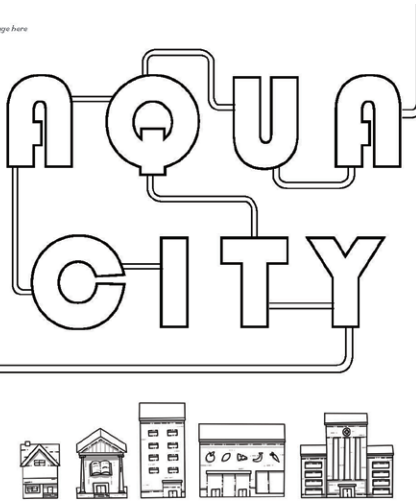
Our hope is that the booklet provides a learning opportunity for museum visitors and their friends/family about the region's water story, as well as their own personal home water story.

The booklet is designed for children in grades 3-5, but we highly encourage parents to participate in the activities as well.

In collaboration with Daniel Noh and Don Lee.



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You've been voted as the mayor of Aqua City! Your first task is to help design and develop two empty blocks in the city center. As the new mayor, part of your duty should be to improve the way water is handled in the city. Try to be more water-conscious and water-sustainable, and use this activity to learn about the cause and effect of home and city infrastructure.

Feel free to color and decorate the Aqua City components as you see fit!

H2OME | 2020

Cut out page here

## SCORE SHEET

Use the Score Sheet to calculate the score of your city. How did you do? What are ways you can improve your score? Feel free to rebuild your city, then recalculate your score. A higher score means your city is more water-conscious and water-sustainable!

Component	Points		Your Quantity		Points Subtotal
Bioswale	2	X	<input type="text"/>	=	<input type="text"/>
Permeable Street Pavement	2	X	<input type="text"/>	=	<input type="text"/>
Rain Garden	1	X	<input type="text"/>	=	<input type="text"/>
Green Roof	1	X	<input type="text"/>	=	<input type="text"/>
Rain Barrel	1	X	<input type="text"/>	=	<input type="text"/>
Flower Garden	0	X	<input type="text"/>	=	<input type="text"/>
Bench	0	X	<input type="text"/>	=	<input type="text"/>
Car	-1	X	<input type="text"/>	=	<input type="text"/>
Fish Pond	-1	X	<input type="text"/>	=	<input type="text"/>
Lawn Sprinkler	-1	X	<input type="text"/>	=	<input type="text"/>
Pool	-1	X	<input type="text"/>	=	<input type="text"/>
Fountain	-2	X	<input type="text"/>	=	<input type="text"/>
<b>TOTAL SCORE</b>					<input type="text"/>

Carnegie Mellon University

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## INSTRUCTIONS


- Cut out pages 20 - 27.
- Decorate and cut out the individual infrastructure components that will be used to customize the new blocks. Additionally, decorate and cut out the individual building components where people will live and roam in your city.
- On the map (pages 29 and 30), arrange the buildings and infrastructure components on the two empty blocks of the map. Pick and choose the elements that you'd like to include as new mayor. Don't forget that Aqua City should be water sustainable, so try to choose infrastructure components that will make your city beautiful as well as aqua-friendly. Check out the Aqua City Index to see what each infrastructure component can do for your city.
- Finally, check how environmentally friendly your city's water-planning is by calculating your points using the Score Sheet. A higher score means your city is more water-conscious and water-sustainable!
- Show us how you did by taking a picture of your city and sharing it on social media with **#H2OME.CMNH**

H2OME | 2020


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## AQUA CITY INDEX


Included in your Aqua City Kit:




House (x7)




Apartment Building (x3)




Hospital (x1)




Grocery Store (x1)




Library (x1)




Rain Barrel (x6)  
*Attach any number of Rain Barrels to any building to collect rainwater.*




Lawn Sprinkler (x5)  
*Place a Lawn Sprinkler near any house or apartment building to keep the grass watered and green.*



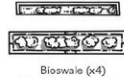
Rain Garden (x5)  
*Place a Rain Garden near any building to collect and absorb surrounding stormwater.*




Permeable Street Paving (x2)  
*Place a Permeable Street Paving on top of any existing street to improve its water retention and runoff quality.*



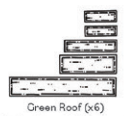
Flower Garden (x5)  
*Place any number of Flower Gardens near any buildings.*




Bioswale (x4)  
*Use a Bioswale near a street or sidewalk to collect and filter stormwater from paved areas.*




Pool (x6)  
*Place a Pool near a house or apartment building to provide a recreational water activity.*




Green Roof (x6)  
*Replace the roof of the grocery store, hospital, or an apartment building with a Green Roof to absorb rainwater. Make sure you use the right size roof for each building!*




Fountain (x4)  
*Place a Fountain anywhere to create a city water attraction.*



Fish Pond (x3)  
*Place a Fish Pond anywhere to create a city water attraction.*



Car (x7)  
*Place a Car on any street. Be aware that cars can create pollution in stormwater runoff!*



Bench (x8)  
*Place a Bench anywhere to provide a great outdoor sitting area.*

H2OME | 2020

# MEDIAMATH

*Position: UI/UX Designer*

*New York City*

*June 2018 - August 2018 (Summer 2019)*

## **INTRODUCTION TO MEDIAMATH**

*(from MediaMath's website, accessed February 2020)*

*"MediaMath is the acclaimed independent advertising technology company for brands and agencies.*

*Brands and their partners use our technology and services to achieve the performance they deserve with less effort.*

*We created the first software for real-time media buying in 2007 and today work with over two-thirds of the Fortune 500 and more than 3,500 brands and their agency partners to grow and deepen direct customer relationships.*

*Our clients can access the purest supply to reach real humans at the scale they need across channels like mobile, CTV and display and can use a combination of advanced AI and human expertise to drive improved results over time."*

## **MY WORK**

At MediaMath, I worked with the UX Design & Research team to define a new visual design system for MediaMath's new platform direction. This included creating style tile options, choosing a final direction, component and pattern iteration, desirability study research (to validate direction with stakeholders), component iteration, and a final Design System via Invision Design System Manager (DSM).

All products designed for MediaMath, with appropriate permission to reuse. This is only a selection of work created during this summer position.





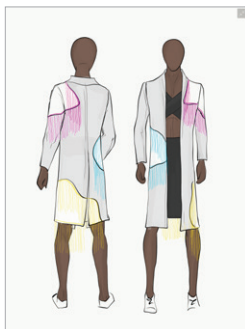
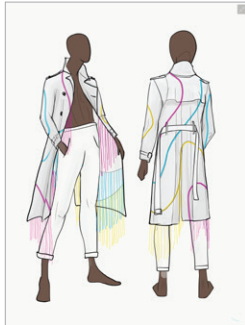
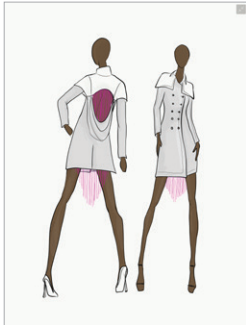
# LUNAR GALA 2020 - COATED

Carnegie Mellon University

Design + Construction Process: Fall 2019 - Spring 2020

Runway Show: February 29, 2020

In collaboration with Michael Powell



## **MORE PROJECTS**

[selenazhen.com](http://selenazhen.com)

## **EMAIL**

[selena.zhen.00@gmail.com](mailto:selena.zhen.00@gmail.com)