

Tianying Li

ARCH 2055

Visual Communication 1
Drawing Field

2022 Fall

Drawing Field

HKU BAAS, Visual Communication 1 (ARCH2055)



José Vial Armstrong. *Windroller*, The Open City, Chile, the 1970s.

Architectural drawing oscillates between two types of knowledge: the analytical, and the creative.

Drawing as abstraction

To draw is to perceive reality and abstract it. Besides collecting, documenting, and categorizing what is out there, drawing also filters information and further reorganizes it to reveal new knowledge. It uncovers the underlying structure of reality through conscious isolation and removal, and that which to isolate or remove, despite a biased choice, manifests the author's reading of the space.

Drawing as a process

Such reading reflects the internal relationships of space, or in other words, its latent tectonics. Meanwhile, drawing traces the history of such relationships. It portrays the sediment of materials and their driving forces through time. The product of drawing is a synchronic section of the object, while the making of drawing is a process of (re)construction.

Drawing as creation

Yet, the drawing should not be limited to the translation of a preconceived idea. Instead, it is the thinking process itself. It accommodates as many conscious decisions as unexpected discoveries. The accumulation of operations creates space for reading and misreading. It is between such freedom and prescription that drawing functions as a productive instrument.

The course consists of four parts:

- Lectures: Theoretical background and introduction of exercises.
- Technical tutorials: introduction to basic representational methods and software skills.
- In-class exercises: a 30 min to 1h exercise to practice the skills.
- Assignments: comprehensive projects that require the mastery of skills and active creation. (in total 4)

The semester starts with a 5-week project (weekly exercises) on basic architectural representation techniques. The second half of the semester asks students to use drawing skills comprehensively to speculate and create a form/space.

1.A. Analysis (In-class exercises): Analytical drawings, including sections, developed surface, image sequence, and projections of the case-study houses (assigned in design studios)

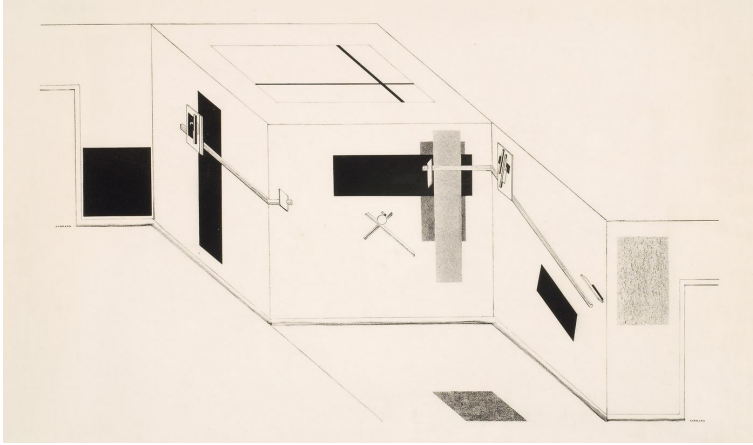
1.B. Field Drawing: Survey and translation of a found piece of ground (in a group of four).

2. Hidden Gauge: Rationalize the curves from the field survey with geometric constraints.

3. Drawing Field: Take the previously constructed curves as the basis to speculate a 3D form/space following a series of operations.

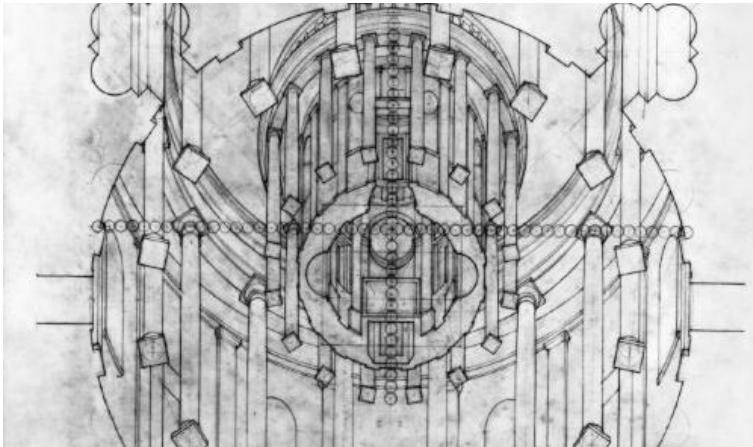
Project 1A: Analysis

Analytical drawings studying the case-study houses assigned in studio



El Lissitzky. *Proun Room*, 1923.

Thomas Silva. *Analysis of Tempietto*, 1984.



The first three sessions of the course will introduce basic representational techniques, including sections, developed surface, projection (perspectival and parallel), as well as the sequencing and composition of drawing making. Students will learn and practice through in-class exercises by studying their case-study houses in the studio. The in-class exercise of analysis drawings will be sketches or computer drafting (Rhino or AutoCAD).

Exercise 1: Hidden Section

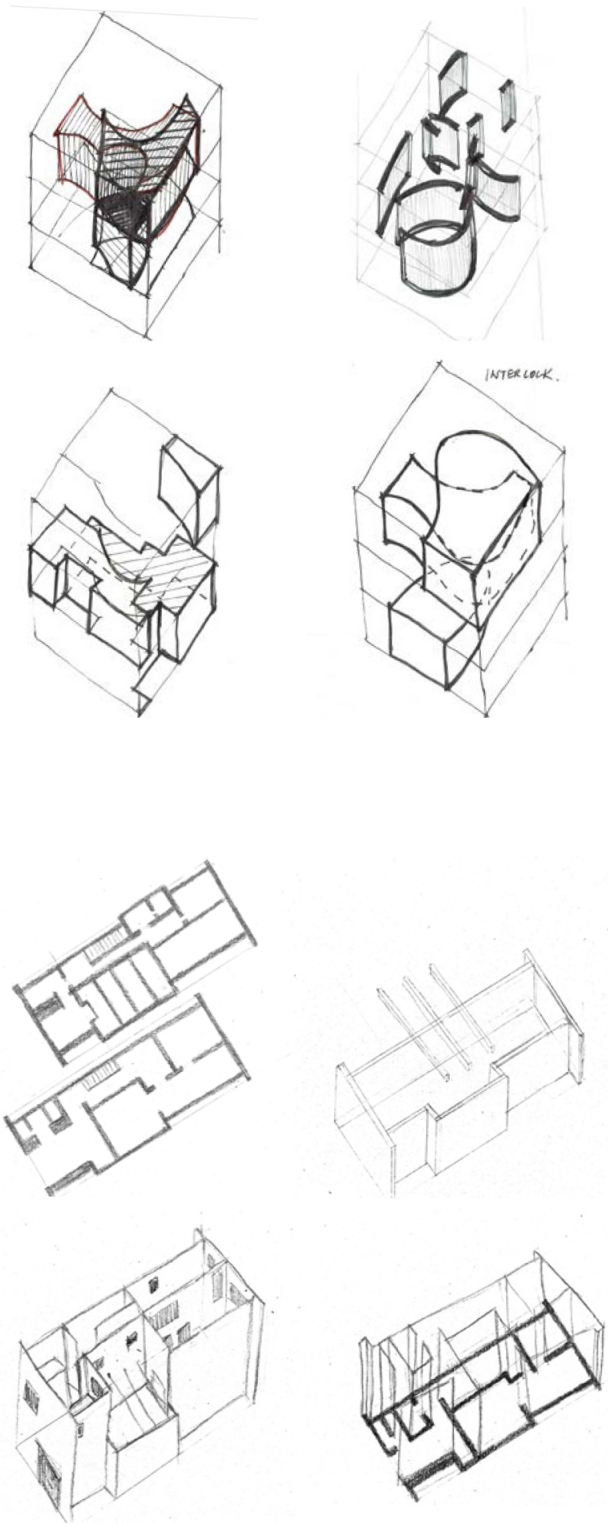
Based on the case-study houses in the studio, every student identifies three typical moments to draw a section, each a critical position to expose and thus reveal s particular knowledge surrounding the house.

Exercise 2: Shadow Play (parallel projection)

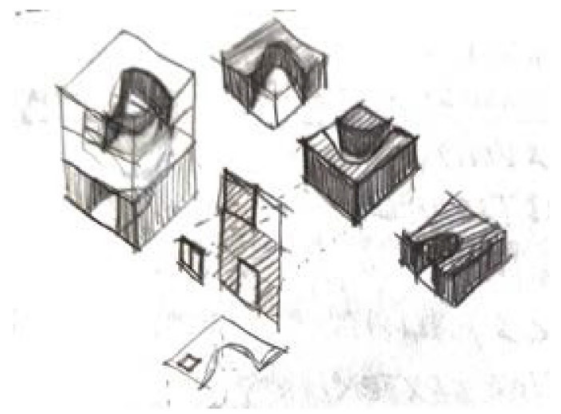
This exercise shifts the focus to the ways of best conveying the form of the house massing through parallel projection. The house massing will be projected in three directions, each representing a particular quality of its geometry. AutoCAD basic will be introduced to the exercise.

Exercise 3: House Revealed (sectional axonometric)

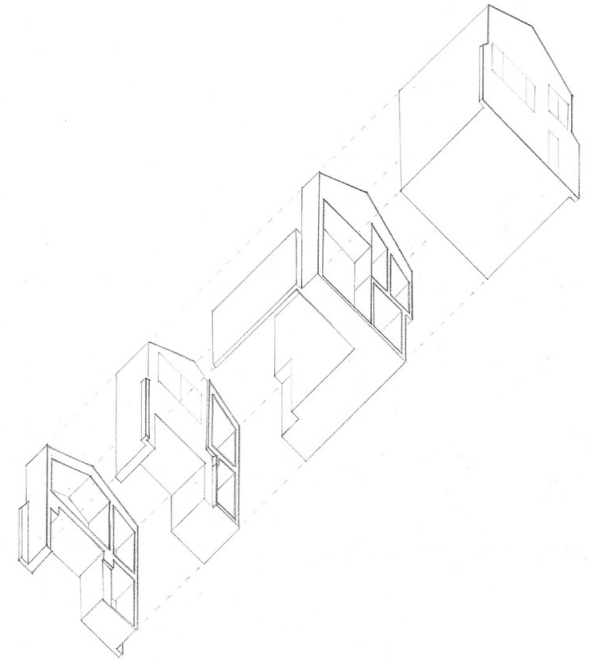
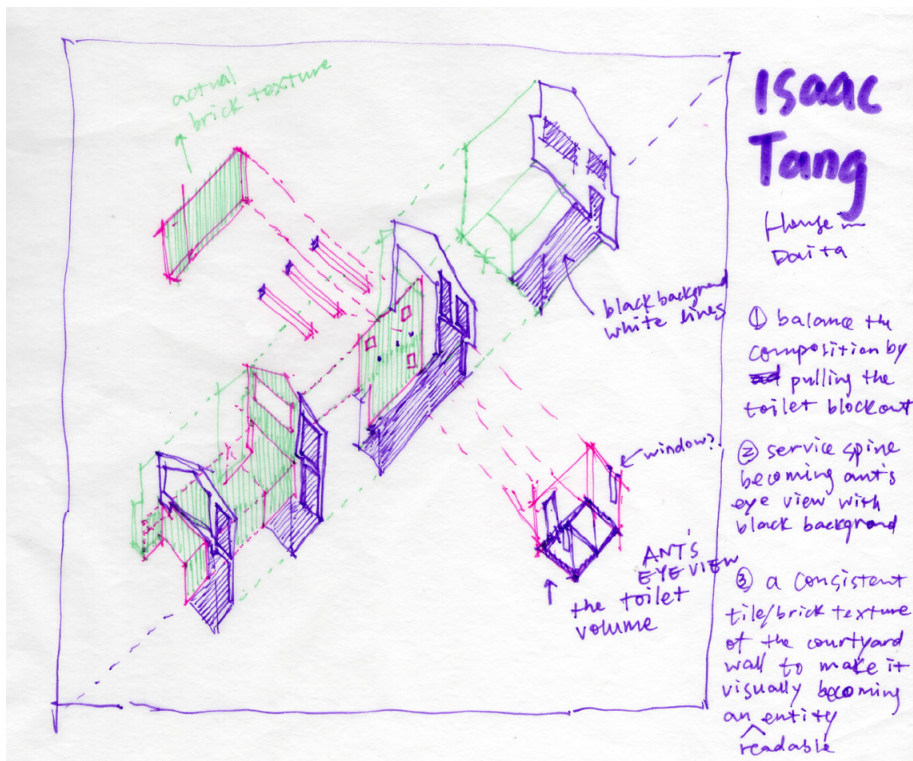
This exercise shifts the focus to reveal the knowledge of the house through projections. The hidden sections will be combined in the projected massing. The sketch is to be finalized into an A1 axon analysis drawing at the end of the semester. Rhino basics will be introduced in this exercise.



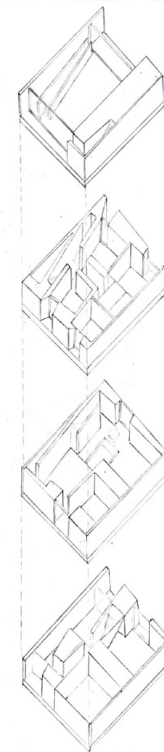
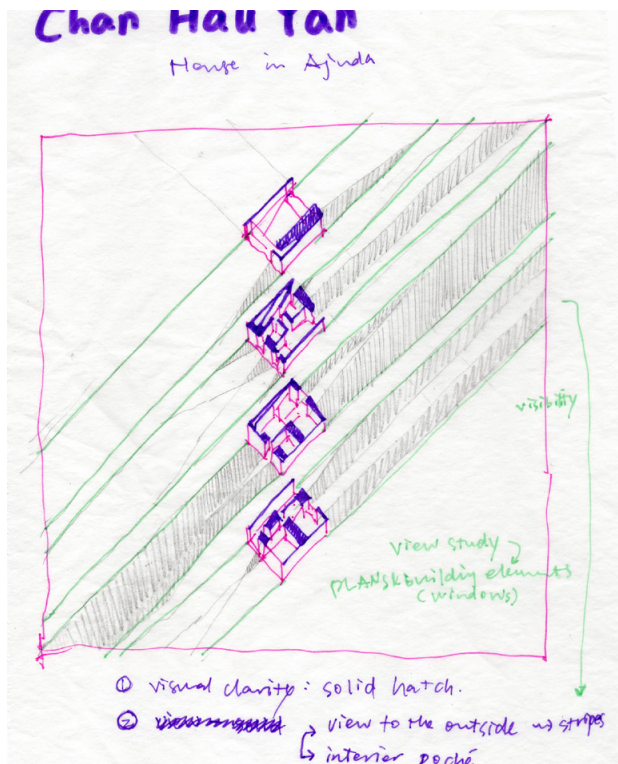
Gu Yuying. Analysis of *OM House* (Sou Fujimoto, 2010).



Sze Ching Yi. Analysis of *Machiya House in Daita* (Kazunari Sakamoto, 1976).



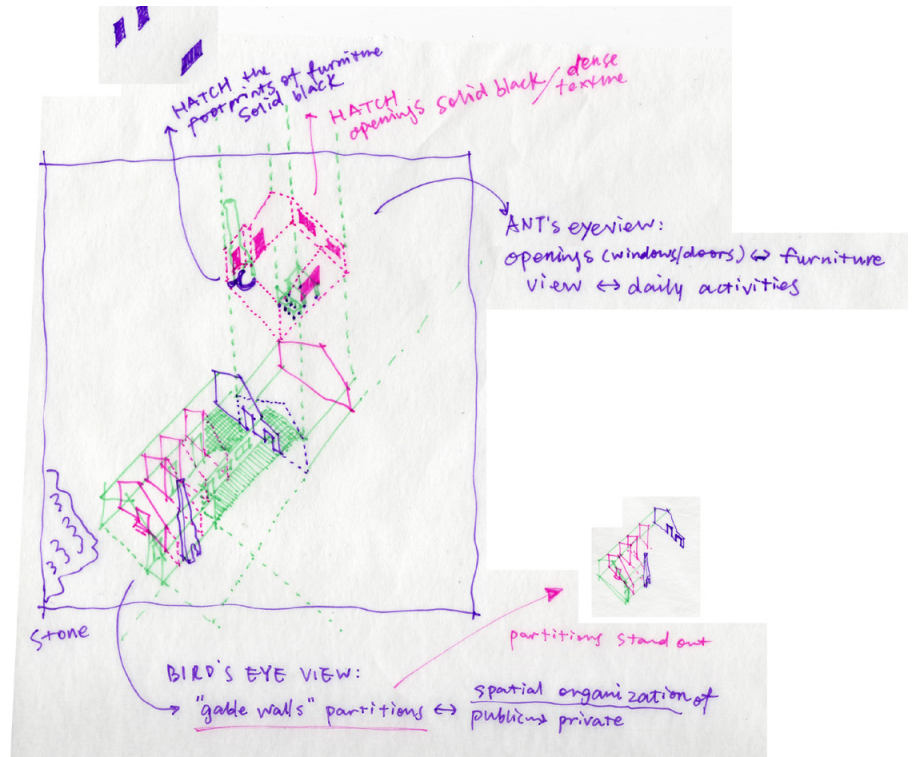
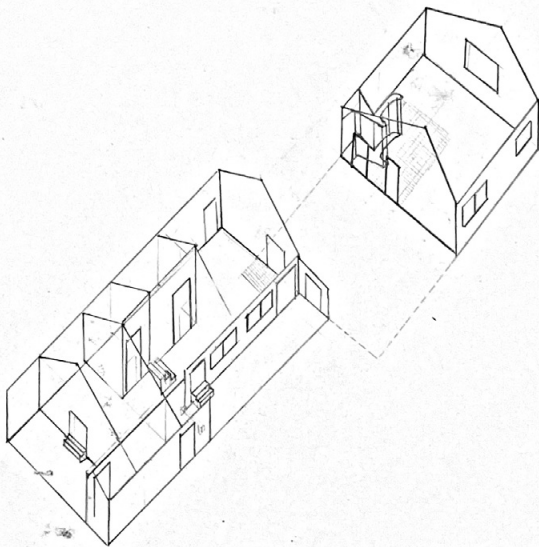
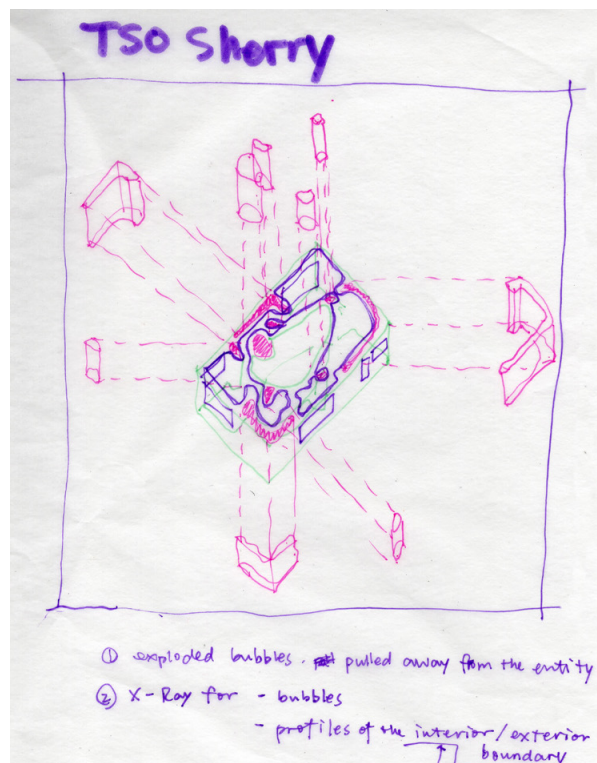
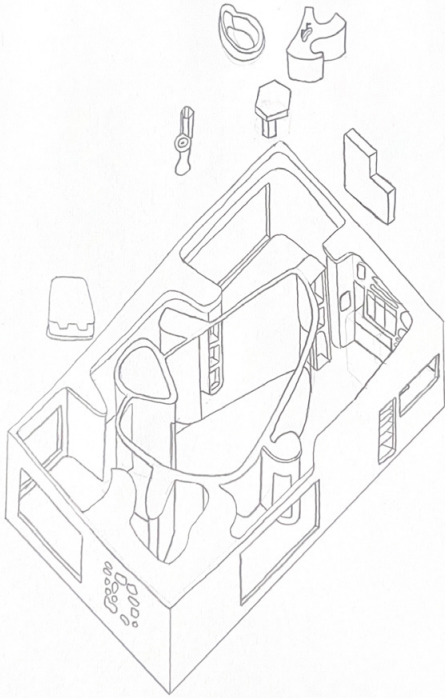
1:200 CUTAW



House in Ajuda
exploded axon 1:4

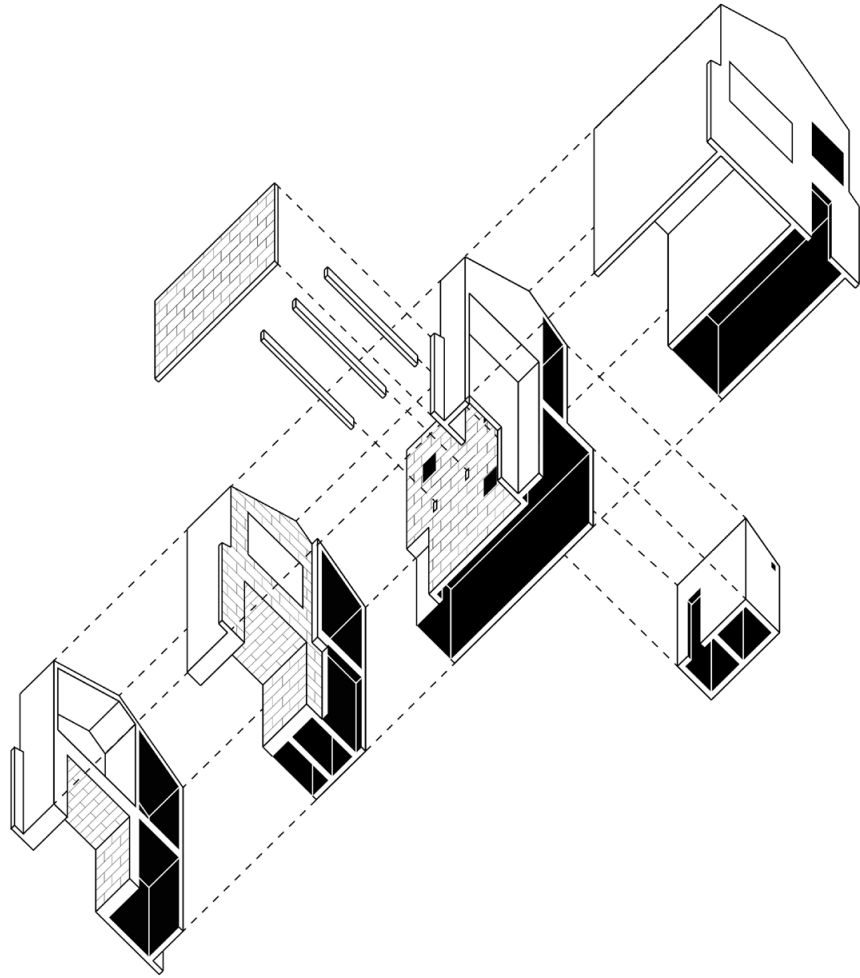
Tang Chun Hei Isaac. Analysis of *Machiya House in Daita* (Kazunari Sakamoto, 1976).

Chan Hau Yan. Analysis of *House in Ajuda* (Aires Mateus, 2014).

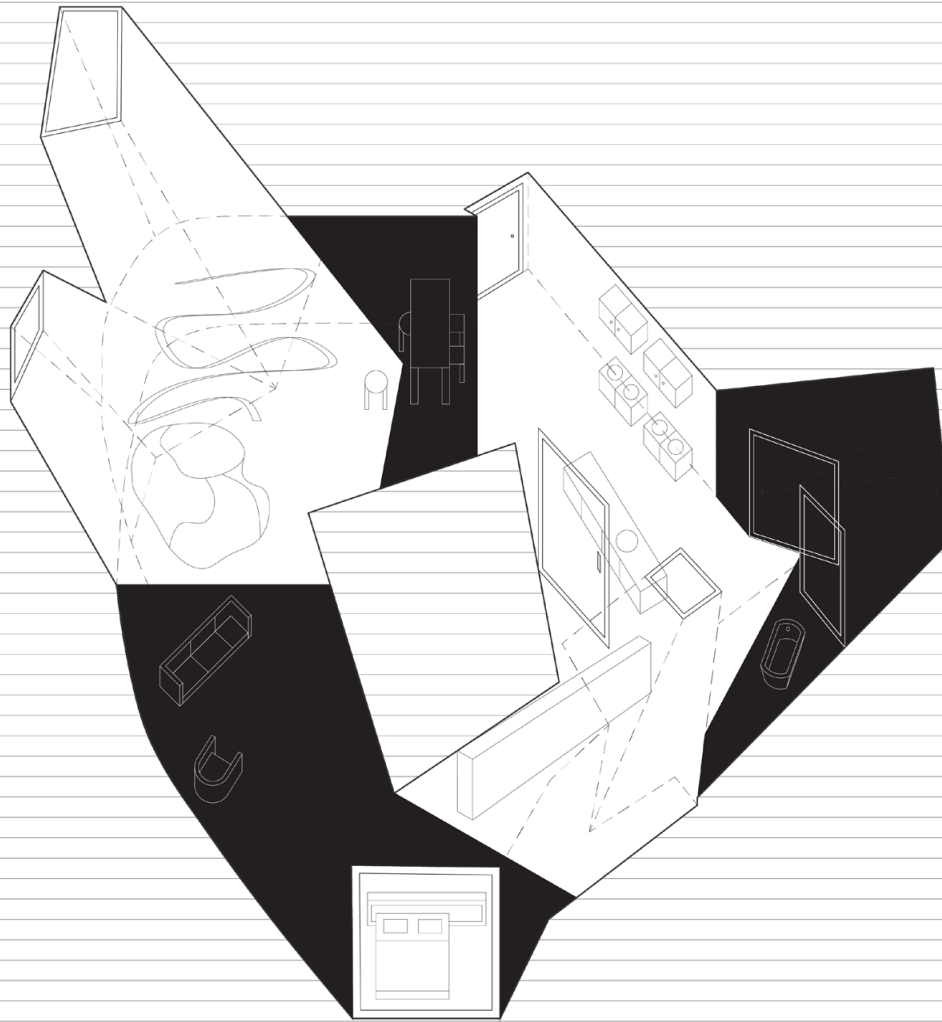


Tso Sherry. Analysis of *House of the Future* (Alison & Peter Smithson, 1956).

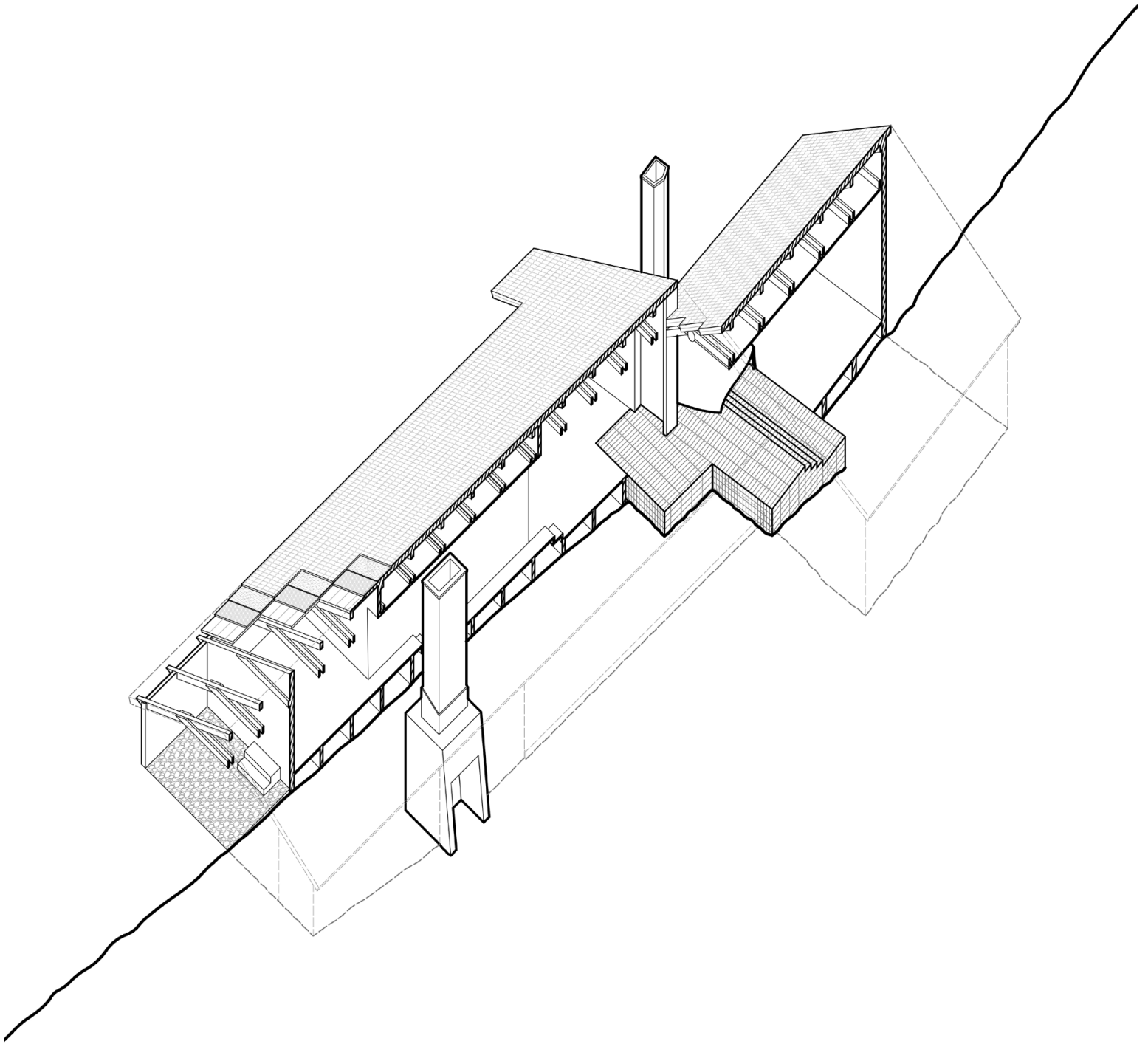
Cheng Fei Wan Anthea. Analysis of *Summer House* (Gunnar Asplund, 1937).



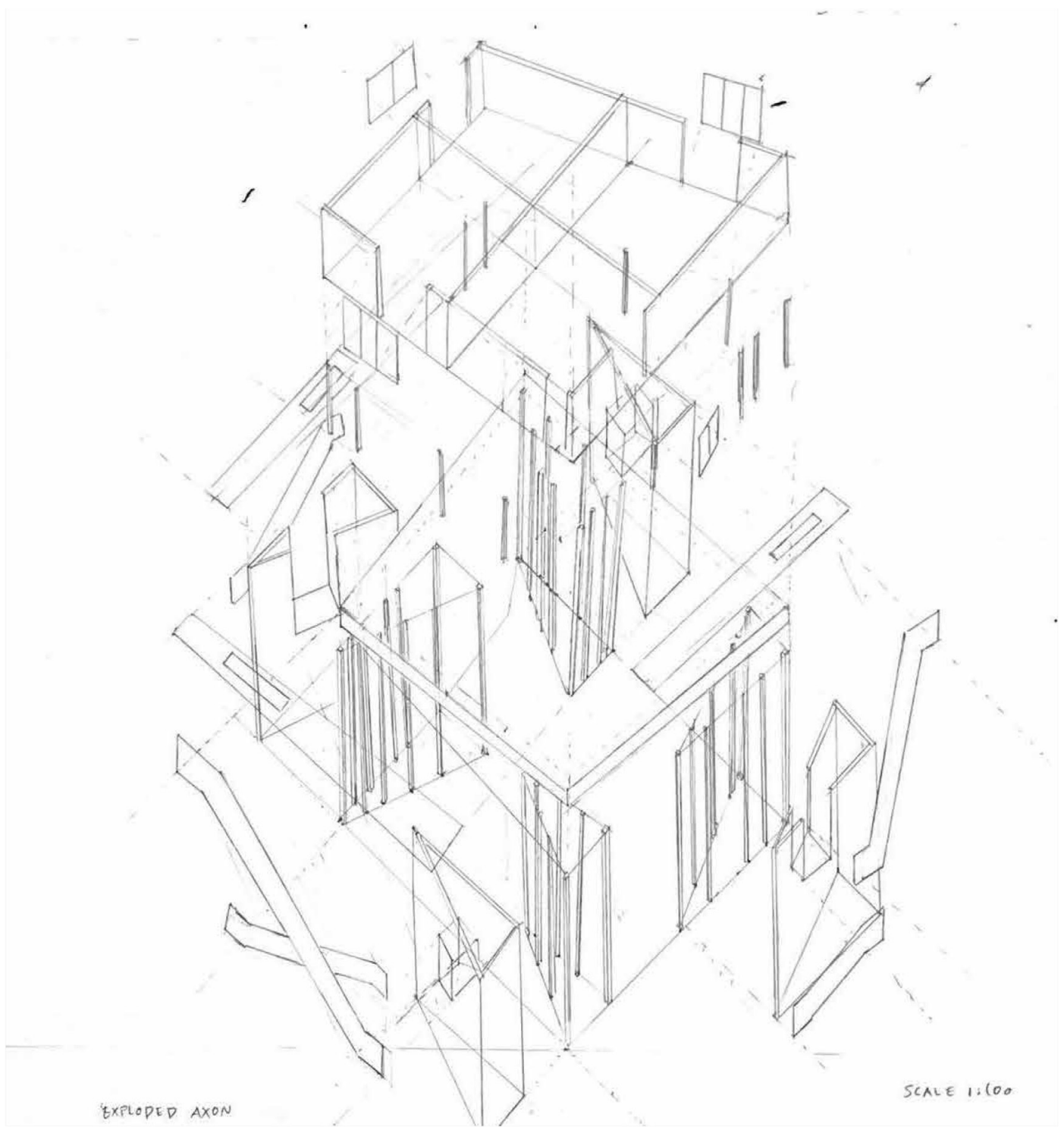
Tang Chun Hei Isaac. Analysis of *Machiya House in Daita* (Kazunari Sakamoto, 1976).



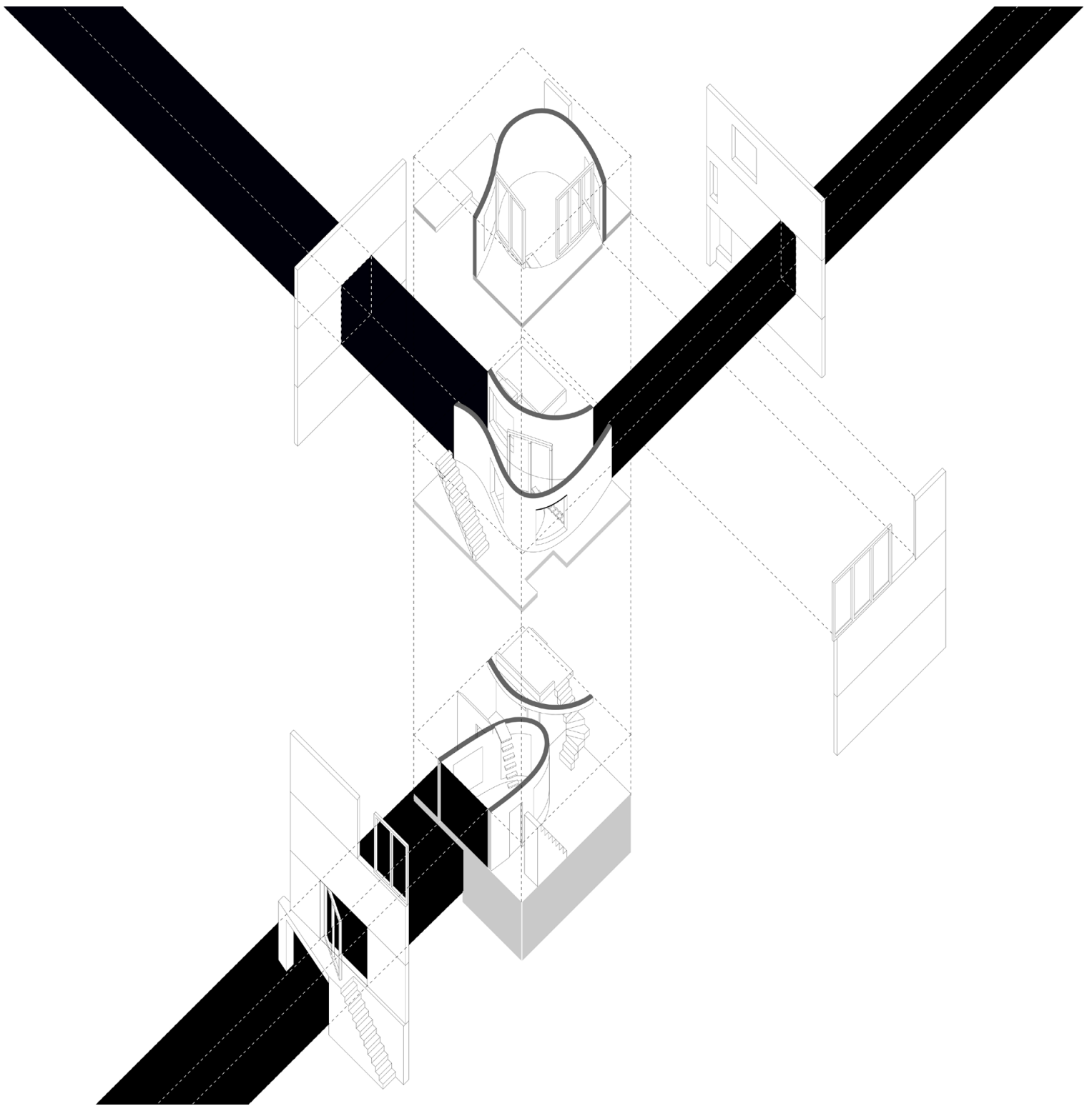
Chan Lok Io. Analysis of *House for the Poem of the Right Angle* (Smiljan Radic, 2010-12).



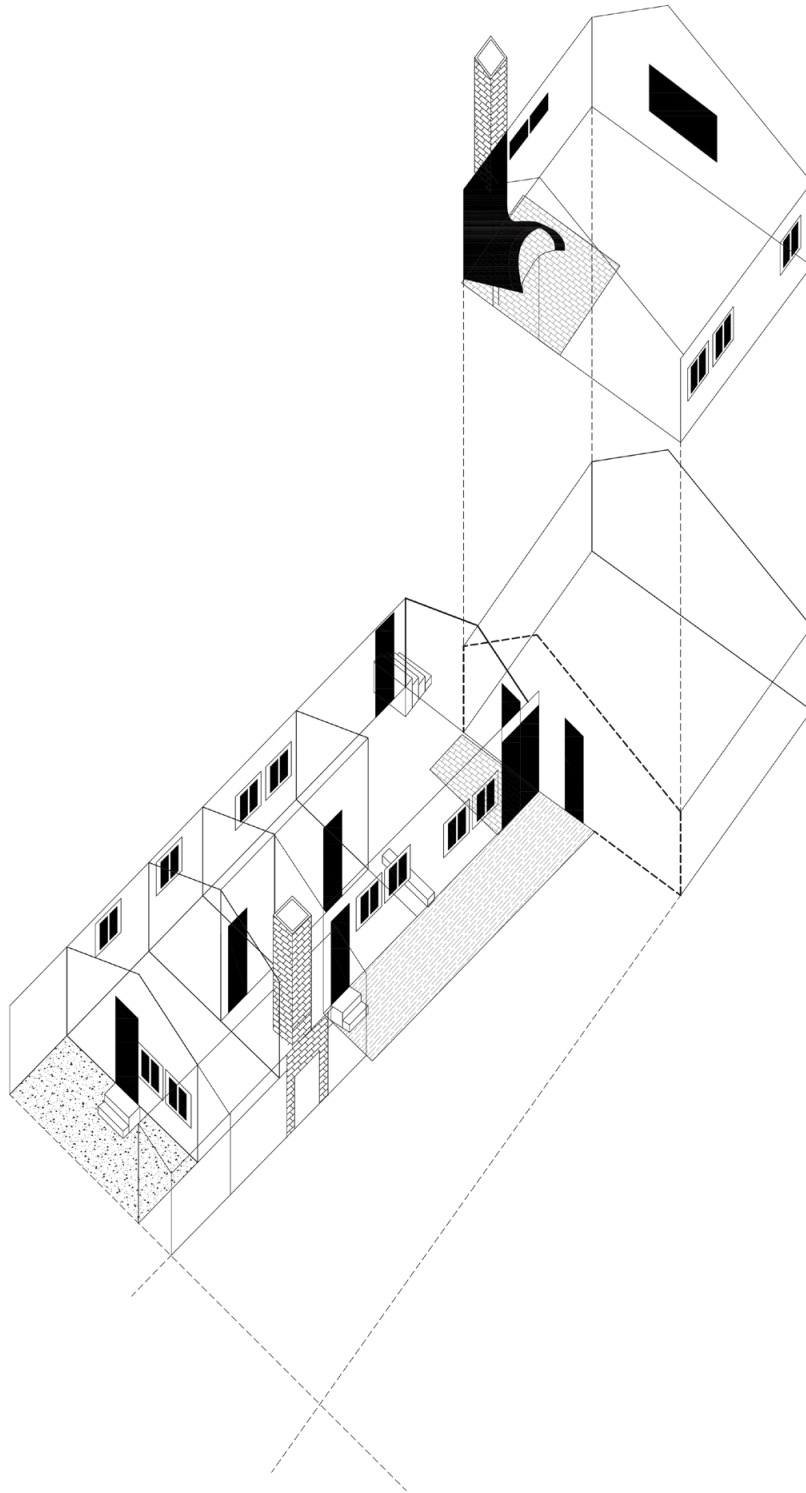
Chau Ching Ho Marco. Analysis of *Summer House* (Gunnar Asplund, 1937).



Natalie Davina. Analysis of *Yokohama Apartment* (ON Design, 2009).



Gu Yuying. Analysis of *OM House* (Sou Fujimoto, 2010).



Cheng Fei Wan Anthea. Analysis of *Summer House* (Gunnar Asplund, 1937).

Project 1B: Field Drawing

Surveying the field through the law of perspective

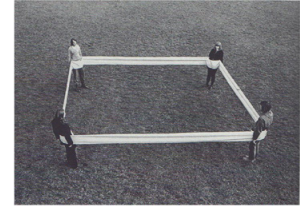
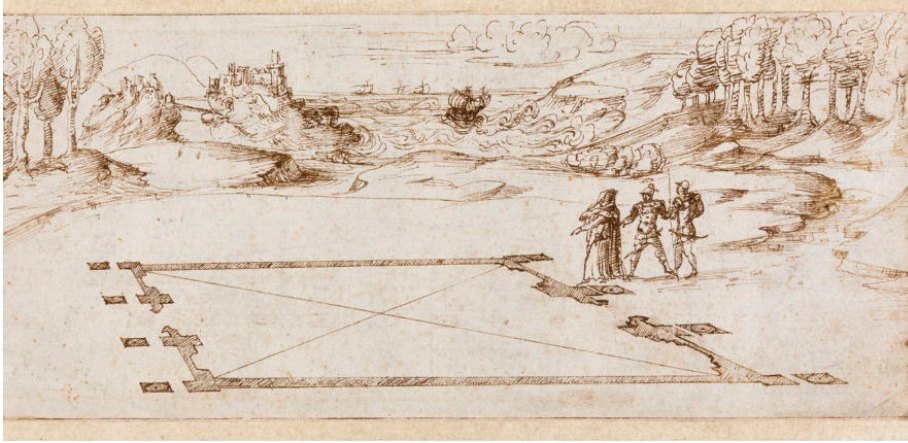


Illustration from 1724 edition of Descartes's *La dioptrique*. Denis Diderot. *Lettre sur les aveugles à l'usage de ceux qui voient (Letters on the Blind)*, 1749, plate 1, p.19

Heiner Borchard. *Trapezoid*.

Franz Erhard Walther. *We Find Wildness*, 1967.

Circle of the Sangallo Family, Illustration to Vitruvius Book III, Chapter 2, c.1530–1545.

KwieKulik. *Game on Morel's Hill (Group Action)*, 1971.

The second half of the project will be a field survey of an as-found piece of land in Hong Kong***. The representational techniques learned from Project 1A will be combined and further developed in this survey. The outcome will be a comprehensive drawing documenting the process of translation from the collected information into a descriptive drawing.

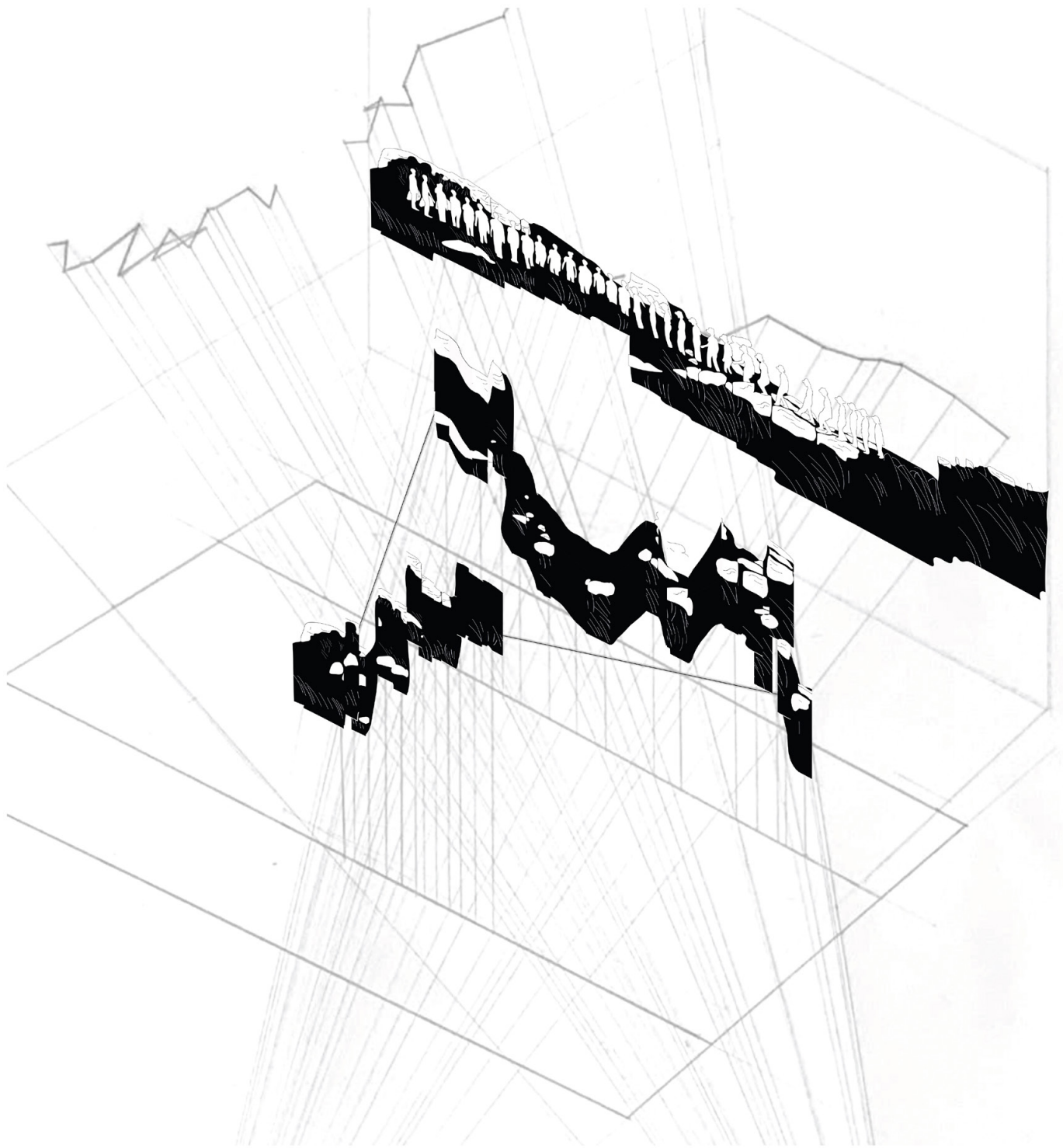
Specific reading: Each group will conduct the survey to reveal a specific knowledge of the site: either a certain element of the site, including shadows, profiles of land/water/etc, or locations of certain objects.

Bodily survey: Using their body as the gauge, the ground measurement asks for active bodily interaction with the environment. The movements of the investigators on the site will represent analog representational notions, including points, lines, grids, shadows, etc., which probes into the site by simulating the representational techniques including section making or shadow casting, etc.

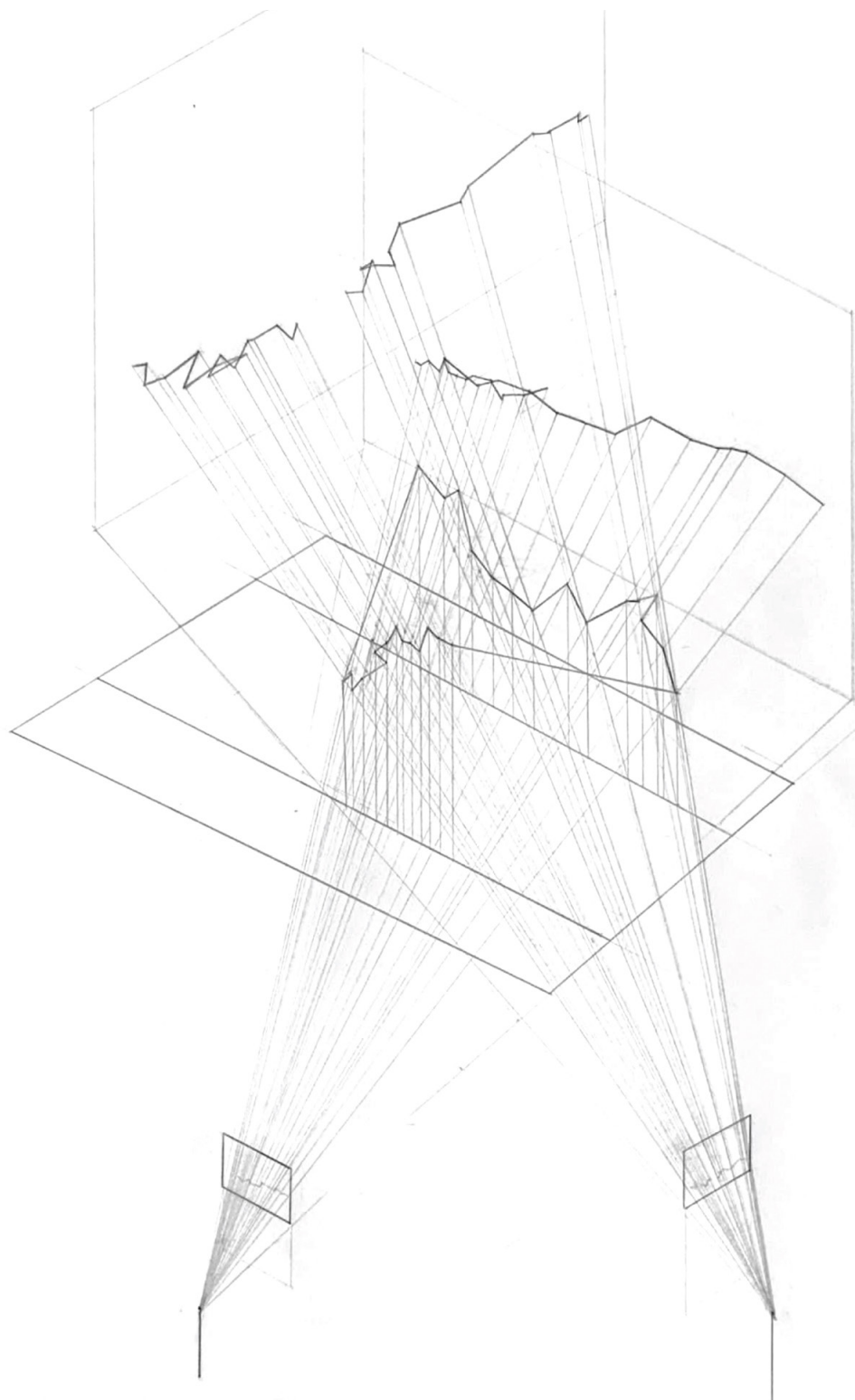
Techniques of observers: The other half of the team will be measuring and documenting their teammates as stop motions (through photos) in front of the single or double picture planes (can be two window frames) fixed in place. Additional dimensions should be collected if needed, including the body measurement of the investigators, and the distance from the camera to the window frames.

Group work: The students will conduct the measurement and documentation in a group of 4. One to two group members will be the observers, and others being the investigator in the field.

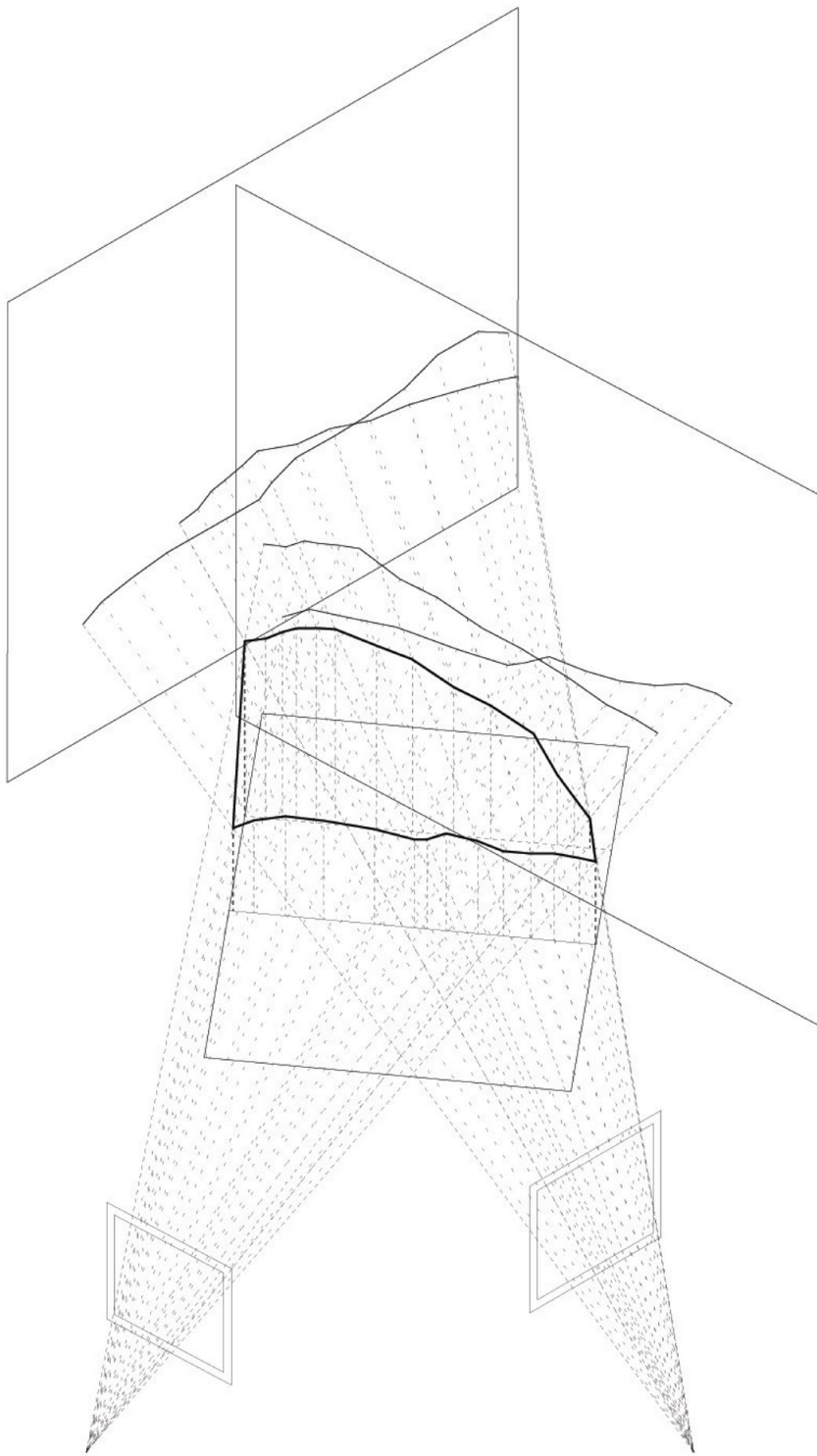
Individual drawing (assignment to submit): A reconstructed axonometric drawing synthesizing the site survey information. The geometry of the site will be translated by calculating the discrete movements in perspectival projections. Photo collages will be combined in this drawing.



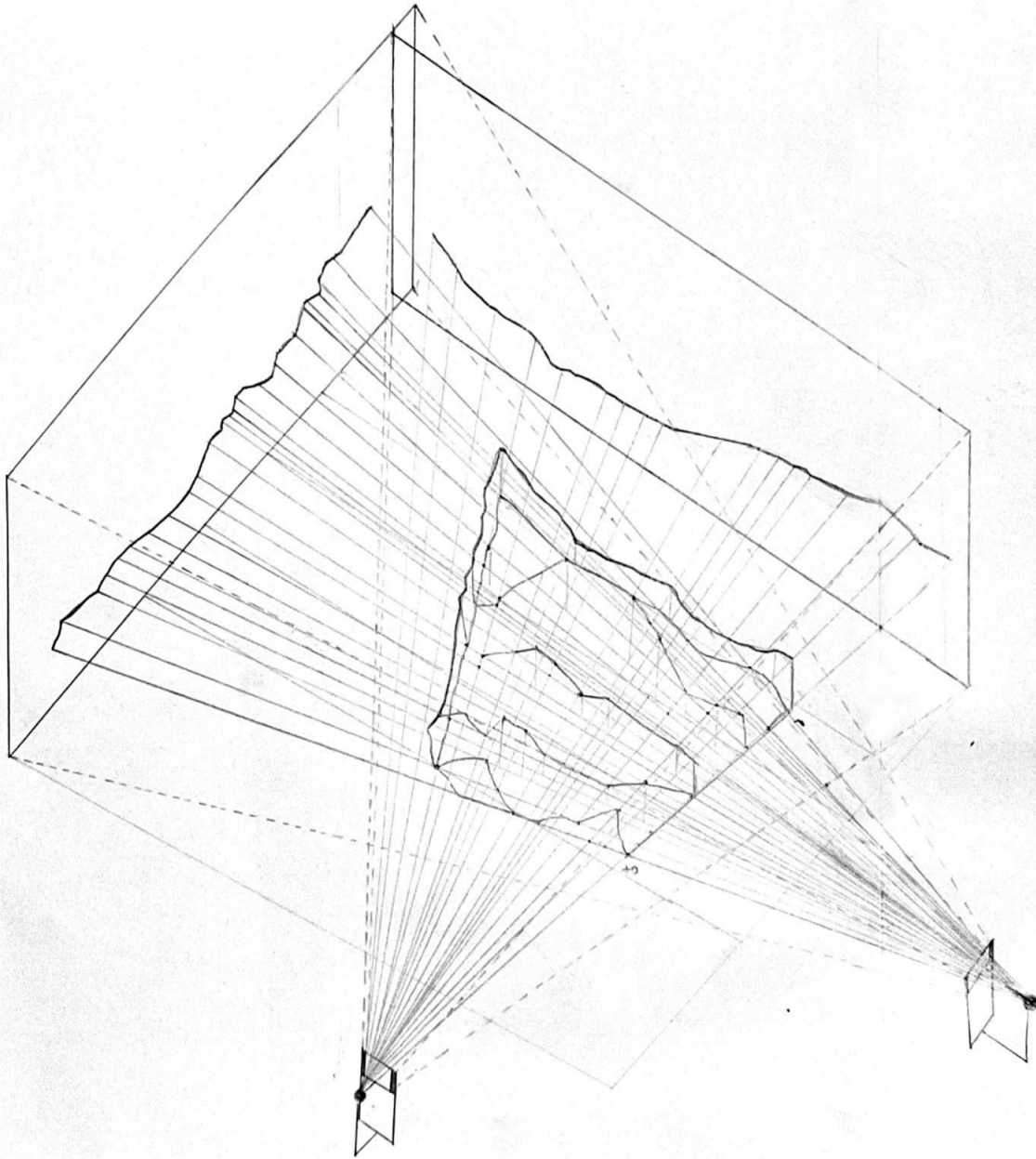
Gu Yuying



Gu Yuying



Ng Hou Ming



Field Drawing

Axonometric

Scale 1:50

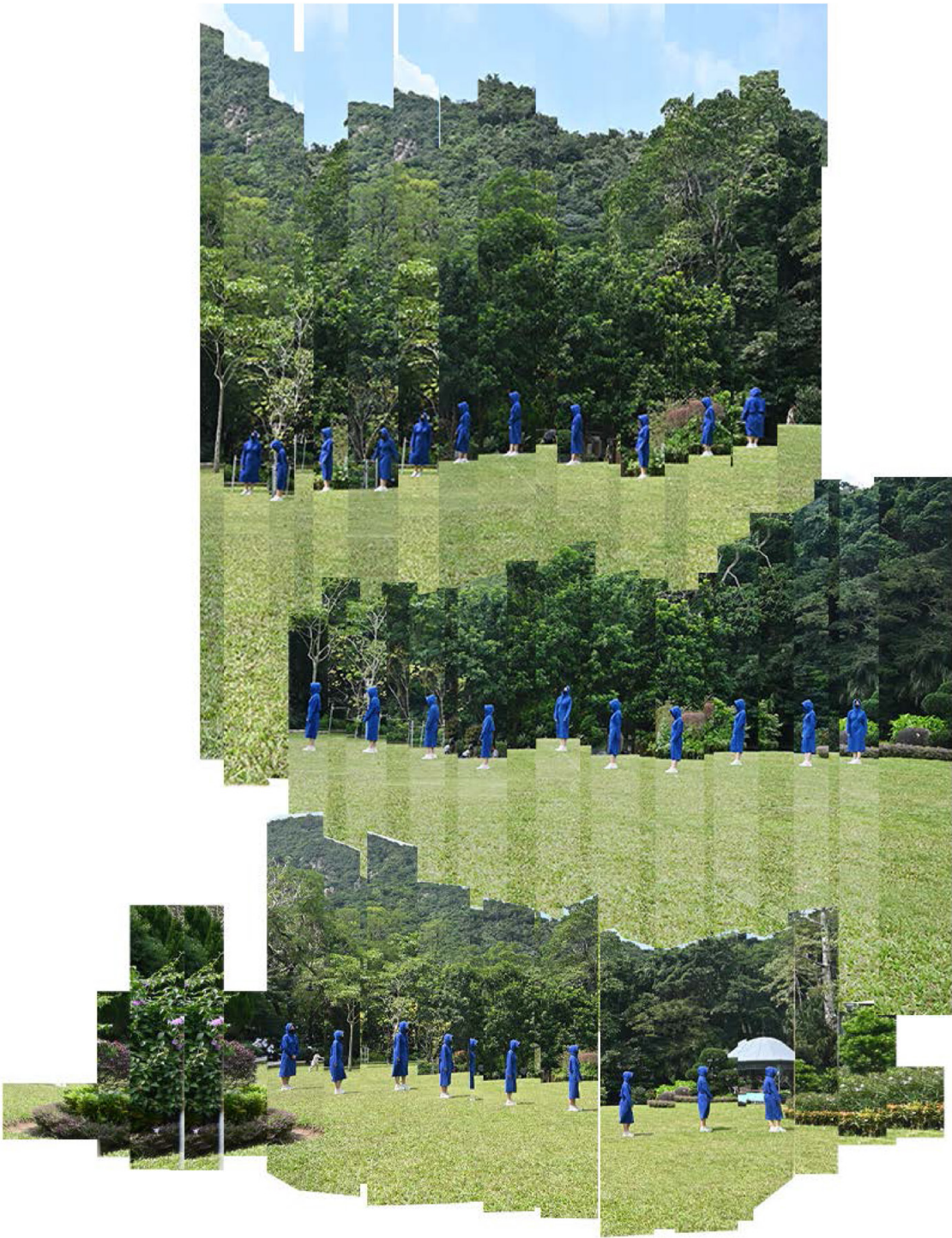
Rishima Mathur



Chan Cheuk Tung Kimberly.
with Law Lok Tung Elyse, Hung Chi Hang, Ng Hou Ming.



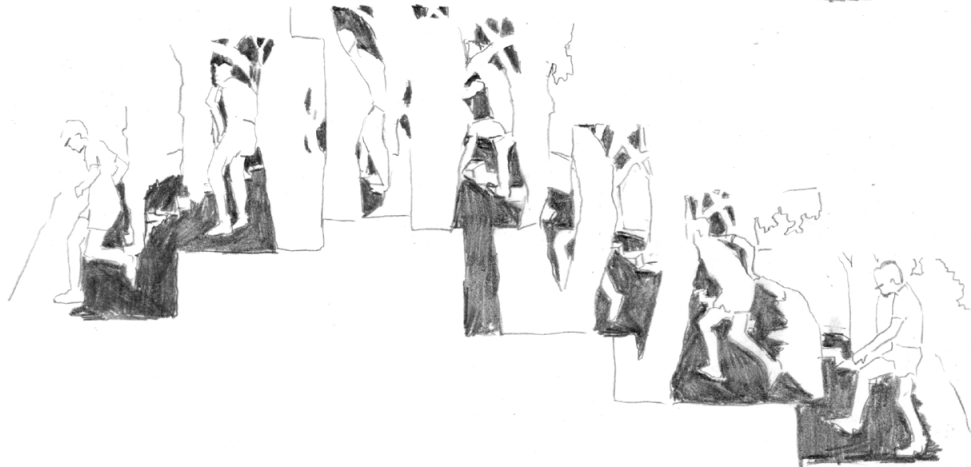
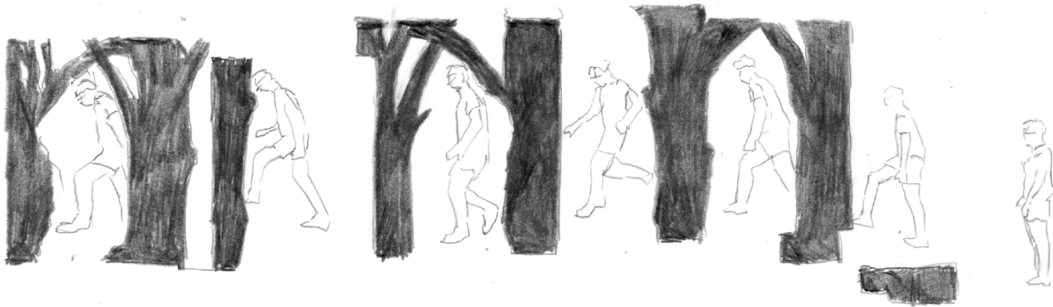
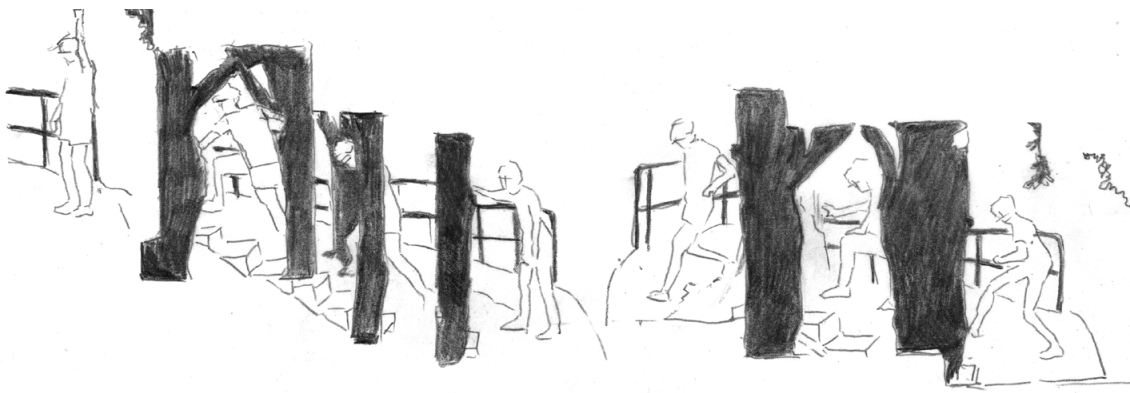
Chan Cheuk Tung Kimberly.
with Law Lok Tung Elyse, Hung Chi Hang, Ng Hou Ming.



Gu Yuying.
with Xiang Yuheng, Zhou Yiheng.

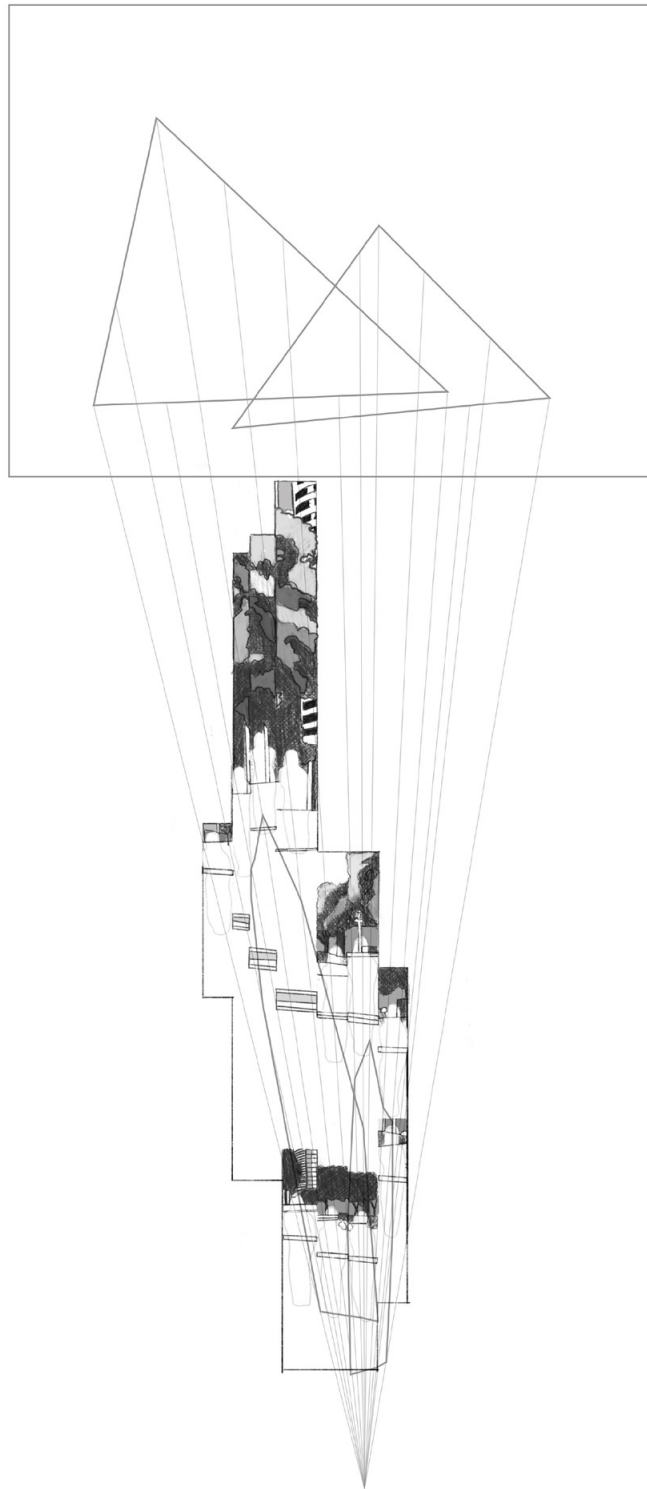


Chi Chau Hang.
with Joung Seiyong, Chau Gabriella, Eamon Sun.



Chi Chau Hang.

with Joung Seiyong, Chau Gabriella, Eamon Sun.



Pang Yan Cassandra.

with Wong Sze Ka Carla, Soon Tsoi Yi Kayla.



Photo collage of textures, and the top of rocks (shown by white highlight) !
elevation(furthest distance f)

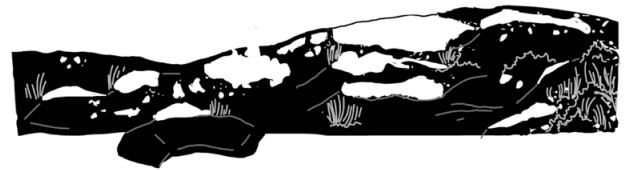
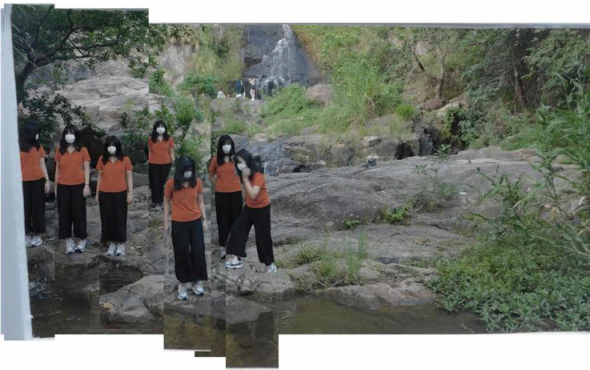
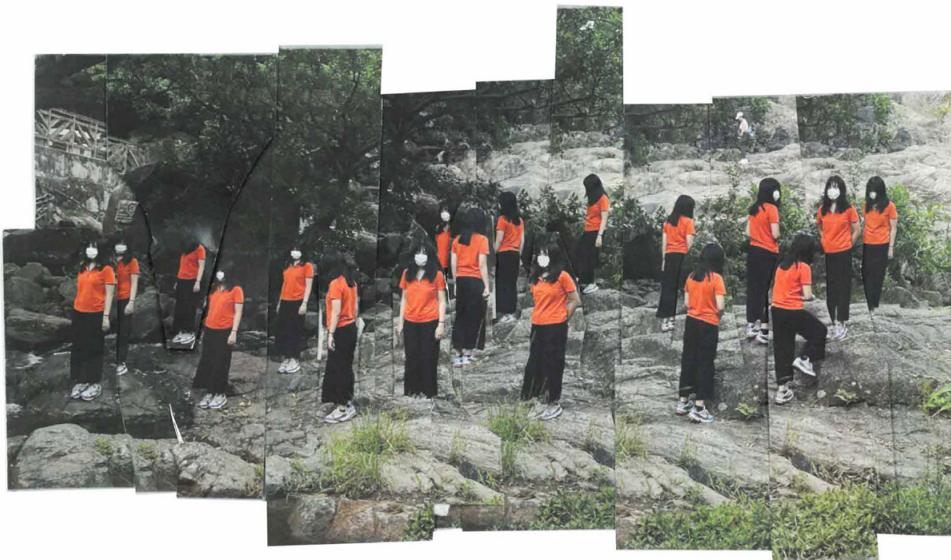


Photo collage (flattened) of textures, and the top of rocks (shown by white h
to the camera, warping arc



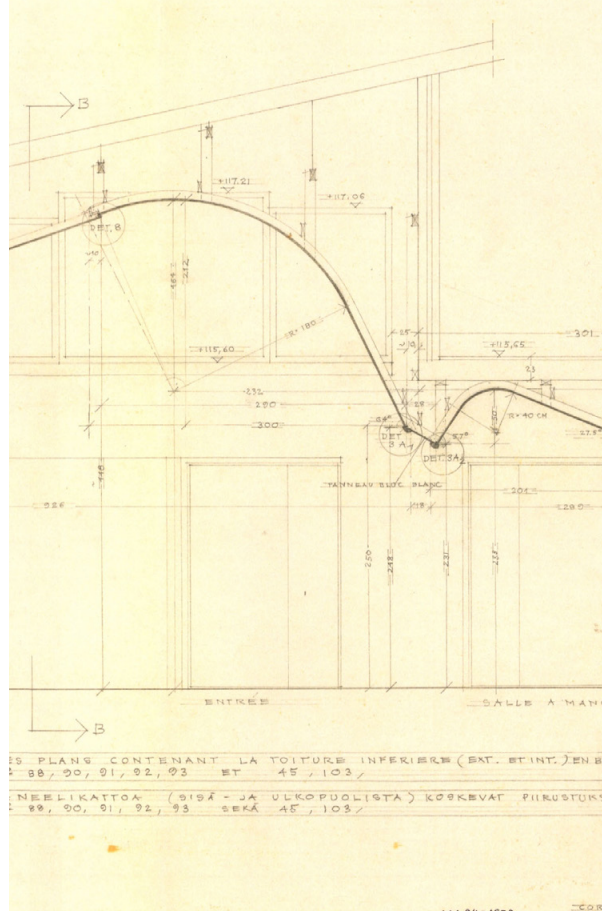
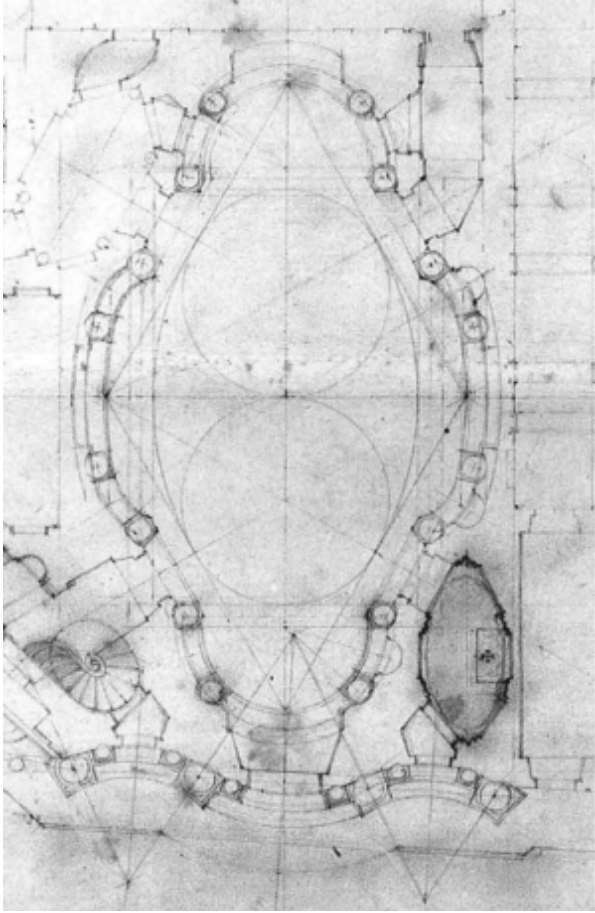
Rishima Mathur.
with Natalie Davina, Lendy Gaby Davina, Shamayel Nur.



Group of Chan Cheuk Tung Kimberly,
Law Lok Tung Elyse, Hung Chi Hang,
and Ng Hou Ming.

Project 2: Hidden Gauge

Rationalization of geometry



Francesco Borromini. *San Carlo alle Quattro Fontane*, Design for the plan using a generating oval, 1634.

Alvar Aalto. Section for construction, pencil on tracing paper. *Maison Louis Carré*, 1958.

As drawings represent potential physical instructions in the real world, the geometric orders are embedded in the operations of the drawing tools. Investigated by gauges and guided by templates, a found form will be captured and further transcribed in the drawing by measurable actions, while filtered by the geometric features of the tools at the same time.

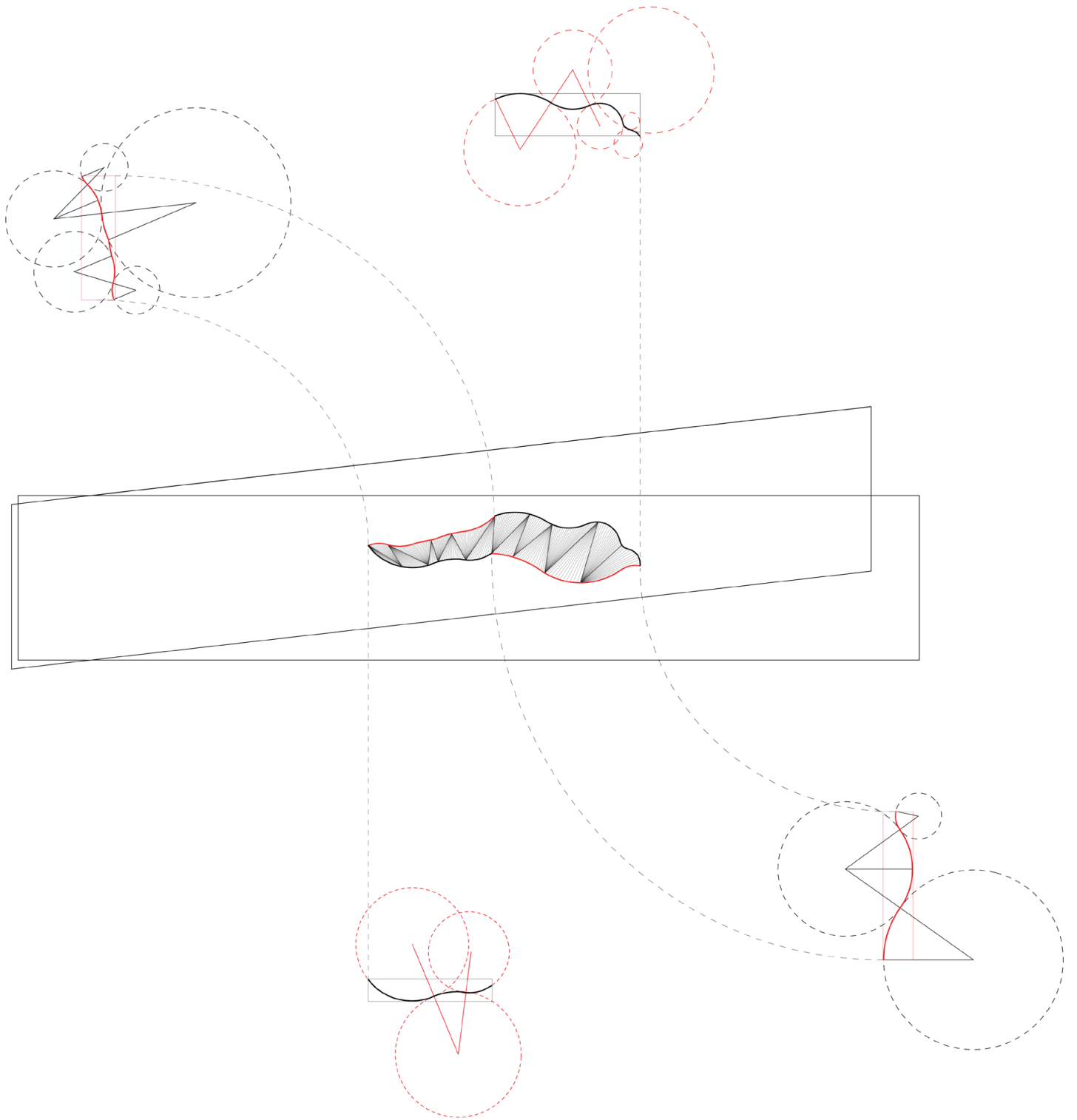
This project introduces gauges as geometric constraints in reconstructing the site. The discrete site information will be translated into continuous geometry, through the conscious search for its underlying geometric order. The outcome of this project will be the reconstructed land with ruled surfaces.

1. A set of rationalized curves:

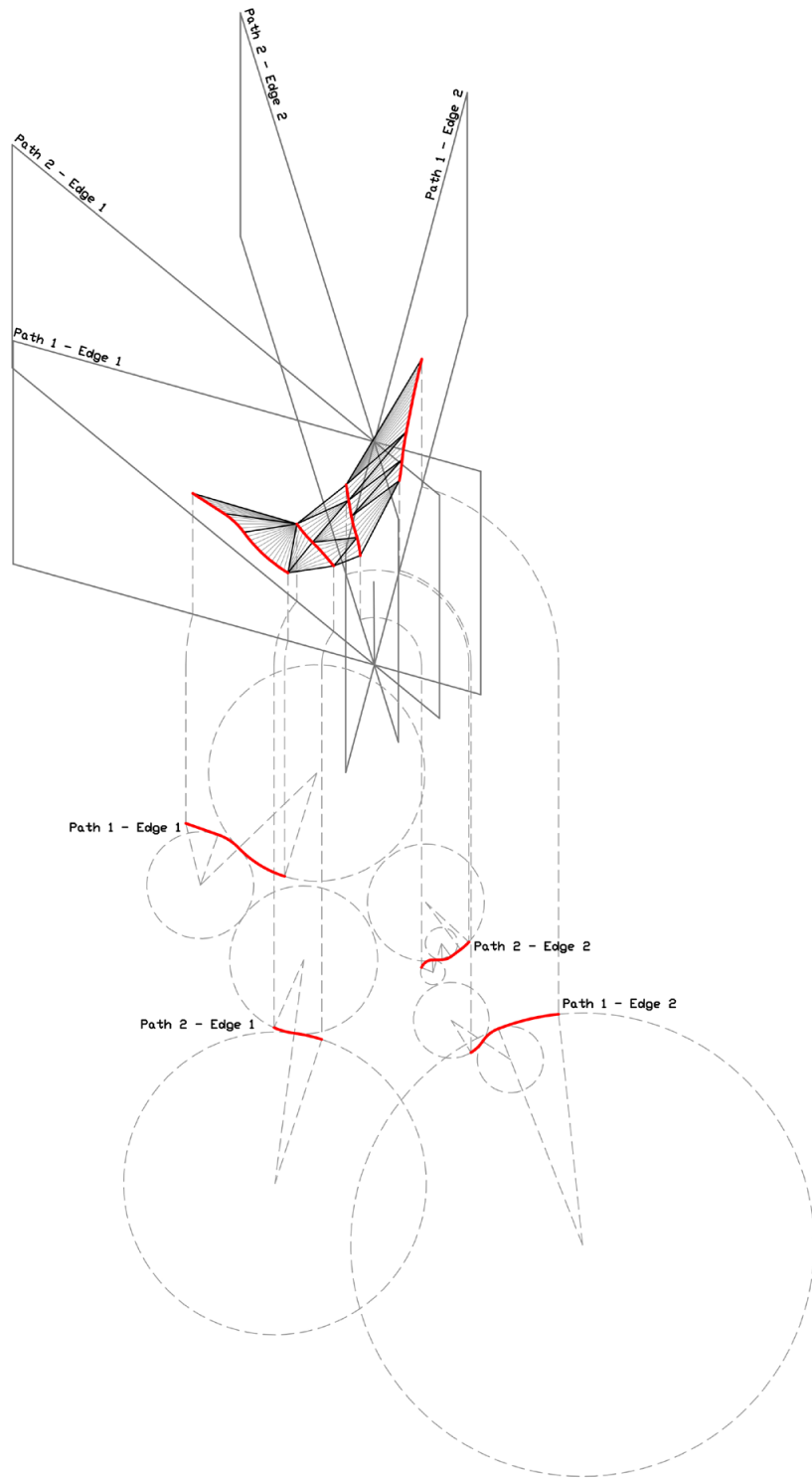
- To rationalize three curves sharing the same set of geometric order, which are comparable and relevant to each other.
- 20 cm by 20 cm drawing, rationalizing the discrete measured information.

2. A reconstructed ground:

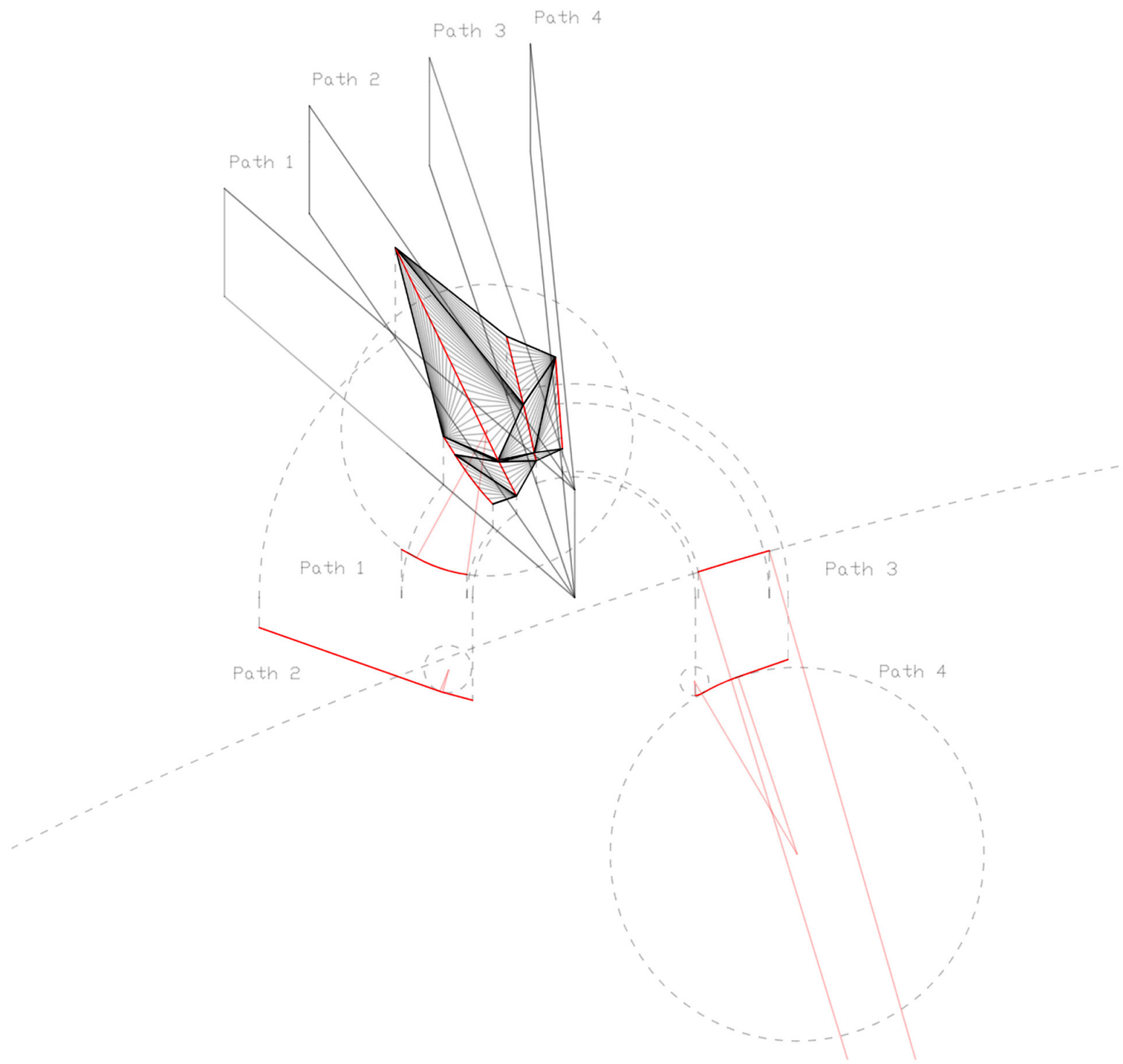
- Combines the three curves through ruled surfaces. (Rhino modeling)
- 40 cm by 40 cm projection drawing to describe the three-dimensional form. (Rhino -> CAD)



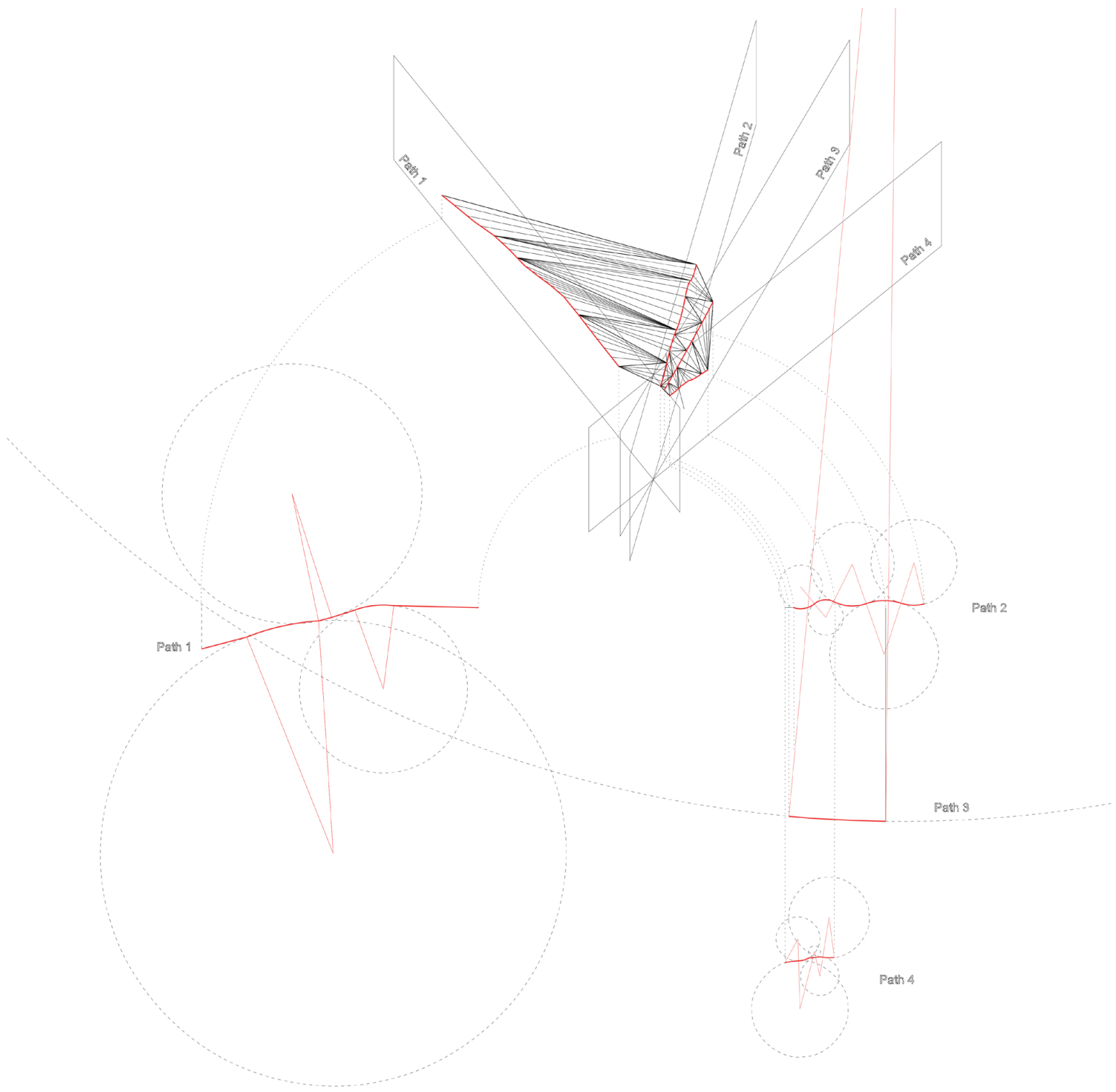
Tso Sherry



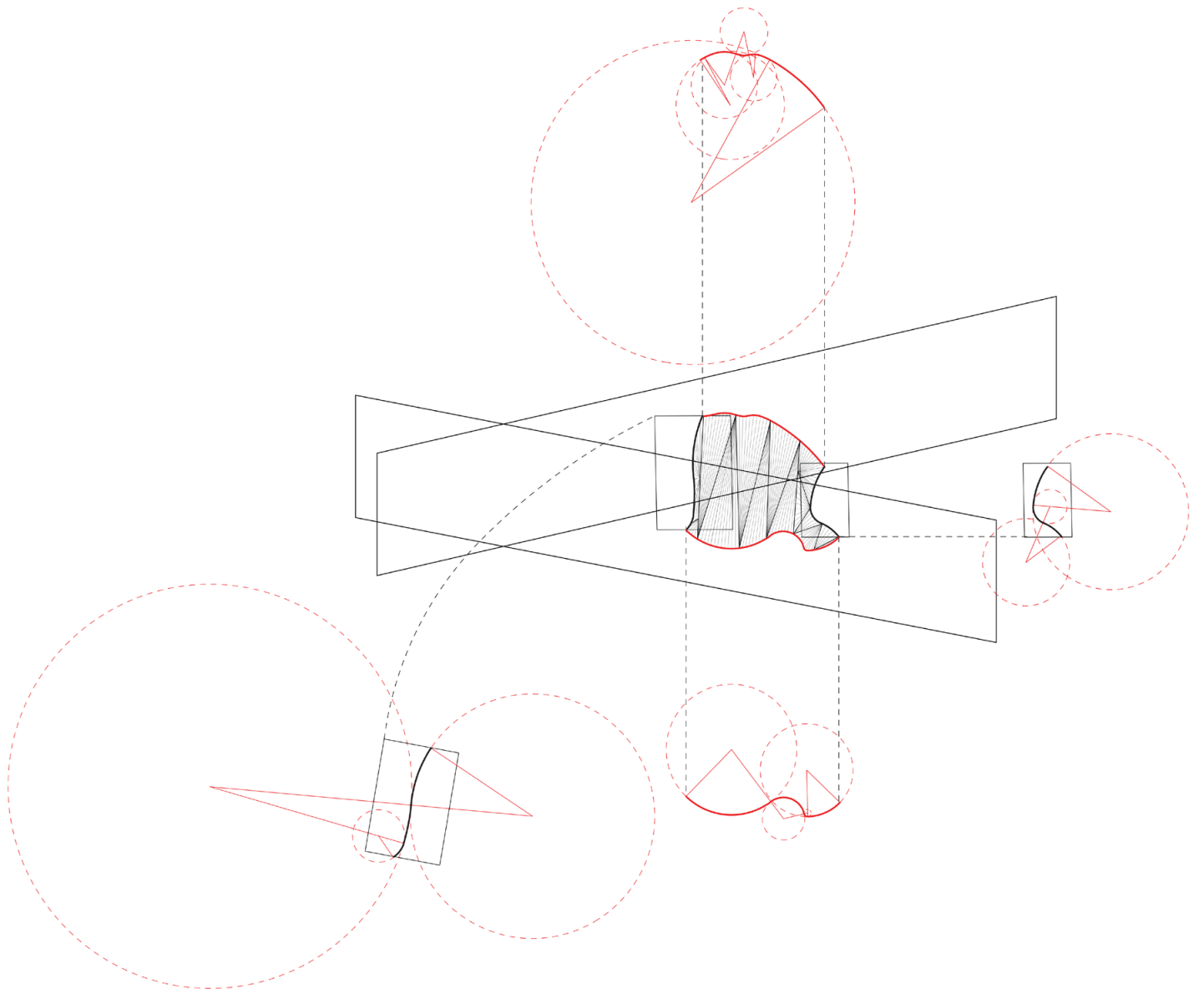
Chau Ching Ho Marco.



Cheng Jabez Owen



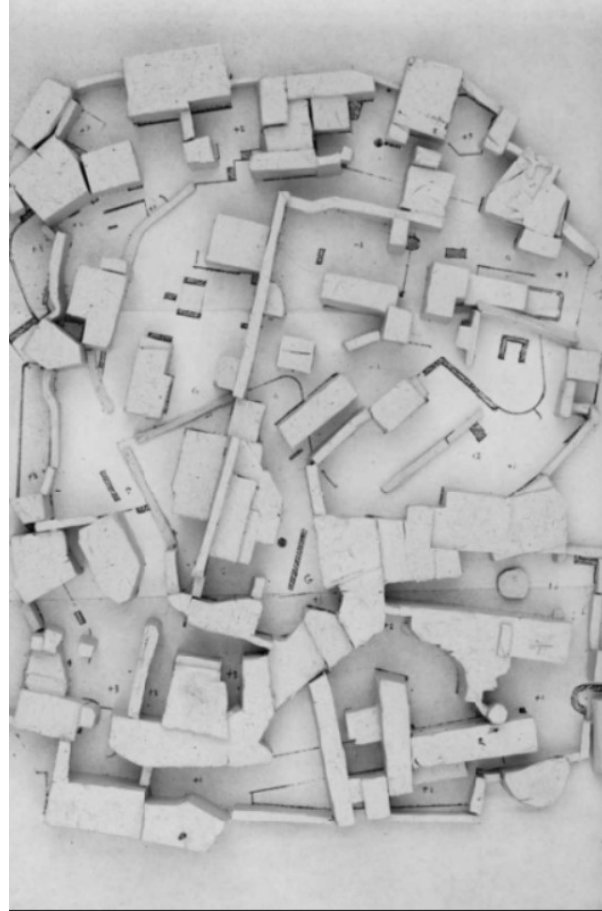
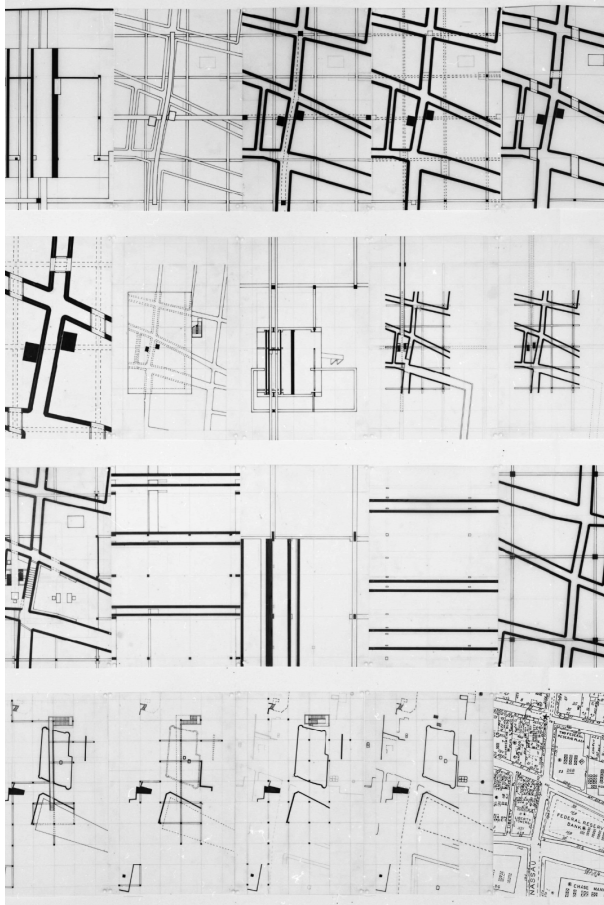
Cheung Kun Ho



Lendy Gaby Davina

Project 3: Drawing Field

Reimagined ground



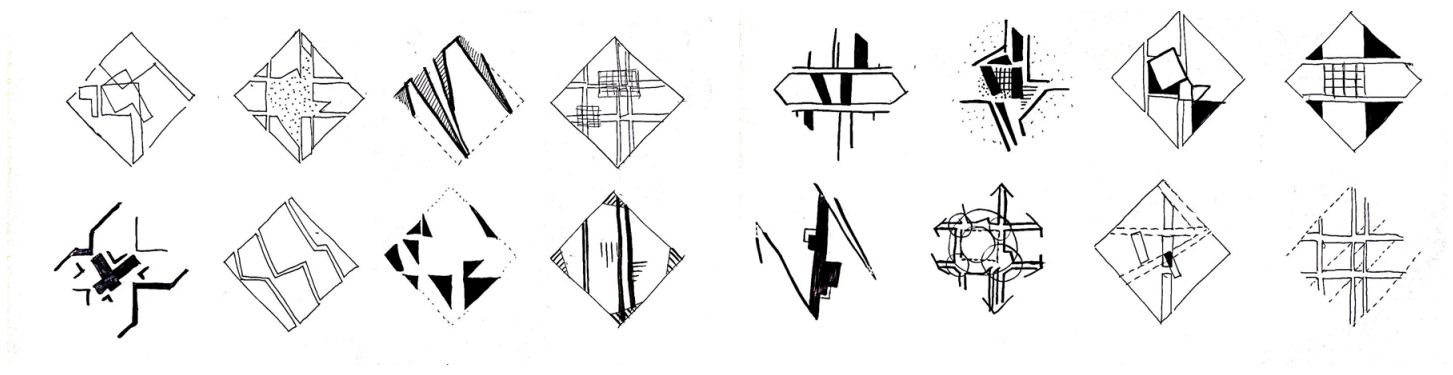
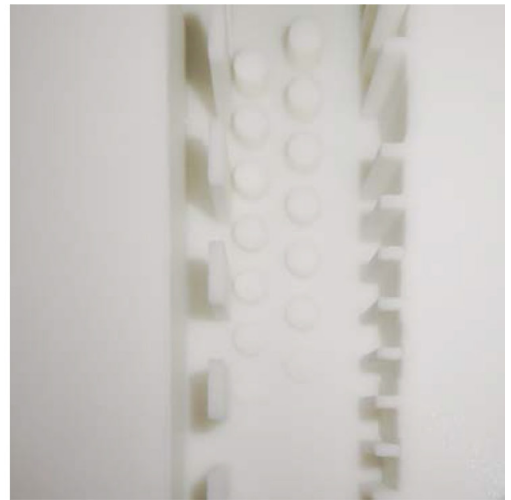
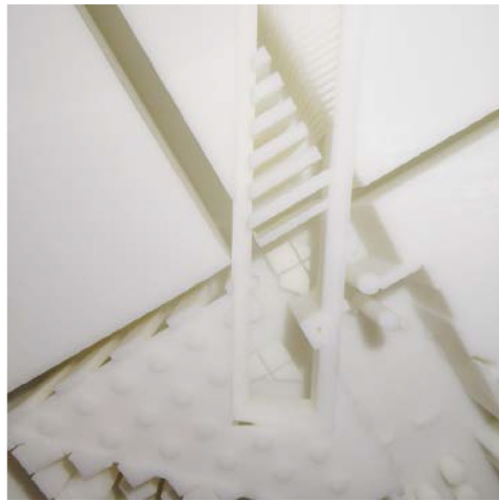
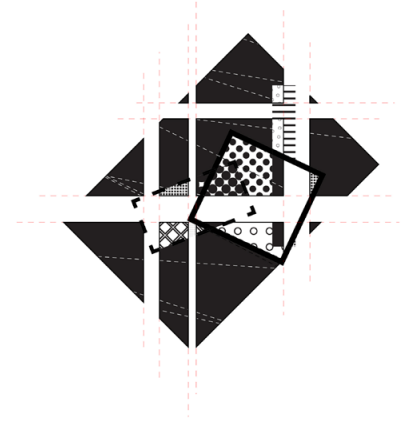
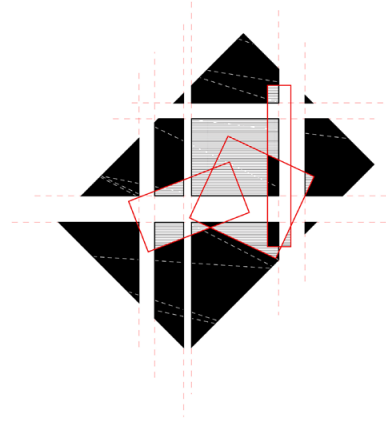
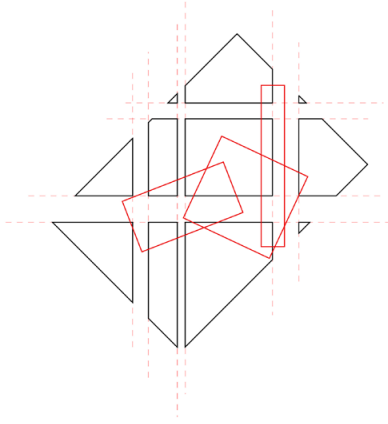
Anthony Gregor. *House for the retired quarryman*, 1984.

Michael Behrman. *House/Book, House/Fiction*, 1994.

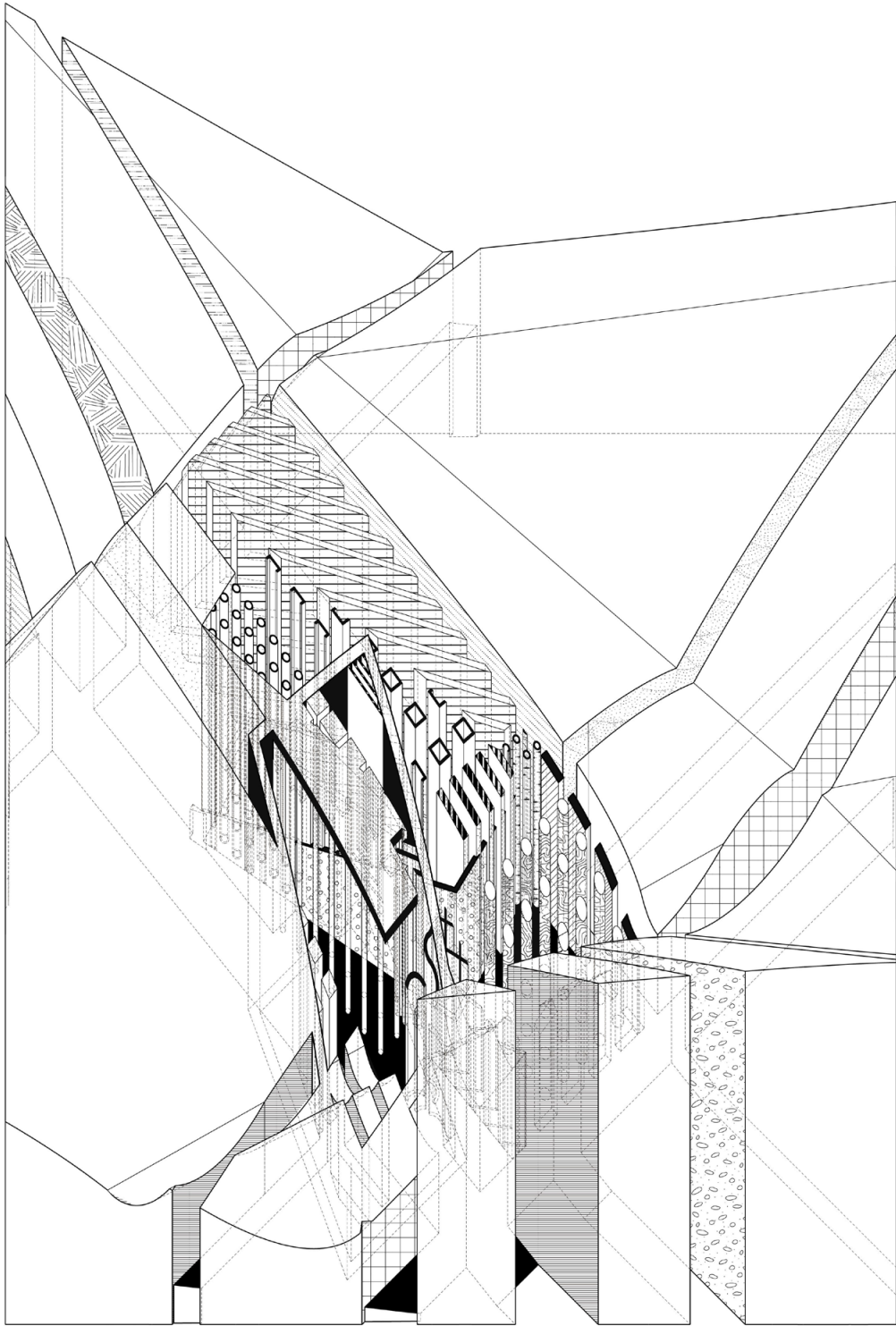
This project explores the imaginative gap between precision and freedom, embracing both the mechanized operations and their multiple readings through the constant shifting between 2D and 3D.

Based on the reconstructed land created in the previous project, this project will imagine the ground to be processed through several operations as an analogical evolution from natural to artificial context. Through the back-and-forth operations shifting between graphic and volumetric, the project aims to decipher the accumulated complexity into a junction moment that can be navigated and experienced.

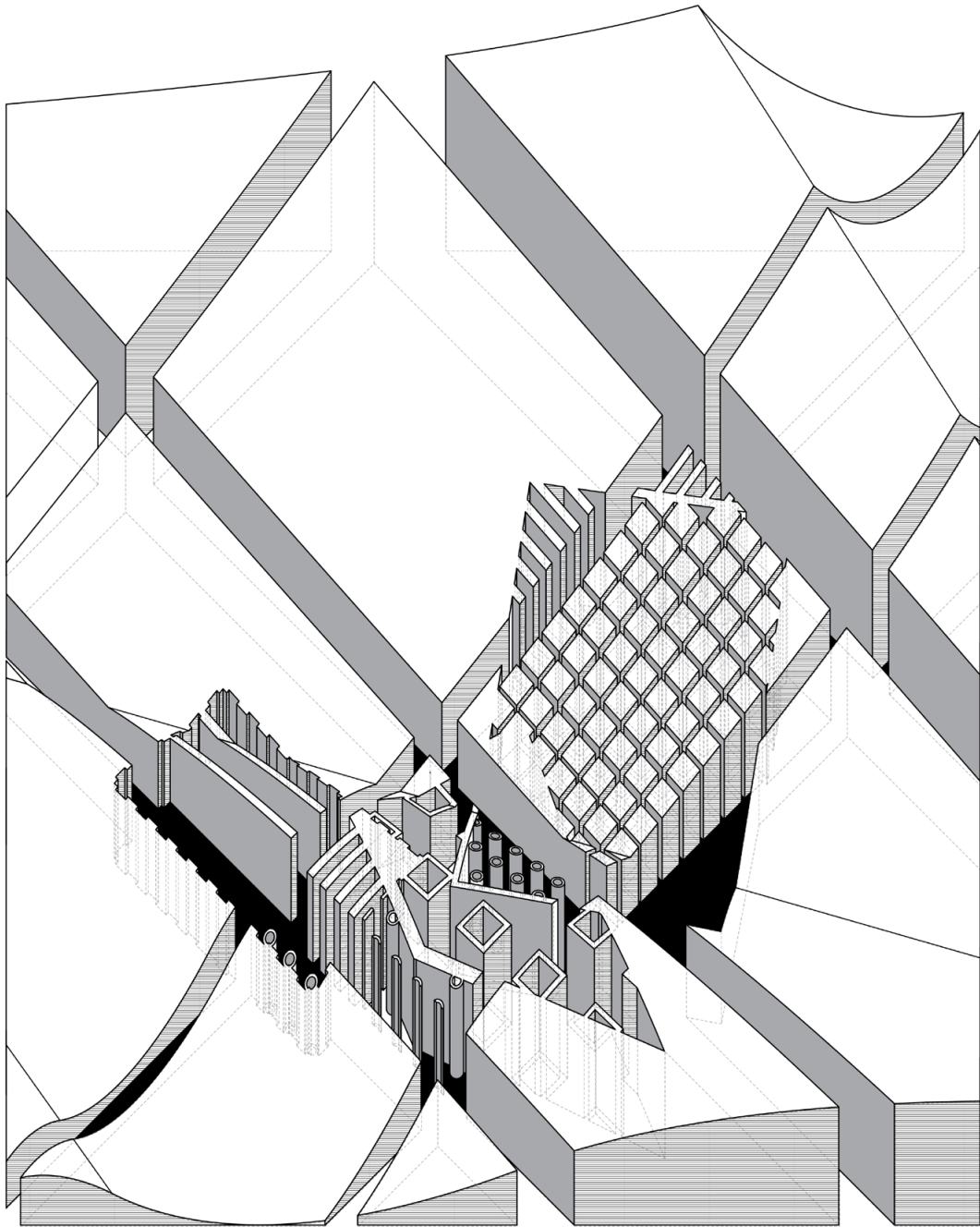
1. A physical model (40cm by 40cm) representing the speculative space.
 - Focus on the special moments.
 - Dematerialized model.
- Material not limited.
2. A comprehensive axon drawing of the formation of the speculative forms.
 - Sketches of the operations.
 - Software: Adobe Illustrator, Rhino



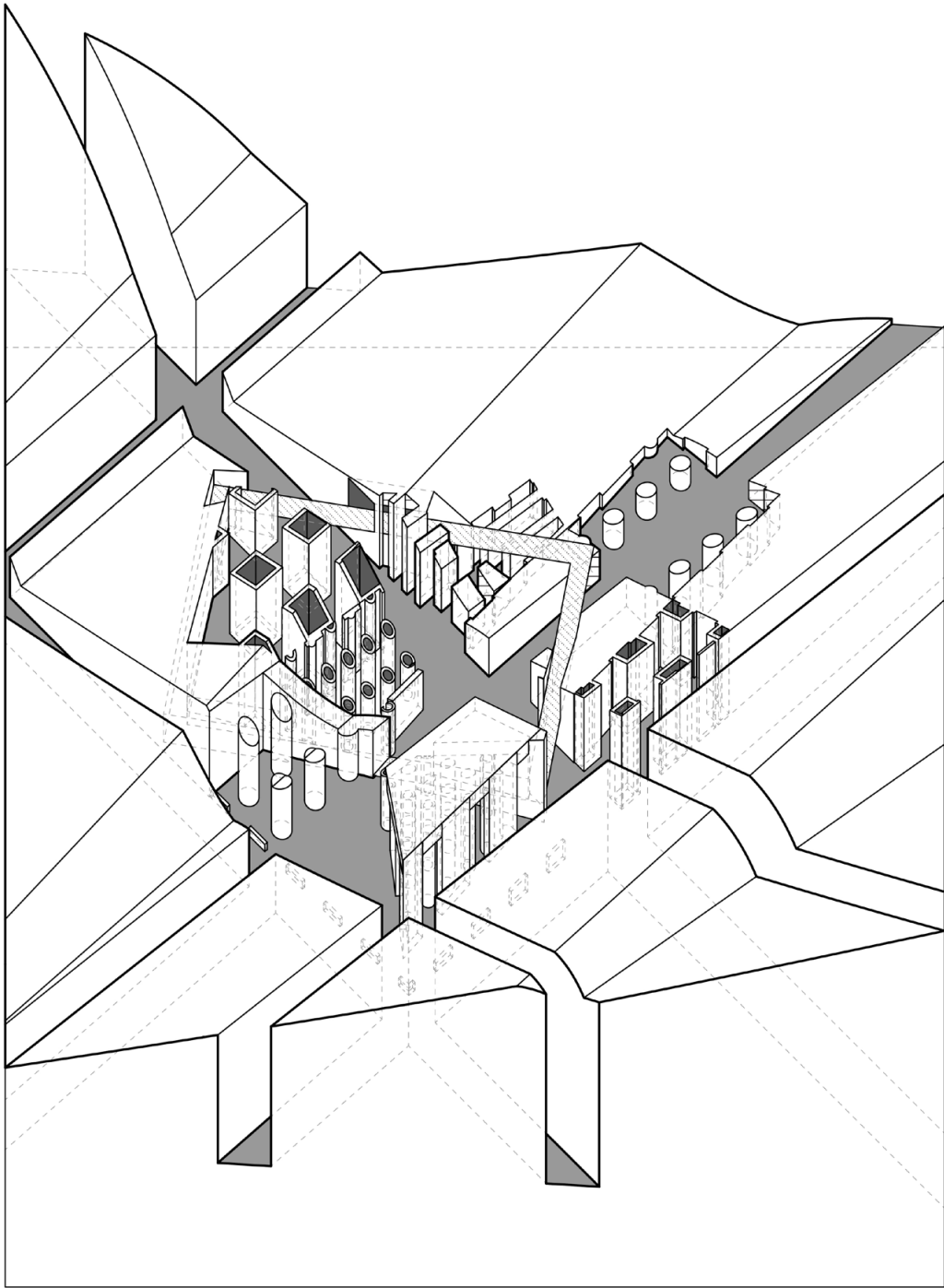
Shan Yanran
Gu Yuying
Cheung Kun Ho



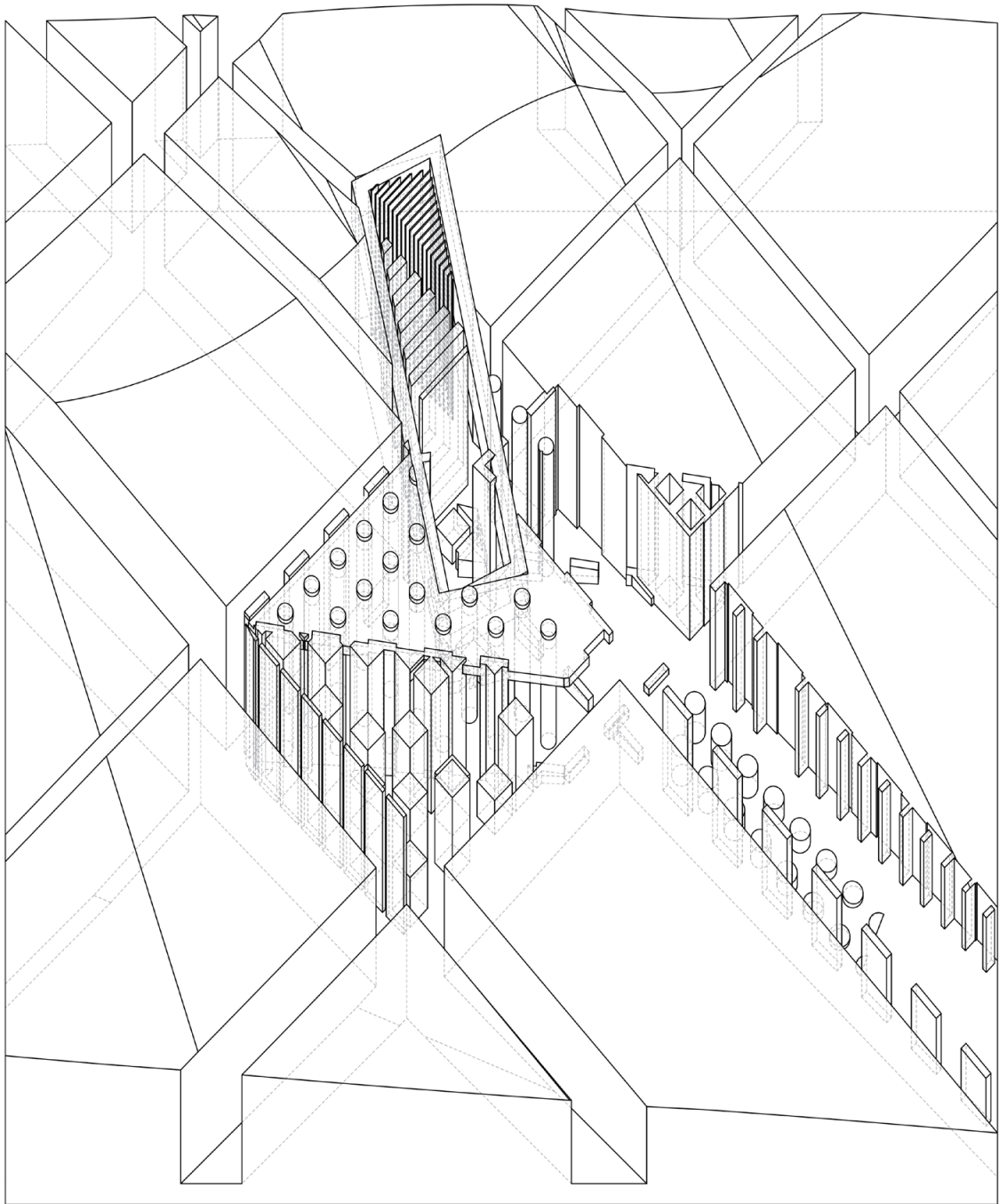
Chi Chau Hang



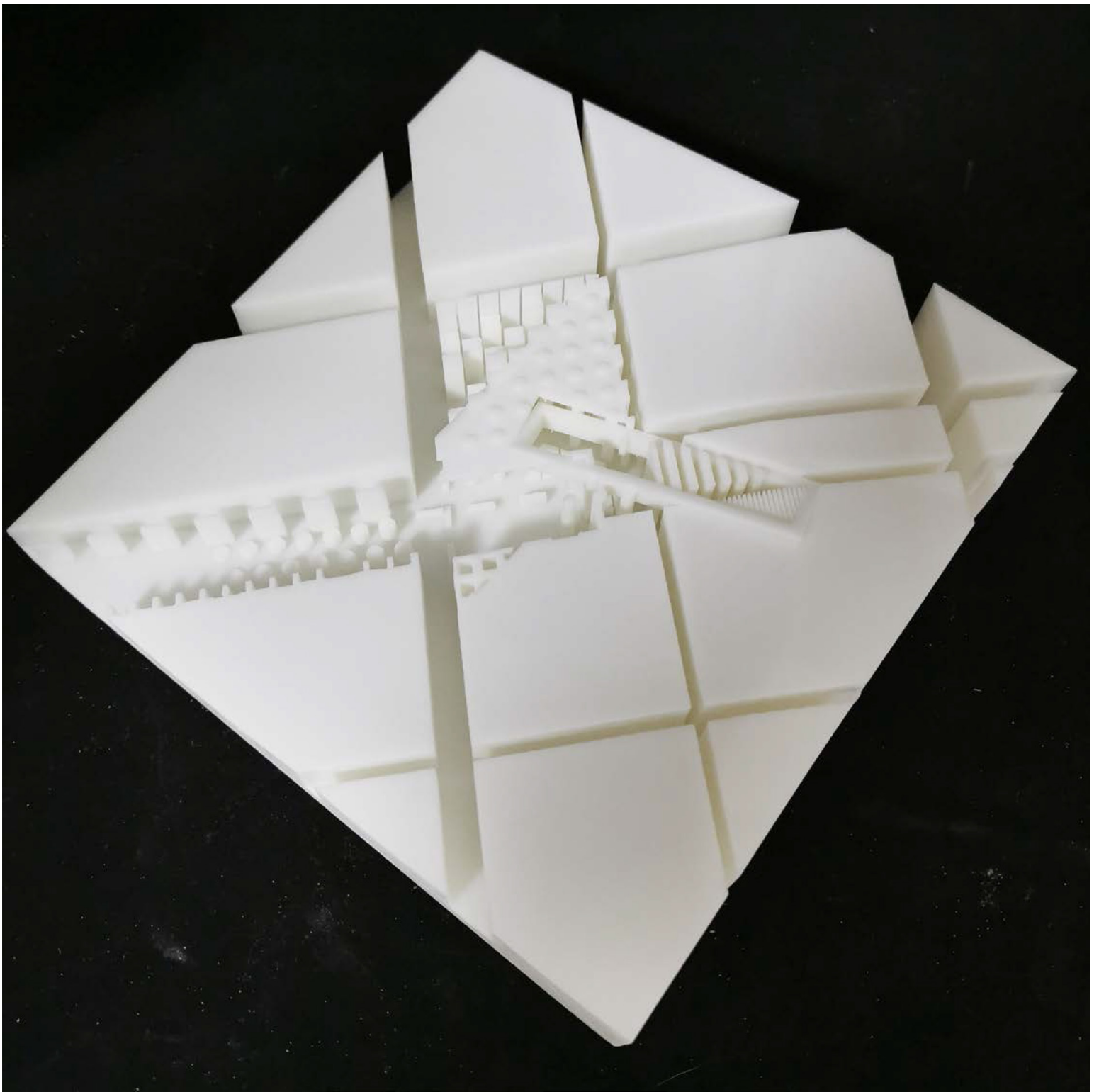
Cheng Ho Yin Matthew



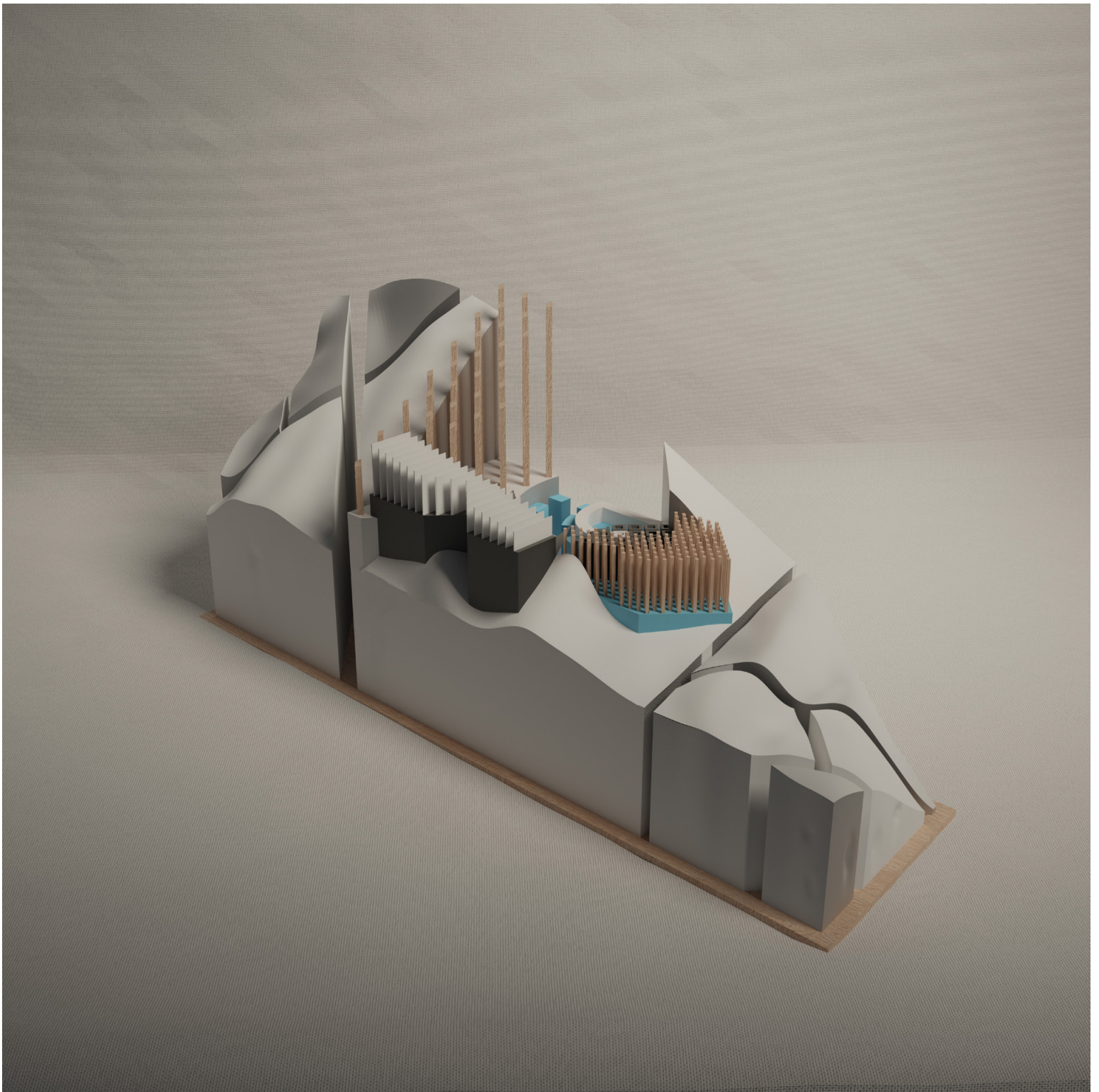
Kwok Chun Hei Derek



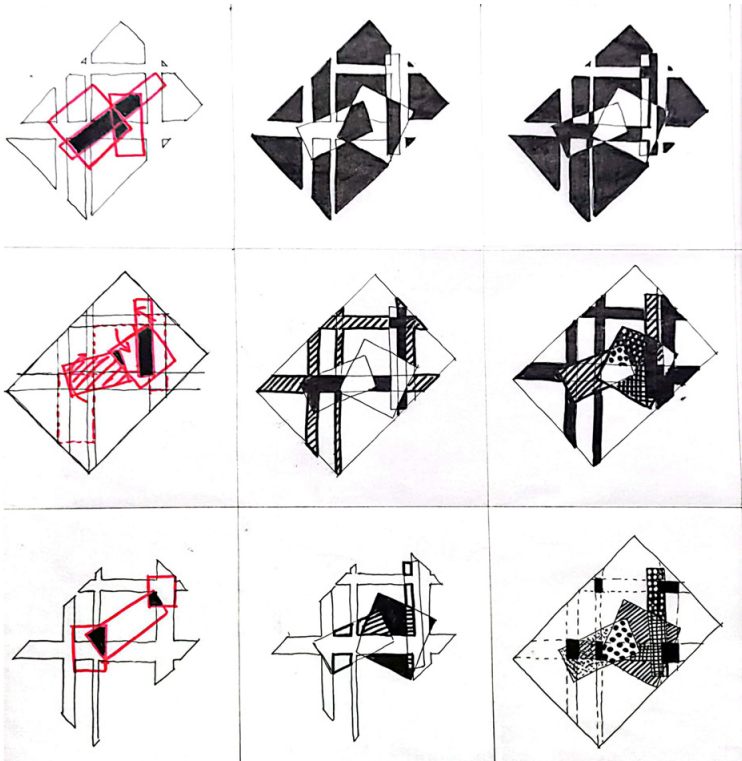
Gu Yuying



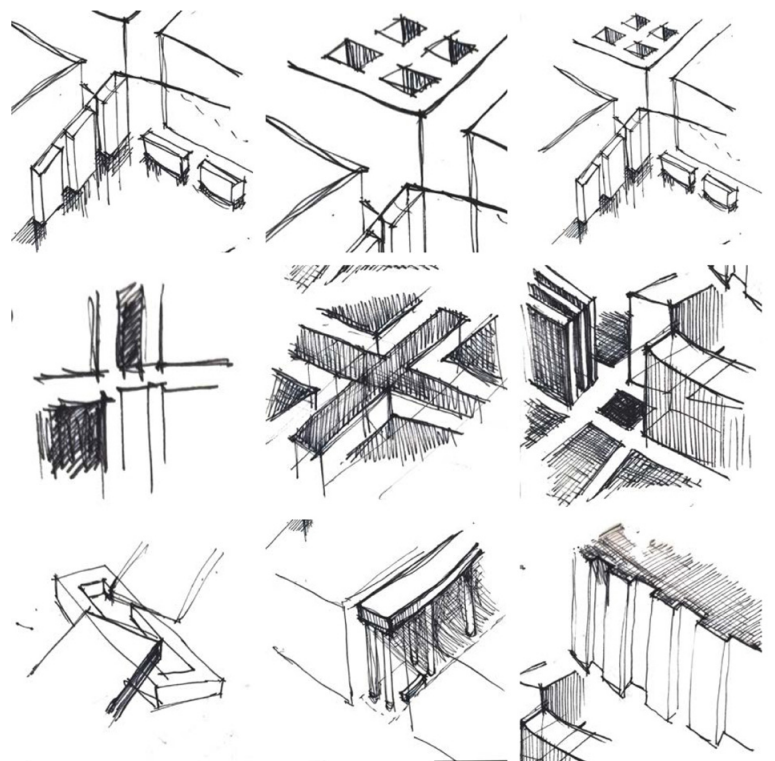
Gu Yuying



Ng Hou Ming



Shan Yanran



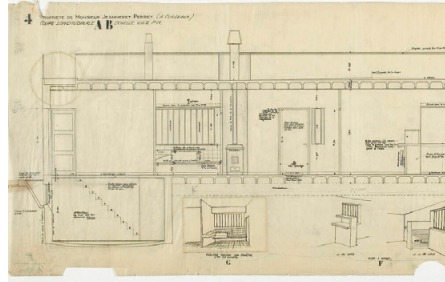
Gu Yuying

Lectures

HKU BAAS, Visual Communication 1 (ARCH2055)



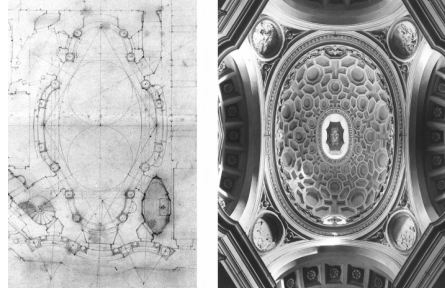
Lecture 0
What is Representation?



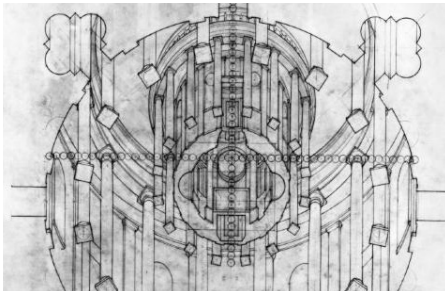
Lecture 6
Resolution & Abstraction



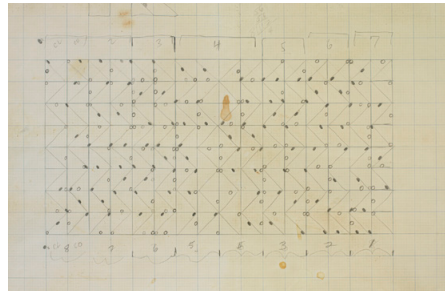
Lecture 1
Sections



Lecture 7
Geometric Order



Lecture 2
Projections



Lecture 8
Grid Myth

Lecture 3
Projection as Anatomy



Lecture 4
Vanishing Point



Lecture 9
Sketches & Speculation



Lecture 5
Motion & Sequence



Lecture 10
Physicalized Lines