MODELAÇÃO GEOMÉTRICA GENERATIVA

generative and geometric modeling

Docente

professor

januario.mgg@gmail.com

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LISBOA
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UNIVERSIDADE DE LISBOA

ANO LETIVO 2024-2025

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ANO LETIVO 2024-2025



Pedro Gomes Januário

Doutor Arquiteto, Professor Associado
Faculdade de Arquitetura - Universidade de Lisboa

Formação Académica

Experiência de Ensino

Orientações e Supervisões

Gestão Universitária

Grupos de Investigação

Linhas de Investigação

Actividade Científica

Uniadades curriculares de 1º Ciclo

1994-2002 - CAD I, Licenciatura de Arquitectura (1º Ciclo)

1994-2003 - CAD II, Licenciatura de Arquitectura (1º Ciclo)

1995-1996 - CAD I, Licenciatura de Arquitectura do Design de Moda (1º Ciclo)

1996-1999 - CAD I, Licenciatura de Arquitectura do Design (1º Ciclo)

1998-2003 - CAD II, Licenciatura de Arquitectura do Design (1º Ciclo)

2007-2013 - Elementos de Computação, Licenciatura de Design (1º Ciclo)

2007-2008 - Desenho de Computação. Licenciatura de Design (1º Ciclo)

2007-2008 - Processos de Computação, Mestrado Integrado em Arquitetura (1º Ciclo)

2007-2013 - Processos de Computação, Mestrado integrado em Arquitectura (1º Ciclo)

2009-2010 - Arquitectura dos Espaços Cénico e Virtual, Licenciatura em Cenografia (1º Ciclo)

2015-2023 - Modelação Paramétrica e Prototipagem Digital em Design, Licenciatura de Design (1º Ciclo)

2023-presente - Prototipagem Digital, Licenciatura de Design (1º Ciclo)

2023-2024 - Modelação e Visualização Tridimensional em Arquitetura, Mestrado integrado em Arquitetura (1º Ciclo)

Uniadades curriculares de 2º Ciclo

2008-2010 - Arquitectura Teatral, Mestrado integrado em Arquitetura (2º Ciclo, Optativa)

2010-2011 - A (Re)Invenção do Espaço Através das Artes e da Imagem, Mestrado integrado em Arquitetura (2º Ciclo, Optativa)

2010-2011 - Construção e Fabricação de maquetas Digitais, Mestrado integrado em Arquitetura (2º Ciclo, Optativa)

2011-2012 - Imagem Digital, Mestrado Design de Produto (2º Ciclo, Optativa)

2011-2012 - Composição Arquitectónica Digital, Mestrado integrado em Arquitetura (2º Ciclo, Optativa)

2016-2018 - Tecnologias de Gestão na Arquitetura - BIM, Mestrado integrado em Arquitetura (2º Ciclo, Optativa)

2012-2015 - Arquiteturas em Papel e Materiais Sustentáveis, Mestrado integrado em Arquitetura (2º Ciclo, Optativa)

2016-2017 - Laboratório de Introdução ao Desenho Paramétrico, Mestrado Integrado em Arquitetura (2º Ciclo, Optativa).

2020-2021 - Arquitetura no Antropoceno, Curso de Doutoramento em Arquitetura (2º Ciclo, Optativa).

2010-2013 - Modelação Geométrica em Design, Mestrado em Design de Produto (2º Ciclo)

2008-2013 - Modelação Geométrica, Mestrado Integrado em Arquitetura (2º Ciclo)

2012-2022 - Modelação Geométrica e Generativa, Mestrado Integrado em Arquitetura (2º Ciclo)

2024-presente - Modelação Geométrica e Generativa, Mestrado Integrado em Arquitetura (1º Ciclo)

Uniadades curriculares de 3º Ciclo

2008-2009 - História e Morfologia dos Lugares teatrais, Curso de Doutoramento em Arquitetura (3º Ciclo, Optativa)

2009-2010 - Desenho Computacional e Comunicação Projectual , Curso de Doutoramento em Arquitetura (3º Ciclo, Optativa)

2013-2015 - Projeto e Fabricação Digital, Curso de Doutoramento em Arquitetura (3º Ciclo, Optativa)

2015-2018 - Laboratório de Desenho Paramétrico, Curso de Doutoramento em Arquitetura (3º Ciclo, Optativa)

2019-presente - Práticas de Investigação em Arquitetura, Curso de Doutoramento em Arquitetura (3º Ciclo, Optativa).

2021-presente - Arquitetura no Antropoceno, Curso de Doutoramento em Arquitetura (3º Ciclo, Optativa).

2014-2015 - Laboratório de Arquitecturas em Papel e Design Paramétrico I, Curso de Especialização em Arquiteturas em Papel e Design Paramétrico (3º ciclo)

2014-2015 - Laboratório de Arquitecturas em papel e Design Paramétrico II, Curso de Especialização em Arquiteturas em Papel e Design Paramétrico (3º ciclo)

2017-2018 - Laboratório I, Curso de Doutoramento em Arquitetura (3º Ciclo).

2017-2018 - Laboratório III, Curso de Doutoramento em Arquitetura (3º Ciclo).

2018-Presente - Seminário Projeto de Tese, Curso de Doutoramento em Arquitetura (3º Ciclo).

2018-2023 - Laboratório II, Curso de Doutoramento em Arquitetura (3º Ciclo).

2023-Presente - Seminário de Investigação em Arquitetura, Curso de Doutoramento em Arquitetura (3º Ciclo).

2023-Presente - TESE I - Seminário Avançado, Curso de Doutoramento em Arquitetura (3º Ciclo).



Pedro Miguel Gomes Januário,
Professor Associado
Departamento de Desenho Geometria e Computação

Faculdade de Arquitectura
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Gabinete 4.9, Edifício 4
acesso escada sala 4.0.11
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ANO LETIVO 2024-2025

01 Outubro · 16 Outubro · 30 Outubro · 13 Novembro · 27 Novembro · **27 Dezembro** · Janeiro

Regras de submissão

Entregue os **Exercícios 10 ea12** electronicamente através do serviço **WESENDIT.COM** para o email **januario.mgg2022@gmail.com**, de modo a que os mesmos sejam recepcionados até às **24:00 do dia 27 de dezembro de 2022**

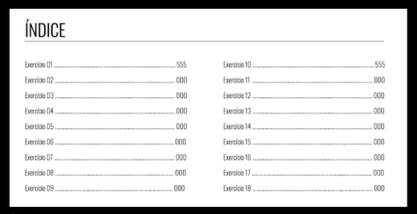
O email deverá conter os ficheiros abaixo descritos:
• o ficheiro com o Portfolio, em formato PDF
• o(s) ficheiro(s) com o(s) exercício(s) em Rhino, em formato 3DM
• o(s) ficheiro(s) com o(s) exercício(s) em Grasshopper, em formato GH
• o(s) ficheiro(s) com o(s) exercício(s) da imagem do Código Grasshopper, em formato JPG ou PNG

Exercícios a submeter

PORTFOLIO6



capa
obrigatório o uso desta imagem como capa do trabalho)



índice



identificação do aluno (número e nome completo), com a respectiva foto

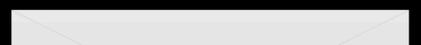


separador do exercício (página esquerda - par)
exemplo de diagramação



separador do exercício (página direita - ímpar)
exemplo de diagramação





Ficheiros a submeter

PORTFOLIO6-númeromecanográfico-NOMEDOALUNO.PDF

ESTE PORTFOLIO DEVERÁ CONTER TODOS OS EXERCÍCIOS 01-12
O ficheiro do Portfolio deverá contar todos os exercícios baixo descritos.
Letras maiúsculas e sem espaços.

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ANO LETIVO 2024-2025

Notas provisórias

modelação geométrica e generativa
ANO LECTIVO 2022-2023

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UNIVERSIDADE DE LISBOA

MGG 2022

		Id	Número	N.	PHOTO	PORTFOLIO E1 E2	PORTFOLIO E3	PORTFOLIO E4	PORTFOLIO E5	PORTFOLIO E6	SUBMISSION E1/E2 Exercise 01 3DM	01 GH	01 PNG	01 LAYOUT	Exercise 02.1 3DM	02.1 GH	02.1 PNG	02.1 LAYOUT	Exercise 02.2 3DM	02.2 GH	02.2 PNG	02.2 LAYOUT	Exercise 03 3DM	03 GH	03 PNG	03 LAYOUT	Exercise 04 3DM	04 GH	04 PNG	04 LAYOUT	SUBMISSION E3 Exercise 05 3DM	05 LAYOUT	Exercise 06 3DM	06 GH	06 PNG	06 LAYOUT	SUBMISSION E4 Exercise 07 3DM	07 GH	07 PNG	07 LAYOUT
					80	2500	925	750	1500	2000	50	100	100	250	50	100	100	500	50	100	100	500	150	300	300	750	150	300	300	750	100	250	150	300	300	750	150	300	300	750
0,000	001	**20091220**	*Liliana Monteiro Freitas*																																				
7,784	002	**20141055**	*João Miguel Rodrigues da Fonseca Rosa*		20,0	20,0		20,0			20,0	20,0	20,0	12,0	20,0	20,0	20,0	12,0	20,0	20,0	20,0	15,0	20,0	20,0	20,0	15,0	20,0	20,0	20,0	15,0		3,0				3,0	20,0	20,0	20,0	15,0
0,000	003	**20141444**	*Sílvia Lopes de Figueiredo*																																				
10,235	004	**20151124**	*Sara Miguel Baptista Pires*		20,0	20,0	20,0	20,0						3,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0		20,0	20,0	20,0		20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	19,5
0,000	005	**20151202**	*Endersan Patrícia Paulo Barbosa*																																				
0,824	006	**20171021**	*Maria do Carmo Maia de Loureiro Valadares*		10,0		10,0							3,0												3,0								20,0							
3,289	007	**20171156**	*Matilde Teixeira Gago Leiria*			20,0	20,0							3,0	5,0	5,0	5,0	3,0													10,0	0,0		10,0	0,0				0,0
0,000	008	**20171161**	*Pedro Miguel Teixeira dos Santos*																																				
0,000	009	**20171371**	*Alexandre Miguel Louçã Graça*																																				
0,783	010	**20171389**	*Mariana de Oliveira Coelho Casimiro*		20,0						20,0	20,0	20,0		10,0	10,0	10,0										20,0	20,0												
9,862	011	**20171408**	*Mariana Pinheiro de Souza Freitas*		20,0	20,0	10,0	10,0			20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0		20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	18,0
6,345	012	**20181167**	*Miguel Bernardes do Carmo*		20,0	10,0		20,0			20,0	20,0	20,0	20,0	15,0	15,0		20,0		15,0		20,0		20,0		20,0		20,0		20,0							20,0	20,0	20,0	19,0
5,205	013	**20181184**	*Luís Henrique Ferreira Teles de Sousa*				10,0	10,0								10,0	10,0	20,0					20,0	20,0	20,0	20,0		20,0	20,0				10,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	18,0
7,081	014	**20181192**	*Leonisa Alexia dos Santos Mendes*		20,0	10,0		10,0			20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0					15,0	15,0	20,0		15,0	15,0	20,0		20,0	20,0	20,0	15,0		20,0	20,0	20,0	20,0	16,0
0,000	015	**20181197**	*Gonçalo Martins Viegas*																																				
8,985	016	**20181210**	*Cláudia Alexandra Jerónimo Vicente*		20,0	20,0	20,0	20,0			20,0	20,0	20,0	20,0		10,0		10,0			15,0	3,0	20,0	20,0	15,0	15,0	20,0	20,0	20,0		15,0	15,0	20,0	20,0	20,0	12,0	20,0	20,0	20,0	9,0
4,382	017	**20181289**	*João Miguel Modesto Barata*					10,0			20,0	20,0	20,0	20,0	20,0	20,0	20,0		20,0	20,0	20,0		10,0	10,0	10,0						20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	19,0
4,138	018	**20181423**	*Cristina Andrade Pálido*		20,0	20,0					20,0	20,0	20,0	20,0	10,0	20,0	20,0		20,0	20,0			20,0	15,0			20,0	20,0	20,0											
10,554	019	**20191125**	*Francisca de Sousa Lima*		20,0	20,0	20,0	20,0			20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0		20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	17,0
10,862	020	**20191126**	*Ricardo Filipe Taveira Gonçalves*		20,0	20,0	20,0	20,0			20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	18,5
5,047	021	**20191133**	*Filipe Cortez dos Santos Azinhais de Brito*		20,0	10,0					20,0		20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0		20,0	20,0	20,0			0,0				0,0				0,0
10,554	022	**20191137**	*Raquel Sofia Timoteo Ilhéu dos Reis Pio*		20,0	20,0	20,0	20,0			20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0		20,0	20,0	20,0		20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	17,0
6,973	023	**20191143**	*Daniel Alexandre da Silva Rodrigues de Gouveia*		20,0	5,0					20,0	20,0	20,0	20,0	10,0	20,0	20,0	20,0				7,0	20,0	20,0	20,0		20,0	20,0	20,0		20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	18,0
5,469	024	**20191145**	*Alexandre de Araújo Silva Paes Ferreira*		20,0	10,0	10,0							3,0				3,0				3,0	20,0	20,0	20,0	16,0	20,0	20,0	20,0	16,0	15,0	20,0	15,0	15,0	15,0	20,0				0,0
8,704	025	**20191149**	*David Rolim Mendes Barrote Carrilho*		20,0	20,0	20,0				20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0		20,0	20,0	20,0		20,0	20,0	20,0	20,0	20,0	20,0				0,0
8,568	026	**20191151**	*Mafalda Rodrigues Chagas*		20,0	15,0	15,0	15,0			20,0	20,0	20,0	20,0	20,0	20,0		20,0	20,0	20,0		20,0	20,0		20,0		20,0		20,0		20,0	20,0	15,0	15,0		20,0	20,0	20,0	20,0	16,0
10,643	027	**20191152**	*Beatriz Maria Santos Vital*		20,0	20,0	20,0	20,0			20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0		20,0	20,0	20,0		20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	19,8
9,667	028	**20191159**	*Adriana Sofia Reis Vicente*		20,0	10,0	20,0	20,0			20,0	20,0	20,0	20,0	10,0	20,0	20,0	20,0		20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	17,0
8,179	029	**20191161**	*Beatriz Maria Guerreiro Quinta Queimada*		20,0	15,0	15,0				20,0	20,0	20,0	20,0	20,0	20,0	15,0	20,0	20,0	20,0	15,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0				0,0
10,554	030	**20191185**	*Sara Teixeira Rodrigues*		20,0	20,0	20,0	20,0			20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	17,0
6,730	031	**20191187**	*Maria Ascenso Dias Pedro*				20,0				20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0				0,0
6,129	032	**20191194**	*Guilherme Couto da Silveira e Lorena Vieira*		20,0			10,0			20,0	20,0	20,0	20,0	20,0	20,0	20,0	12,0	20,0	20,0	20,0	12,0	20,0	20,0	12,0		20,0	20,0	12,0				20,0	20,0	20,0	20,0	20,0	20,0	20,0	18,0
4,873	033	**20191201**	*Rita Garcia de Brito*		20,0			20,0			20,0	20,0	20,0	12,0	20,0	20,0	20,0	12,0	20,0	20,0	20,0	12,0	20,0	20,0	12,0	20,0	20,0	20,0	12,0							20,0	20,0			12,0
8,796	034	**20191204**	*Ângela Maria Ferreira Dias*		20,0	10,0	10,0	10,0			20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0		20,0	20,0	20,0		20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	18,5
6,404	035	**20191205**	*Nuno Guilherme Pires de Moura*		20,0	10,0	15,0	20,0			20,0	20,0		12,0	20,0	20,0		14,0					20,0	20,0	20,0		20,0	20,0	20,0									20,0	20,0	14,0
10,586	036	**20191209**	*Inês Raquel Tomás Pereira*		20,0	20,0	20,0	20,0			20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0		20,0	20,0	20,0		20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	18,0
2,861	037	**20191213**	*Rafael Filipe de Sousa Pimentel*		20,0		20,0				20,0	20,0	20,0	16,0																	20,0	20,0	20,0	20,0	20,0	20,0				
7,221	038	**20191214**	*Anibela Correia Gonçalves*		20,0	10,0	10,0				20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0		20,0	20,0	20,0		20,0	20,0	20,0	20,0	20,0	20,0				0,0
10,586	039	**20191218**	*Beatriz da Silva Amaro*		20,0	20,0	20,0	20,0			20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	10,0	10,0	15,0	18,0
1,783	040	**20191242**	*João Pedro Afonso Rogeiro*		15,0	5,0					20,0	20,0	20,0	20,0				3,0				3,0	3,0	3,0	3,0					3,0	20,0	20,0	20,0		0,0	0,0				0,0
10,619	041	**20191257**	*Rafael de Moura Rebelo*		20,0	20,0	20,0	20,0			20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0		20,0	20,0	20,0		20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	19,0
10,543	042	**20191322**	*Beatriz Swaelen Silva*		20,0	20,0	20,0	20,0			20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	10,0	20,0	20,0	20,0	20,0		20,0	20,0	20,0		20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	18,0

MGG 2022

modelação geométrica e generativa
ANO LECTIVO 2022-2023

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		Id	Número	N.	PHOTO	PORTFOLIO E1 E2	PORTFOLIO E3	PORTFOLIO E4	PORTFOLIO E5	PORTFOLIO E6	SUBMISSION E1/E2 Exercise 01 3DM	01 GH	01 PNG	01 LAYOUT	Exercise 02.1 3DM	02.1 GH	02.1 PNG	02.1 LAYOUT	Exercise 02.2 3DM	02.2 GH	02.2 PNG	02.2 LAYOUT	Exercise 03 3DM	03 GH	03 PNG	03 LAYOUT	Exercise 04 3DM	04 GH	04 PNG	04 LAYOUT	SUBMISSION E3 Exercise 05 3DM	05 LAYOUT	Exercise 06 3DM	06 GH	06 PNG	06 LAYOUT	SUBMISSION E4 Exercise 07 3DM	07 GH	07 PNG	07 LAYOUT
					80	2500	925	750	1500	2000	50	100	100	250	50	100	100	500	50	100	100	500	150	300	300	750	150	300	300	750	100	250	150	300	300	750	150	300	300	750

MODELAÇÃO GEOMÉTRICA GENERATIVA

generative and geometric modeling

Entregas

submission of assignments

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sempre sempre para o email,
através do wetransfer (https://wetransfer.com).

1ª Entrega *1st submission*	**03 março**	até às 22:00	via email
2ª Entrega *2nd submission*	**17 março**	até às 22:00	via email
3ª Entrega *3rd submission*	**07 abril**	até às 22:00	via email
4ª Entrega *4th submission*	**21 abril**	até às 22:00	via email
5ª Entrega *5th submission*	**12 maio**	até às 22:00	via email
Entrega FINAL *final submission*	**26 maio**	até às 24:00	via email

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MODELAÇÃO GEOMÉTRICA GENERATIVA

generative and geometric modeling

Entregas

submission of assignments

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Nomenclatura dos ficheiros…

EX00-20191234-PEDROJANUÁRIO.PDF

- *EX00* — número do exercício
- *20191234* — número do aluno
- *PEDROJANUÁRIO* — nome do aluno *(sem espaços) (letras maiúsculas)*
- *.PDF* — tipo de ficheiro

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MODELAÇÃO GEOMÉTRICA GENERATIVA

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Entregas

submission of assignments

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O que é avaliado…

what is assessed…

the delivered files

os ficheiros entregues

modelação geométrica e generativa

ANO LECTIVO 2018-2019

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| | | Id | Número | Nome | EX16 | BASE | | | | MTERRITORIAL | | | | | | | | | | | | MURBANO | | | | | | | | | | | | MODELO2D | | | | | | | | | | | | | | | | | | | | | MODELO 3D | | | | | | | | | | | | | | | | | | |

MODELAÇÃO GEOMÉTRICA GENERATIVA

generative and geometric modeling

Avaliação

assessment

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O que é avaliado…

what is assessed…

estrutura — *structure*
conteúdo — *content*
forma — *layout*

	10,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	10,0	10,0	5,0	1,0	2,0	2,0	2,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	75,0
	MODELO 3D																								
	EXTERIOR								INTERIOR							ARENA									
3DM	COBERTURA	VOLUMETRIA	VÃOAS	P CURROS	P CAVALOS	ANEXOS	EM VOLTA	CURROS	CAVALARIÇAS	ESCADAS	CORREDORES	ISANITÁRIAS	ENFERMARIA	OUTROS	TRINCHEIRA	ESCONDERIJOS	BARREIRA	BANCADAS	CAMAROTES	GALERIAS	VOMITÓRIOS	ESCADAS	OUTROS	LAYOUT
20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0
20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	18,0
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5,0																								

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MODELAÇÃO GEOMÉTRICA GENERATIVA

generative and geometric modeling

Avaliação

assessment

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Como é avaliado…

how does it works…

92 ALUNOS

modelação geométrica e generativa

ANO LECTIVO 2018-2019

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		Id	Número	Nome	FOTOGRAFIA	1	2	3	FINAL	GRUPO	TABELA	LAYOUT	JPG (4)	DESENHOS	LAYOUT	JPG (4)	MODELO	LAYOUT	3DM	4.1	4.2	4.3	LAYOUT
					150						100,00		25,00		75,00				100,00				
					5	10	15	25	45	50	90	10	2,5	2,5	20	4,0	2,0	69	10	5	5	5	75
						PORTFOLIOS (FICHEIROS)					EX01		EX02			EX03			EX04				
																				SPIRULA	PLANORBIS	NÁUTILUS	
15,45	013	20130117	*Sofia Santos Silva Hipólito*		20,0	20,0	20,0	20,0	20,0	20,0	17,0	20,0	20,0	15,0	19,0	20,0	20,0	18,0	20,0	20,0	20,0	20,0	18,0
14,28	014	20130131	*Marcelo Guilherme Junior*		20,0	20,0	20,0	15,0	20,0	15,0	8,0	10,0	20,0	20,0	20,0	20,0	20,0	18,0	20,0	3,0	20,0		16,0
2,03	016	20130151	*Bernardo Calado da Silva*				20,0					1,0	20,0	20,0	20,0	20,0	20,0	12,0	20,0	20,0	20,0	20,0	12,0
14,36	020	20130252	*Gonçalo Santos André*		20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	16,0	20,0	20,0	20,0	20,0	14,0
13,61	022	20130307	*Luís Humberto Alves Carlos*		20,0	20,0	20,0	20,0	10,0	10,0	0,0	10,0	20,0	20,0	18,0	20,0	20,0	12,0	20,0	20,0	20,0	20,0	13,0
4,95	028	20131055	*Inês Guimarães Medina Costa*		20,0	20,0	20,0	20,0	5,0										15,0	20,0	20,0	20,0	13,0

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MODELAÇÃO GEOMÉTRICA GENERATIVA

generative and geometric modeling

Avaliação

assessment

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Arredondamentos…

round up…

09,99 = 9 valores
16,65 = 16 valores
19,84 = 19 valores

92 ALUNOS

modelação geométrica e generativa

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							150								100,00		25,00				2 000,00	
							5	10	15	25	45	50	90	10	2,5	2,5	20					
											PORTFOLIOS (FICHEIROS)				EX01		EX02				SOMA(H2:FJ2)-SOMA(CY2:DC2)	
	Id	Número	Nome	FOTOGRAFIA	1	2	3	FINAL	GRUPO	TABELA	LAYOUT	JPG (4)	DESENHOS	LAYOUT	NOTA PROVISÓRIA (ponderada)	NOTA PROPOSTA
15,45	013	20130117	*Sofia Santos Silva Hipólito*	20,0	20,0	20,0	20,0	20,0	20,0	17,0	20,0	20,0	15,0	19,0	15,45	15
14,28	014	20130131	*Marcelo Guilherme Junior*	20,0	20,0	20,0	15,0	20,0	15,0	8,0	10,0	20,0	20,0	20,0	14,28	14
2,03	016	20130151	*Bernardo Calado da Silva*			20,0					1,0	20,0	20,0	20,0	2,03	2,0
14,36	020	20130252	*Gonçalo Santos André*	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	20,0	14,36	14
13,61	022	20130307	*Luís Humberto Alves Carlos*	20,0	20,0	20,0	20,0	10,0	10,0	0,0	10,0	20,0	20,0	18,0	13,61	14
4,95	028	20131055	*Inês Guimarães Medina Costa*	20,0	20,0	20,0	20,0	5,0							4,95	5,0

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MODELAÇÃO GEOMÉTRICA GENERATIVA

generative and geometric modeling

Avaliação

assessment

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Exercícios na aula ***class assessment***	08/20 v
Exercício Grupo ***group assessment***	12/20 v
Avaliação contínua por média ponderada ***continuous assessment*** ***by weighted average***	0 - 20 valores

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Exame examination

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1ª Chamada

Melhoria ou Exercício específico e autónomo

2ª Chamada

Exercício específico e autónomo

MODELAÇÃO GEOMÉTRICA GENERATIVA

generative and geometric modeling

Portfolio *portfolio*

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20239999

JOANA MARIA APOLINÁRIA MENDONÇA BAPTISTA RESENDE



ABORDAGEM HÁPTICA

EXERCÍCIO 01 - ORIGAMIS I



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LICENCIATURA EM DESIGN
Docentes: Doutor Pedro Gomes Januário
Ano letivo 2023-2024 1º Semestre

PROTOTIPAGEM DIGITAL

MODELAÇÃO GEOMÉTRICA GENERATIVA

generative and geometric modeling

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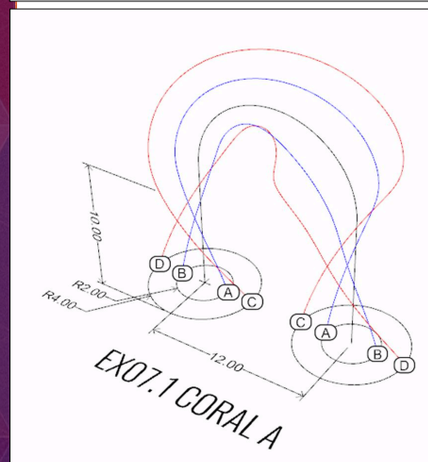
20239999

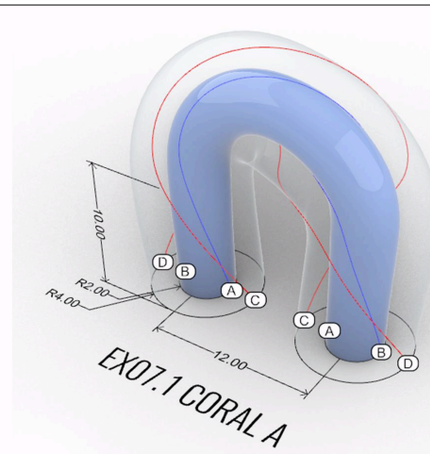
JOANA MARIA APOLINÁRIA MENDONÇA BAPTISTA RESENDE

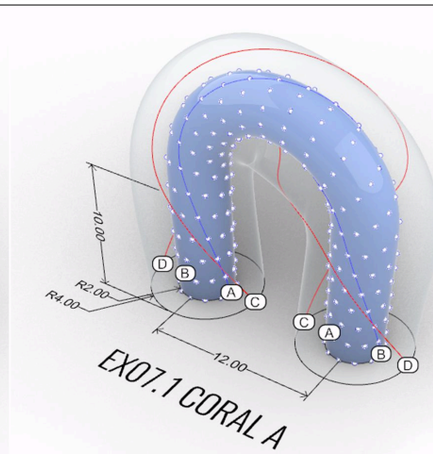


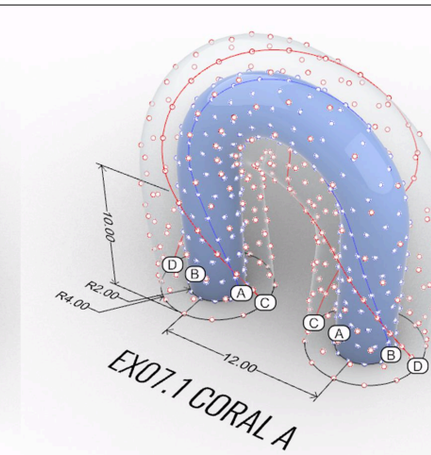
ABORDAGEM HÁPTICA

EXERCÍCIO 01 - ORIGAMIS I











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Docentes: Doutor Pedro Gomes Januário
Ano letivo 2023-2024 1º Semestre

PROTOTIPAGEM DIGITAL

MODELAÇÃO GEOMÉTRICA GENERATIVA

generative and geometric modeling

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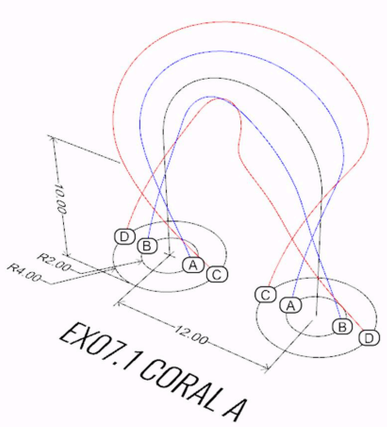

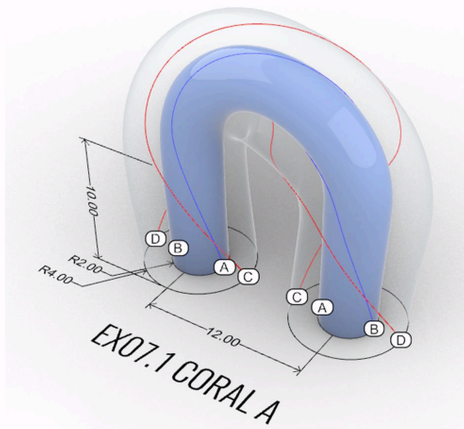

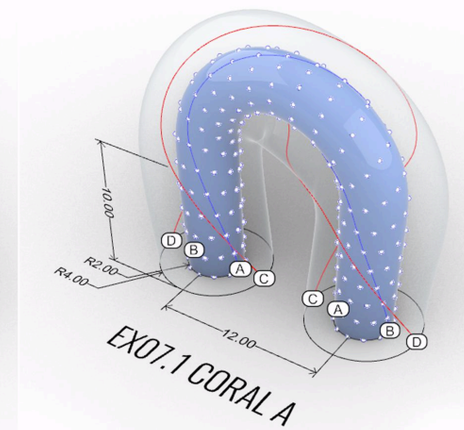

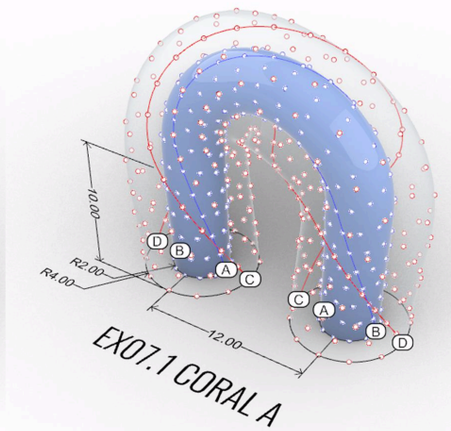

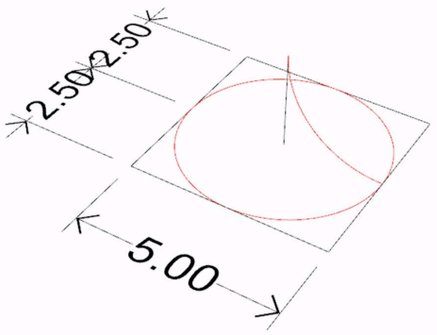

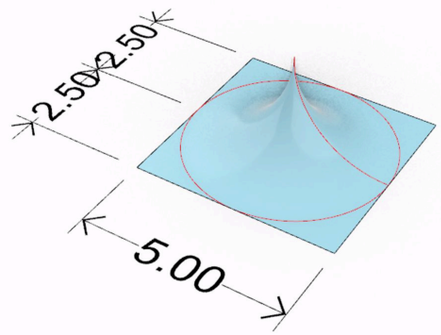

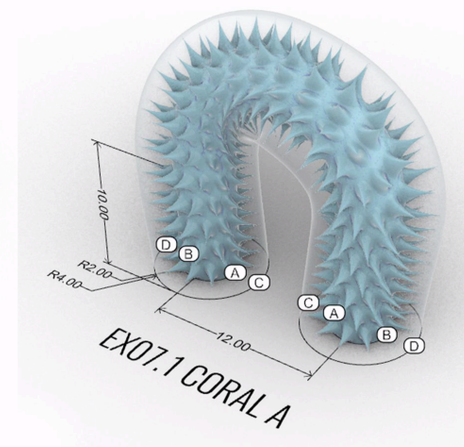

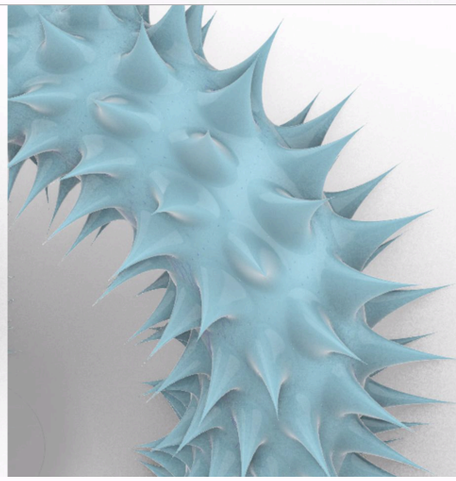

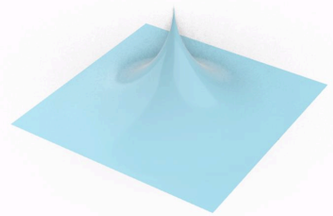

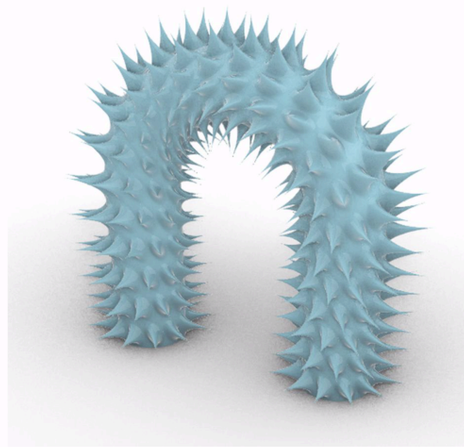

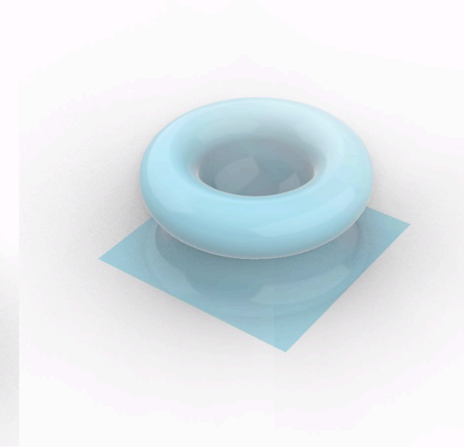

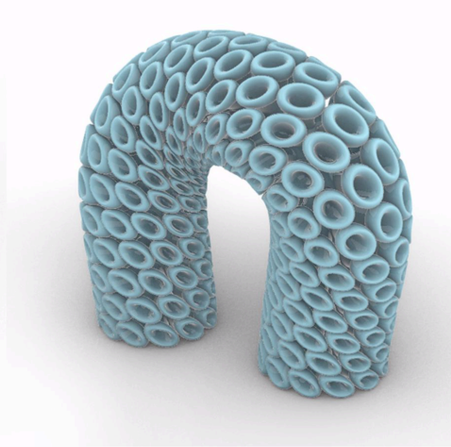

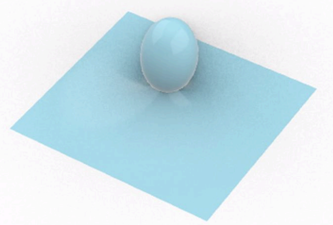

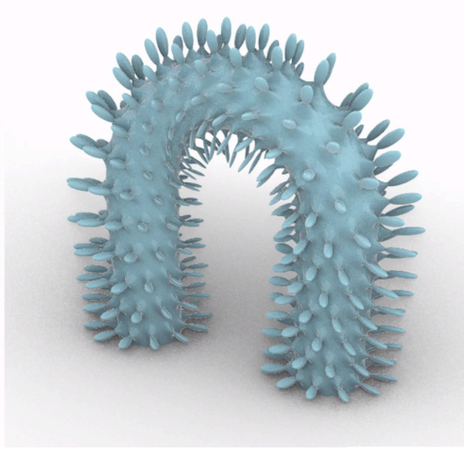

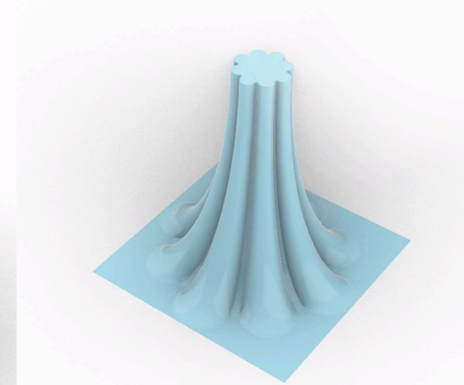

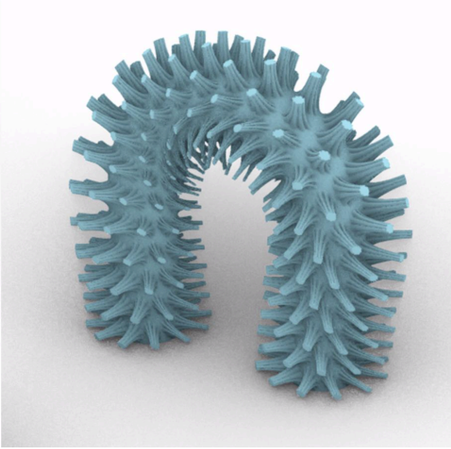

MODELAÇÃO GEOMÉTRICA GENERATIVA

generative and geometric modeling

420mm

210mm

Novo Portfolio

new portfolio

Portfolio *portfolio*

840mm

210mm

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UNIVERSIDADE DE LISBOA

modelação geométrica e generativa

MESTRADO INTEGRADO EM ARQUITECTURA



2015-2016

Maria da Glória Joana Carlota Leopoldina da Cruz Francisca Xavier de Paula Isidora Micaela Gabriela Rafaela Gonzaga de Bragança

número 20141234

420mm

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Portfolio *portfolio*

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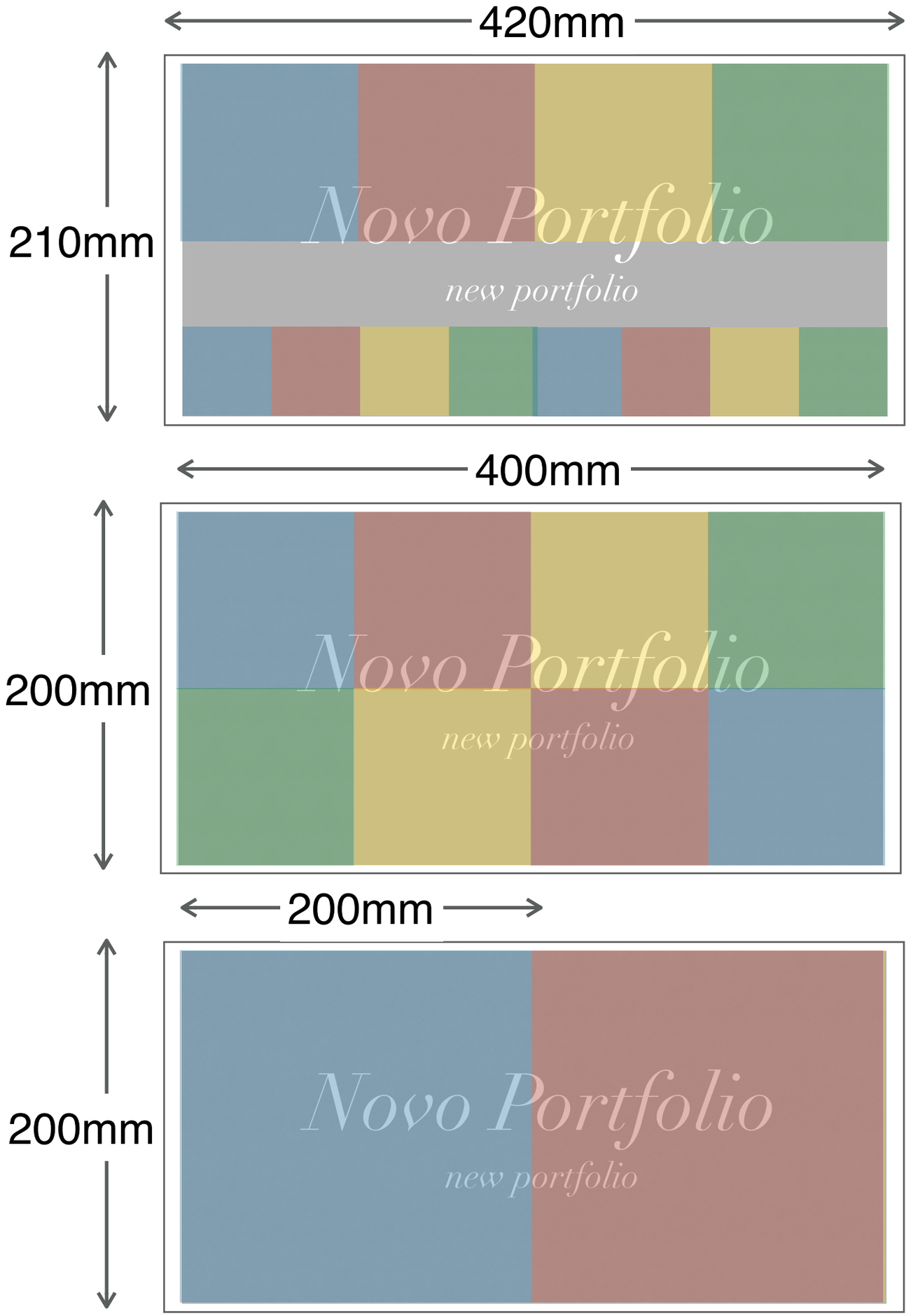

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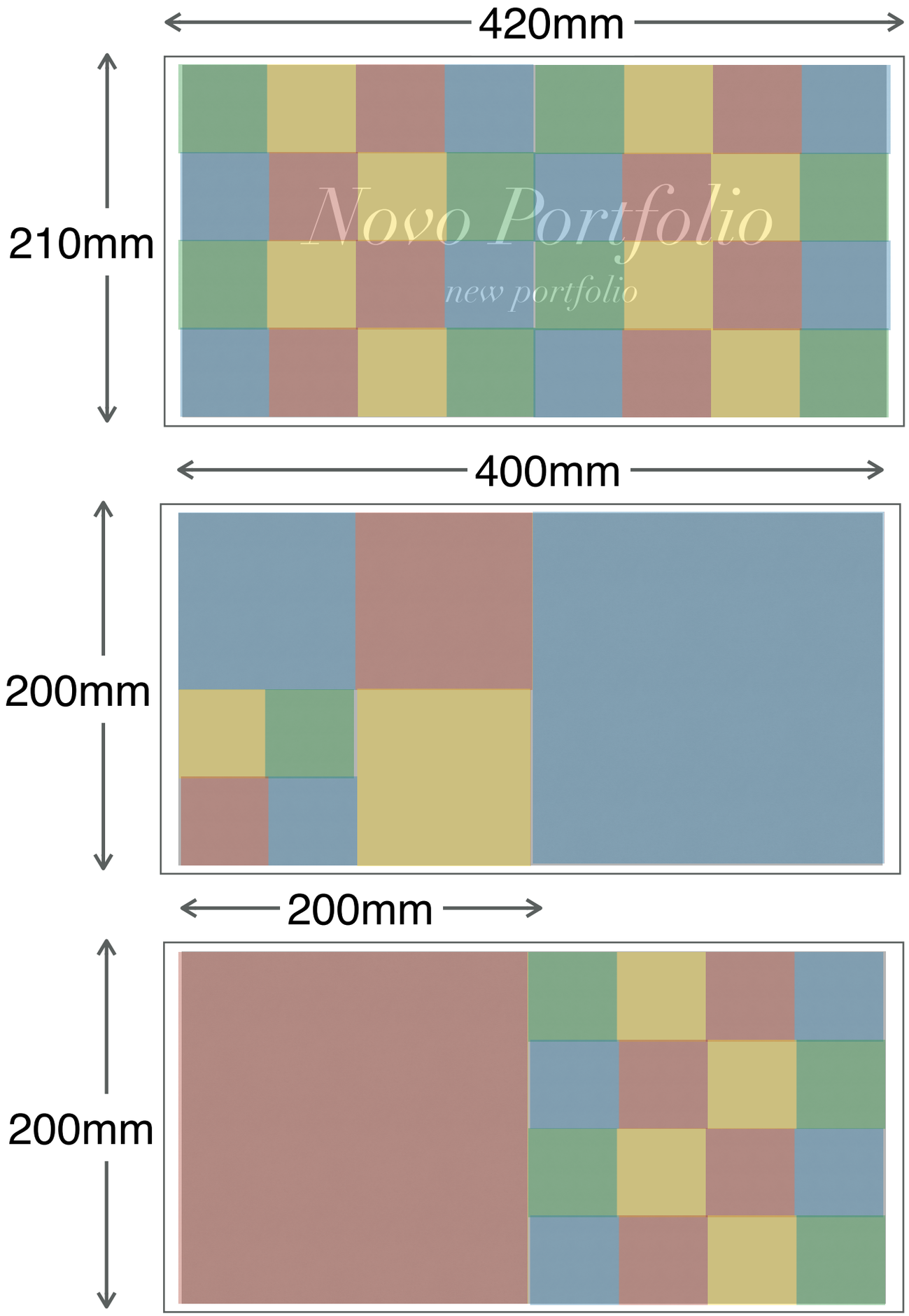

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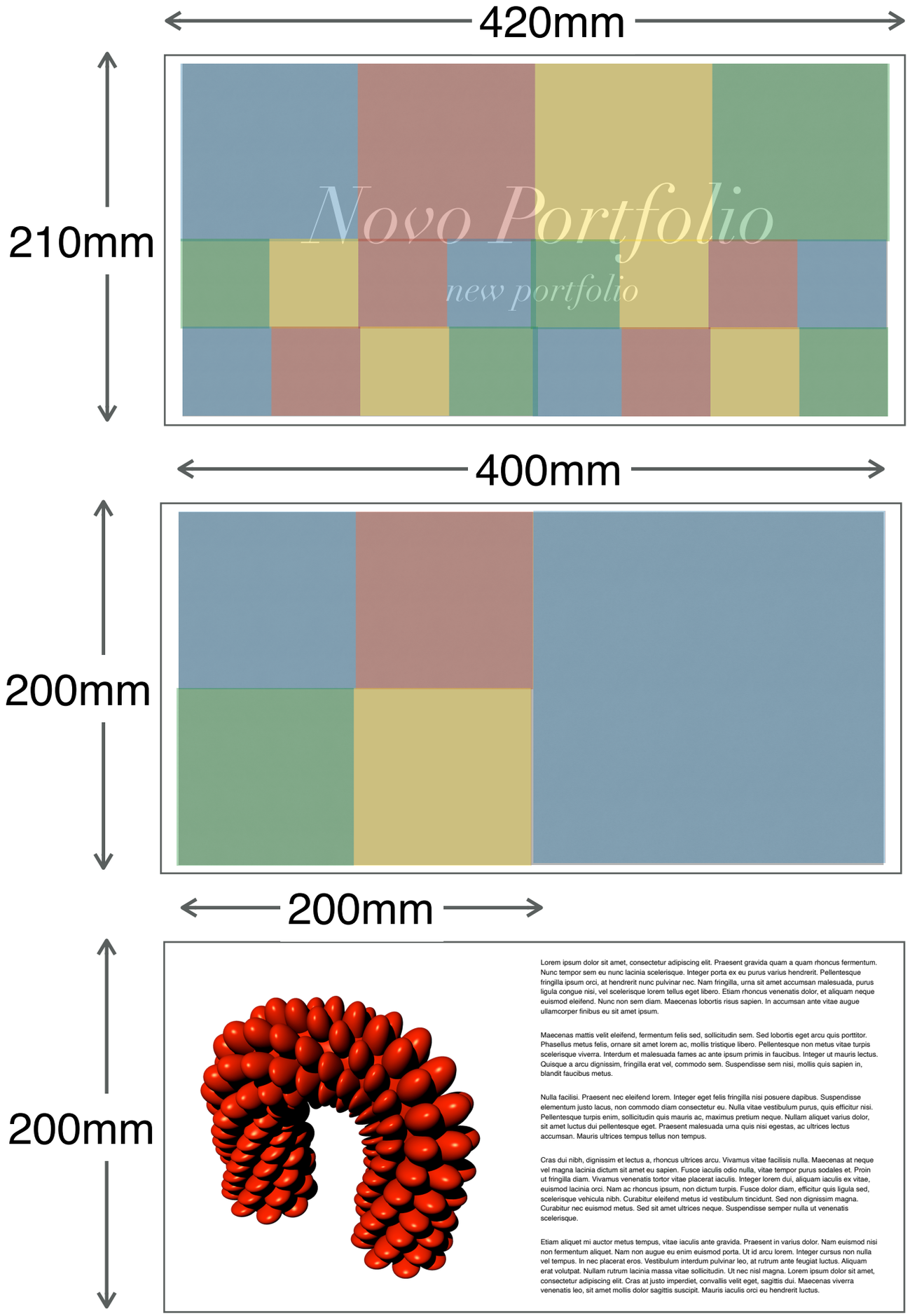

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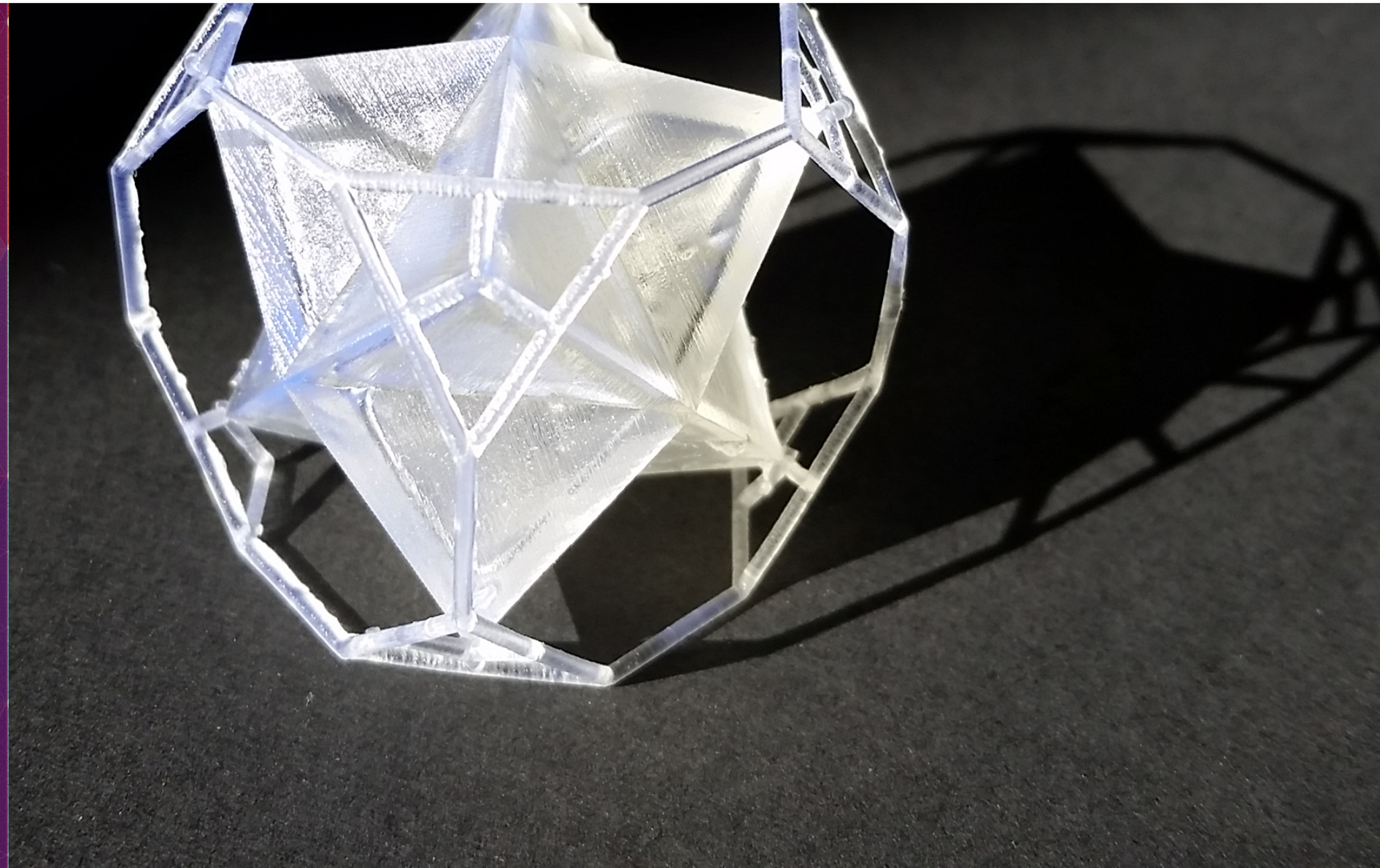

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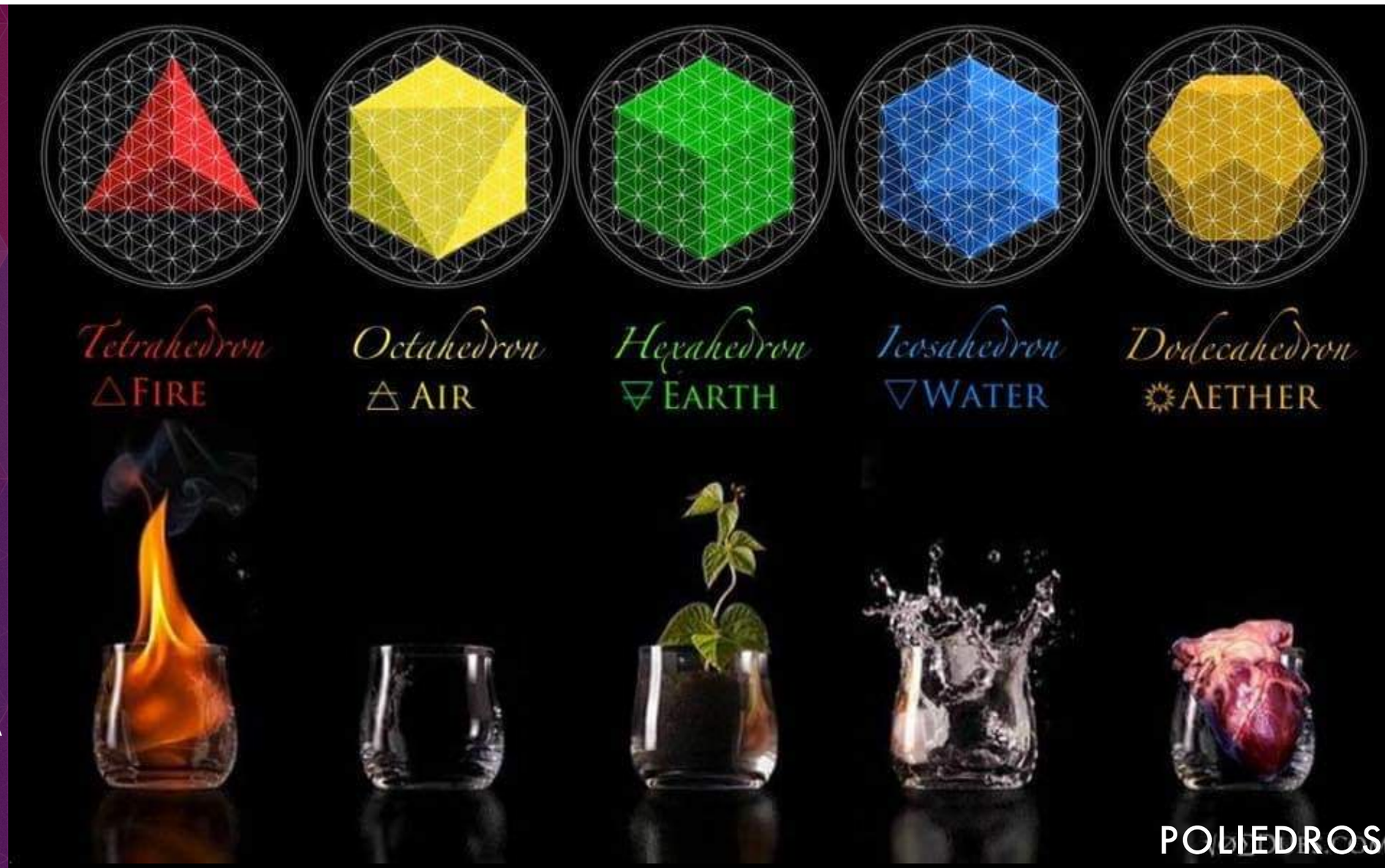

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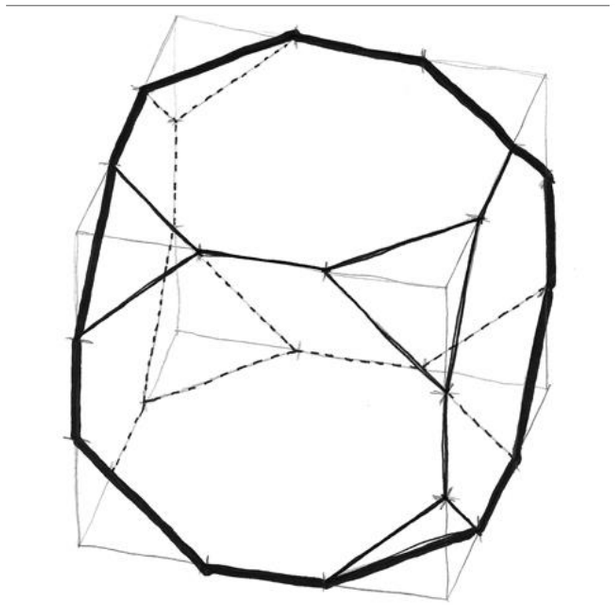

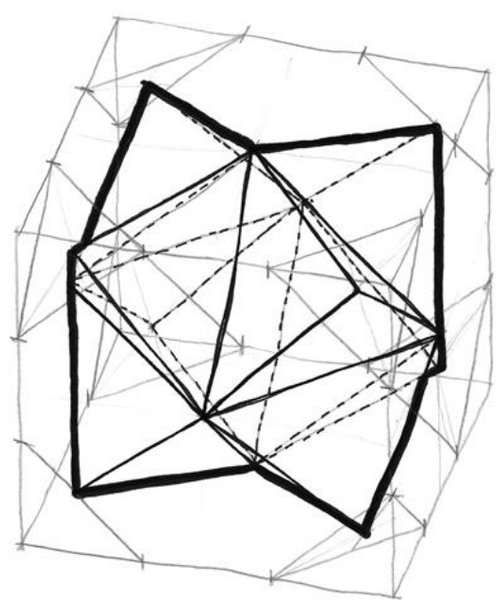

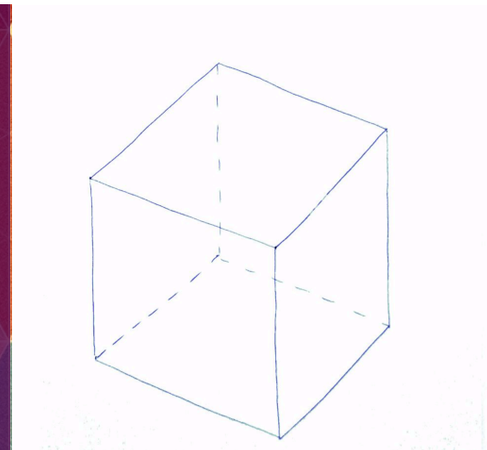

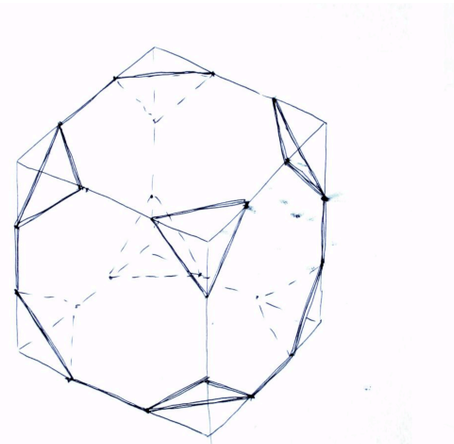

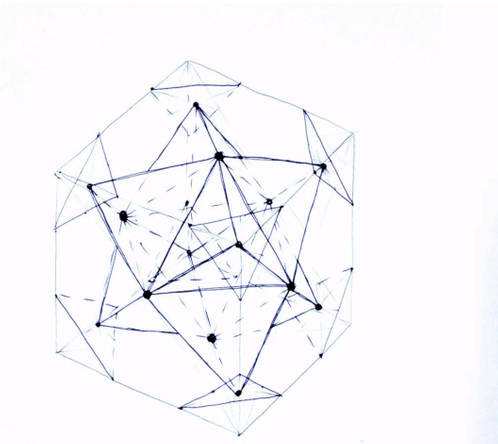

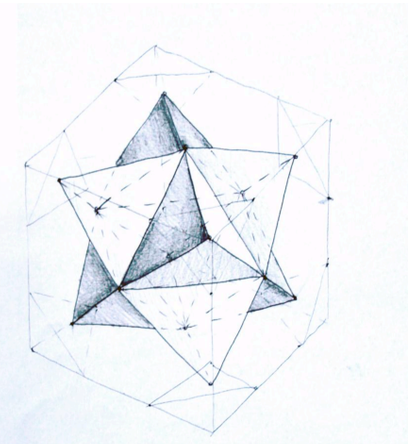

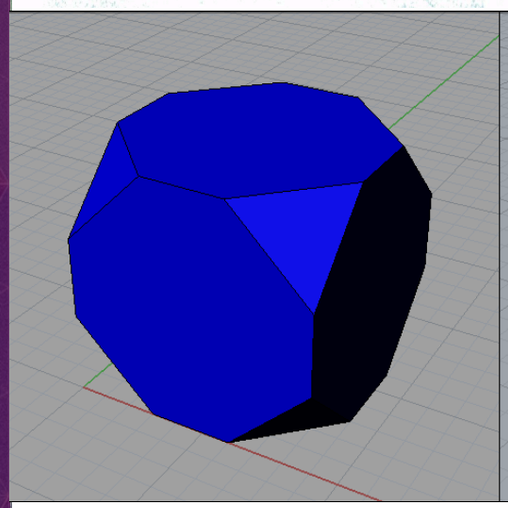

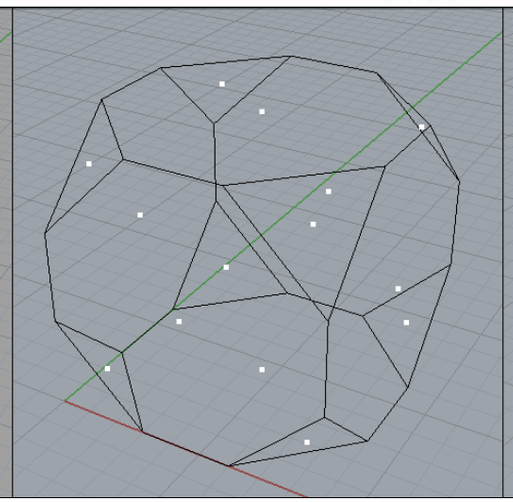

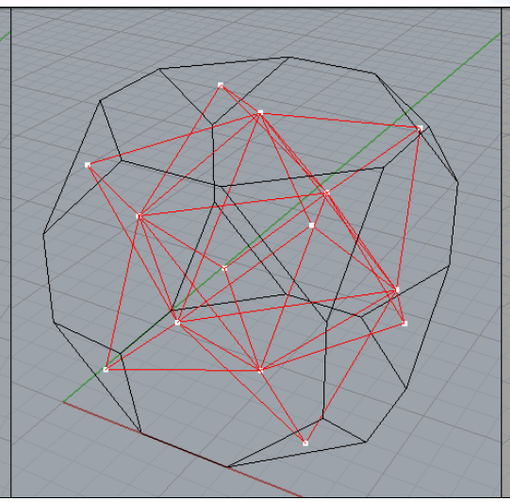

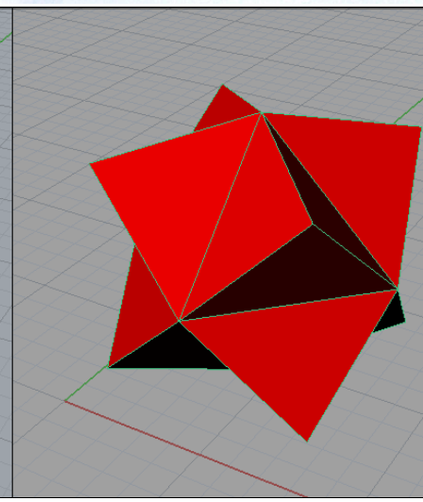

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MODELAÇÃO GEOMÉTRICA GENERATIVA

generative and geometric modeling

Exercícios

assessements

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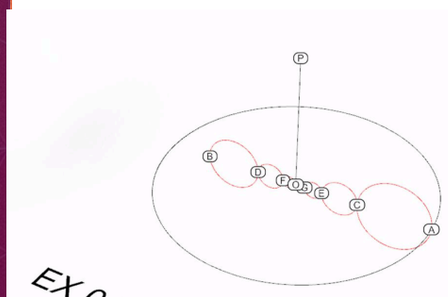

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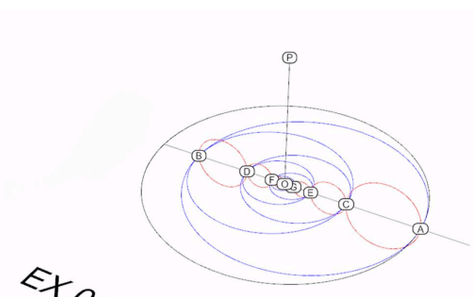

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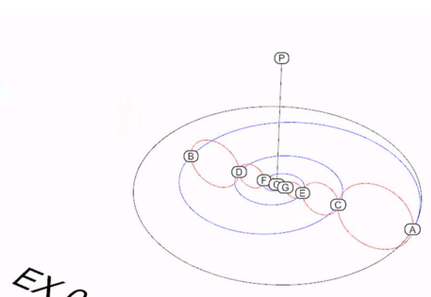

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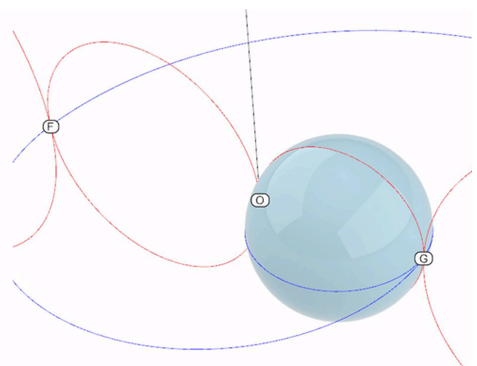

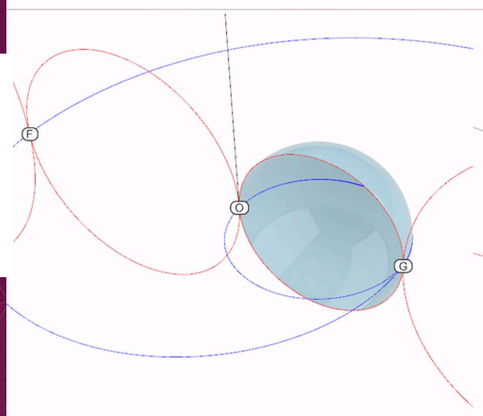

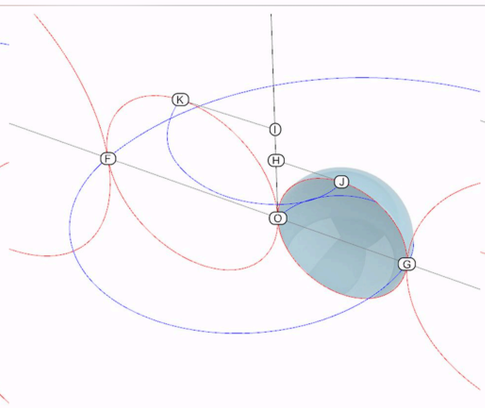

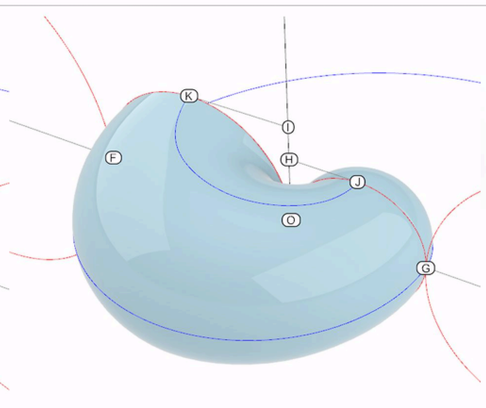

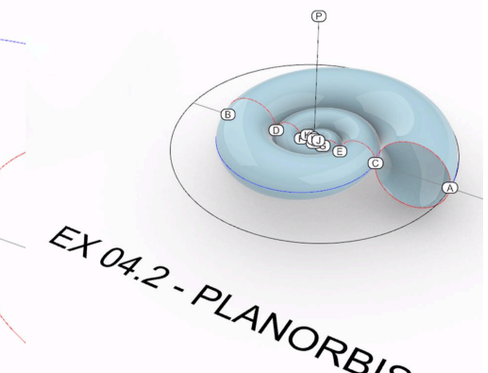

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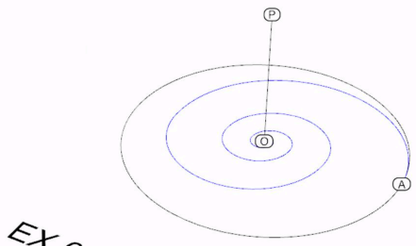

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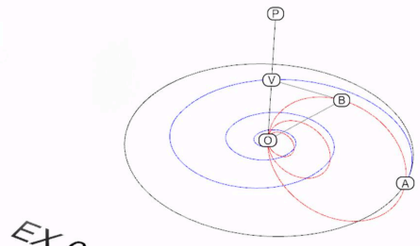

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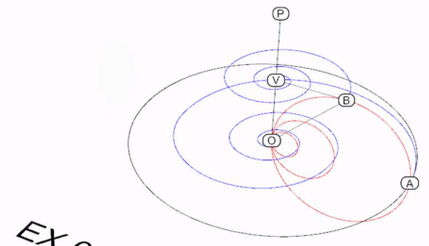

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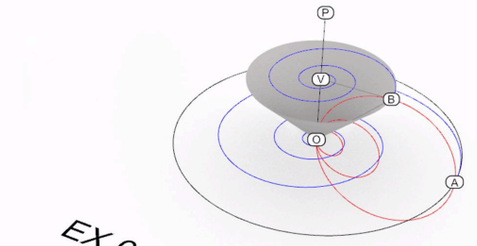

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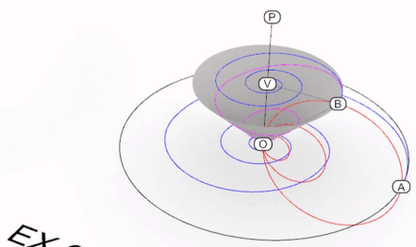

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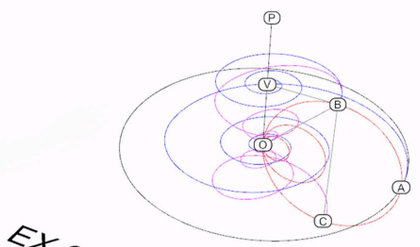

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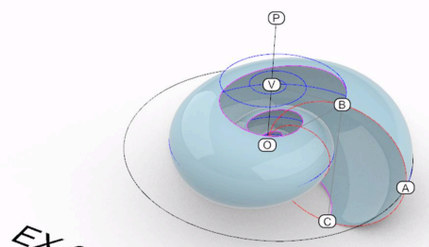

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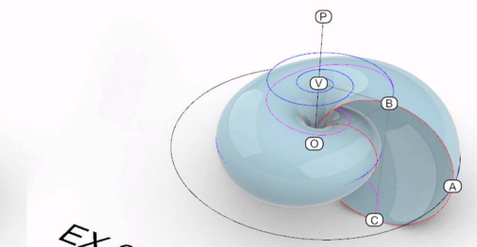

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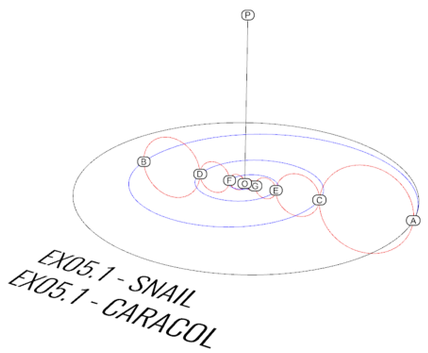

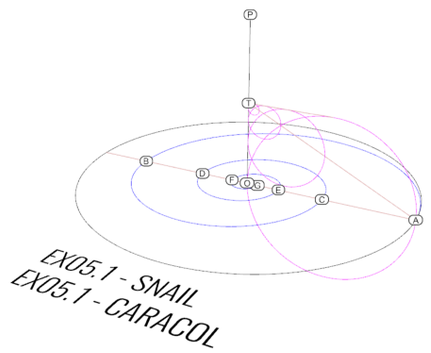

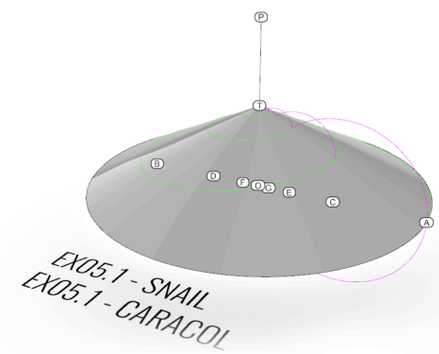

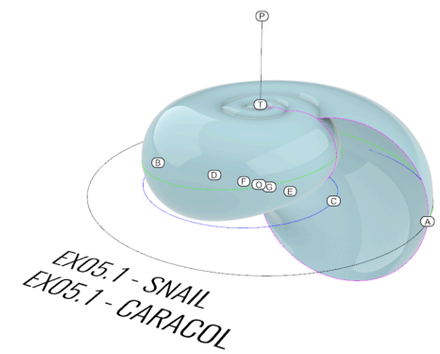

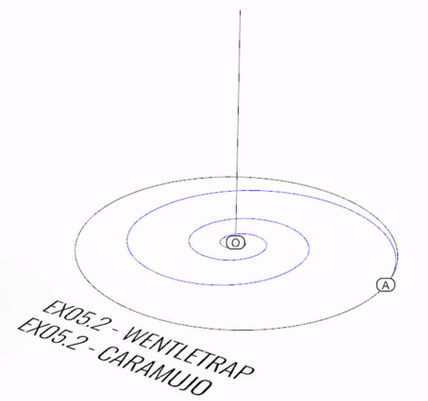

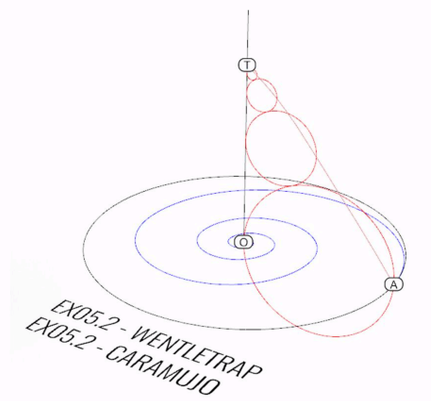

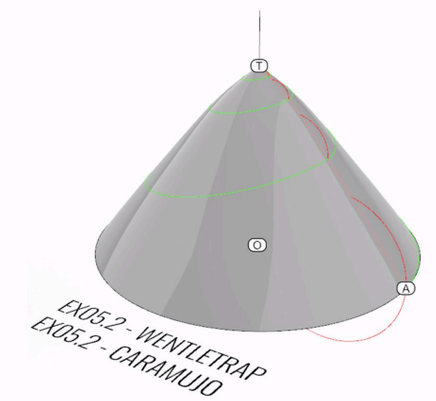

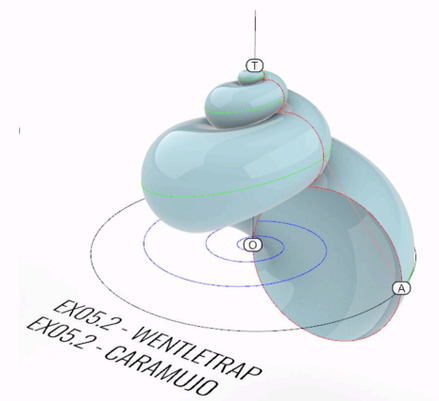

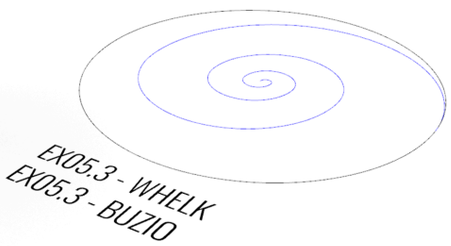

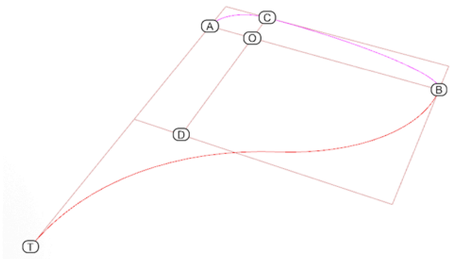

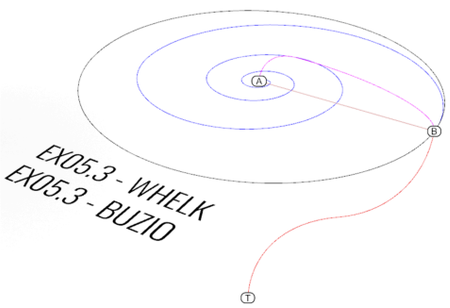

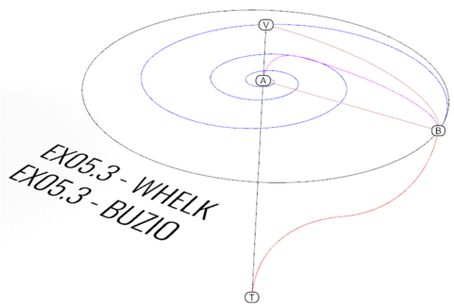

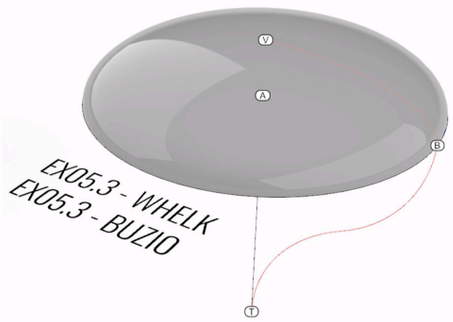

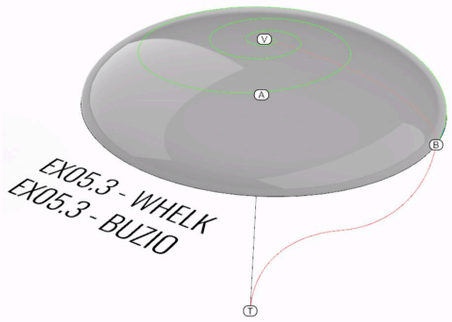

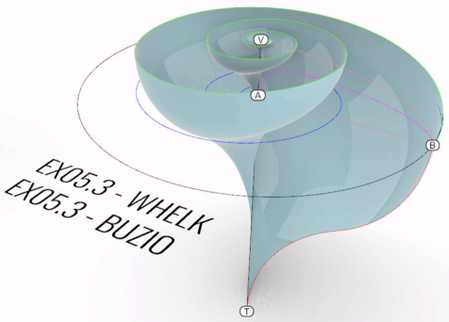

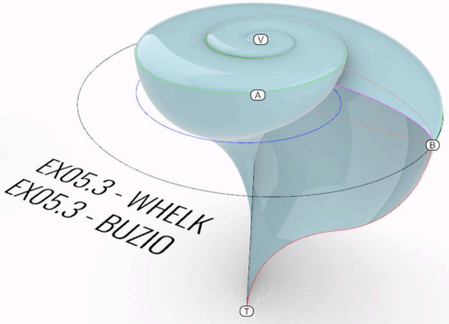

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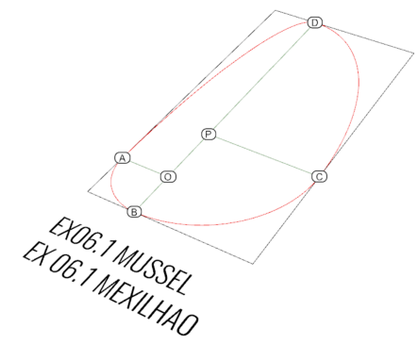

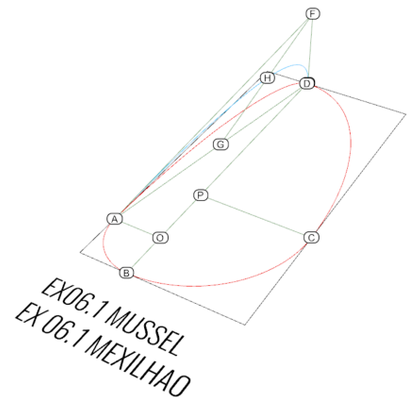

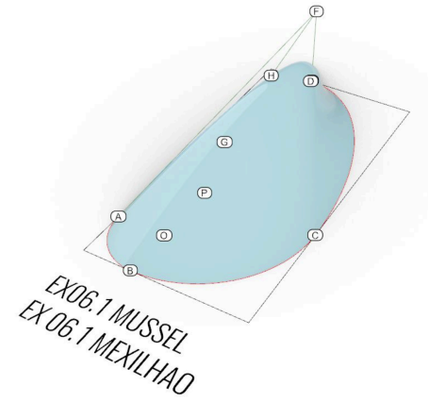

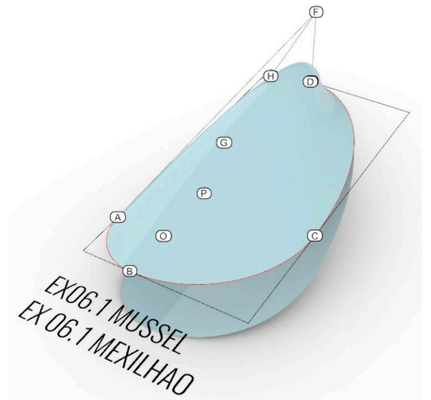

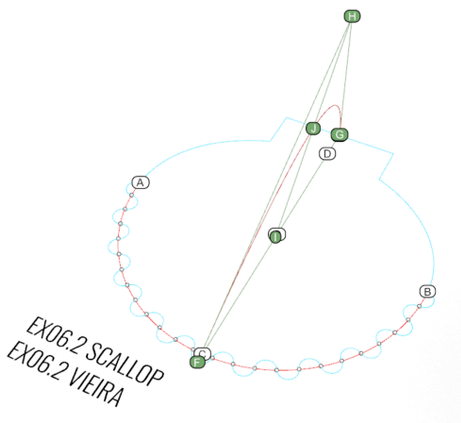

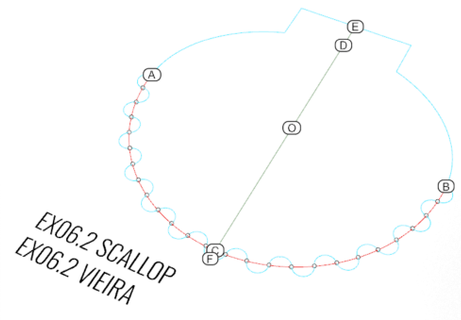

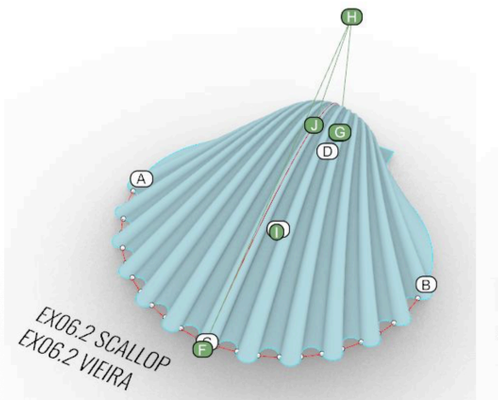

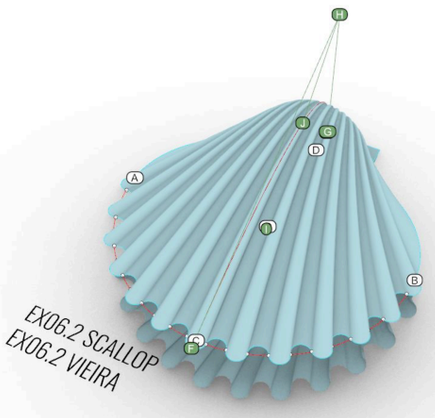

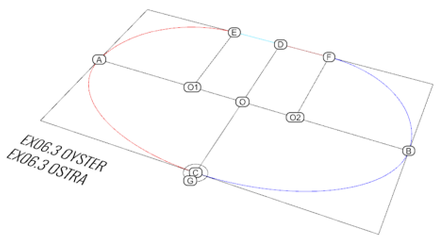

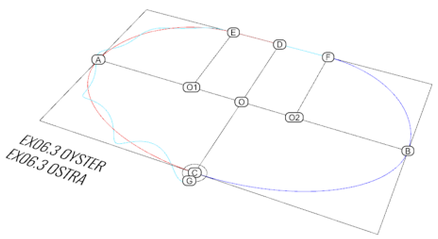

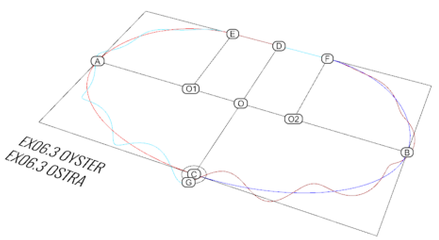

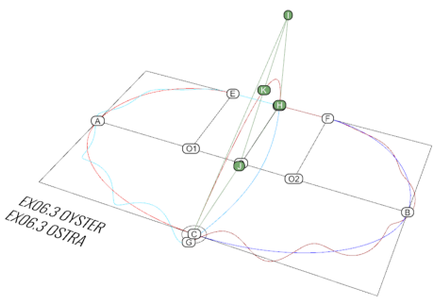

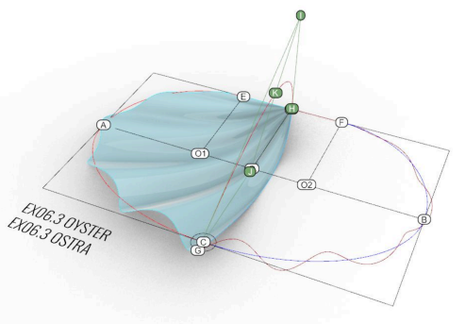

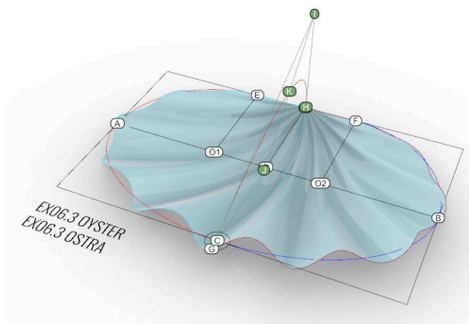

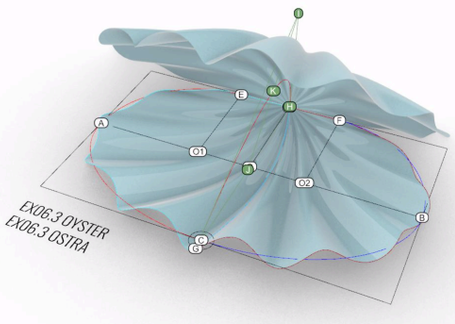

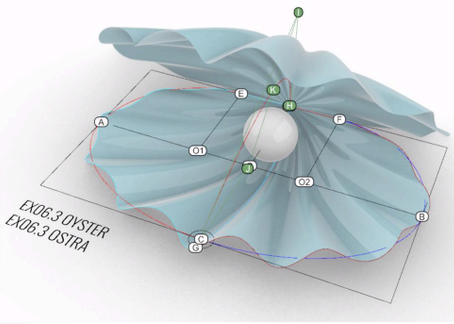

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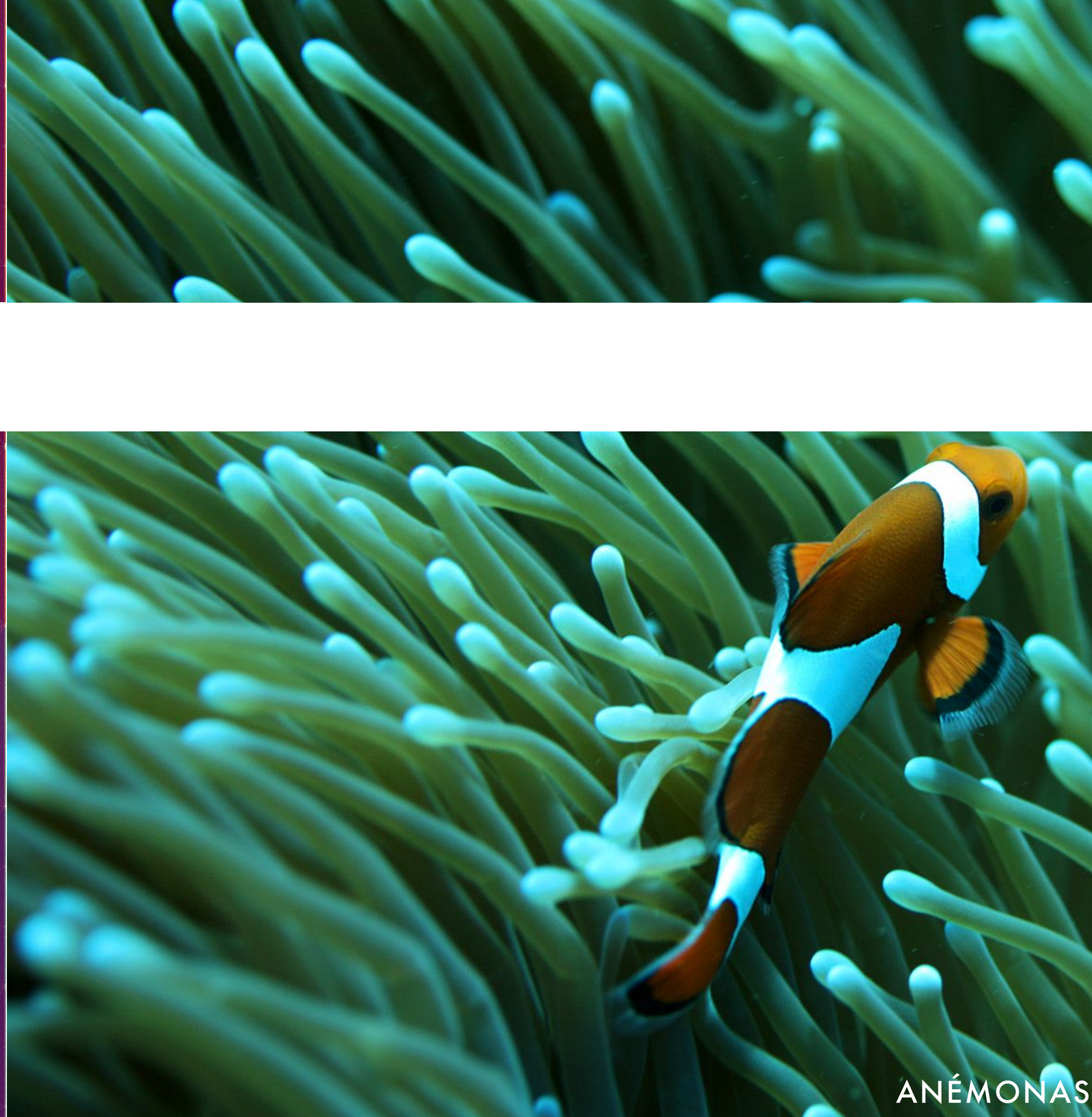

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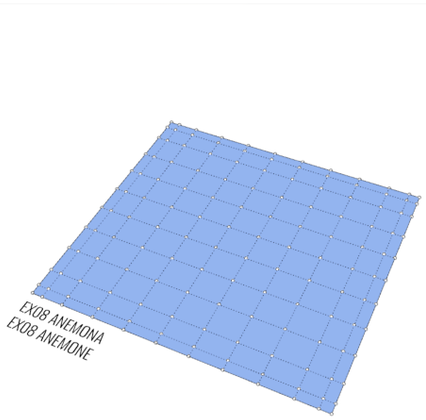

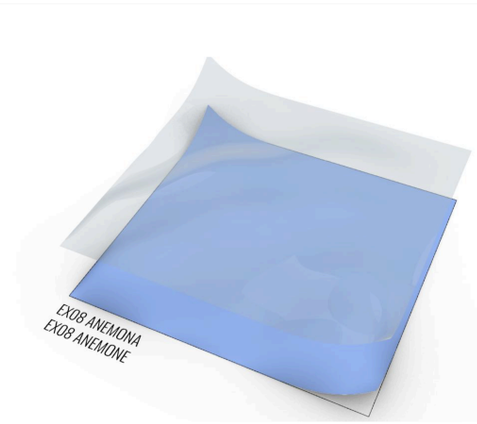

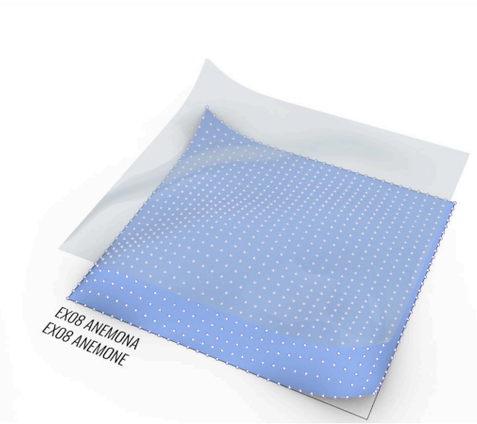

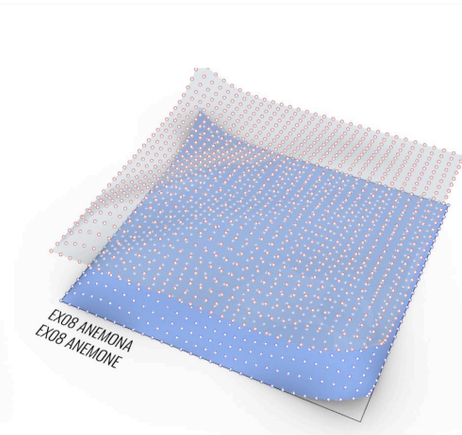

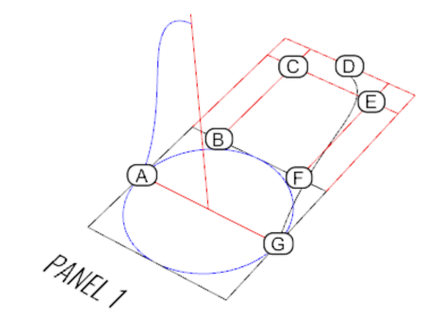

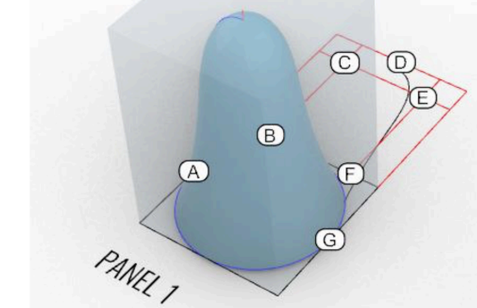

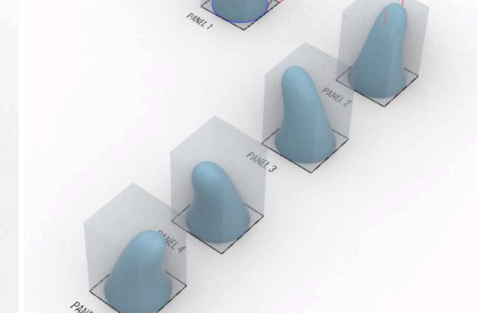

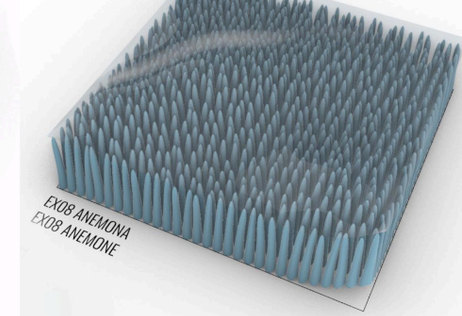

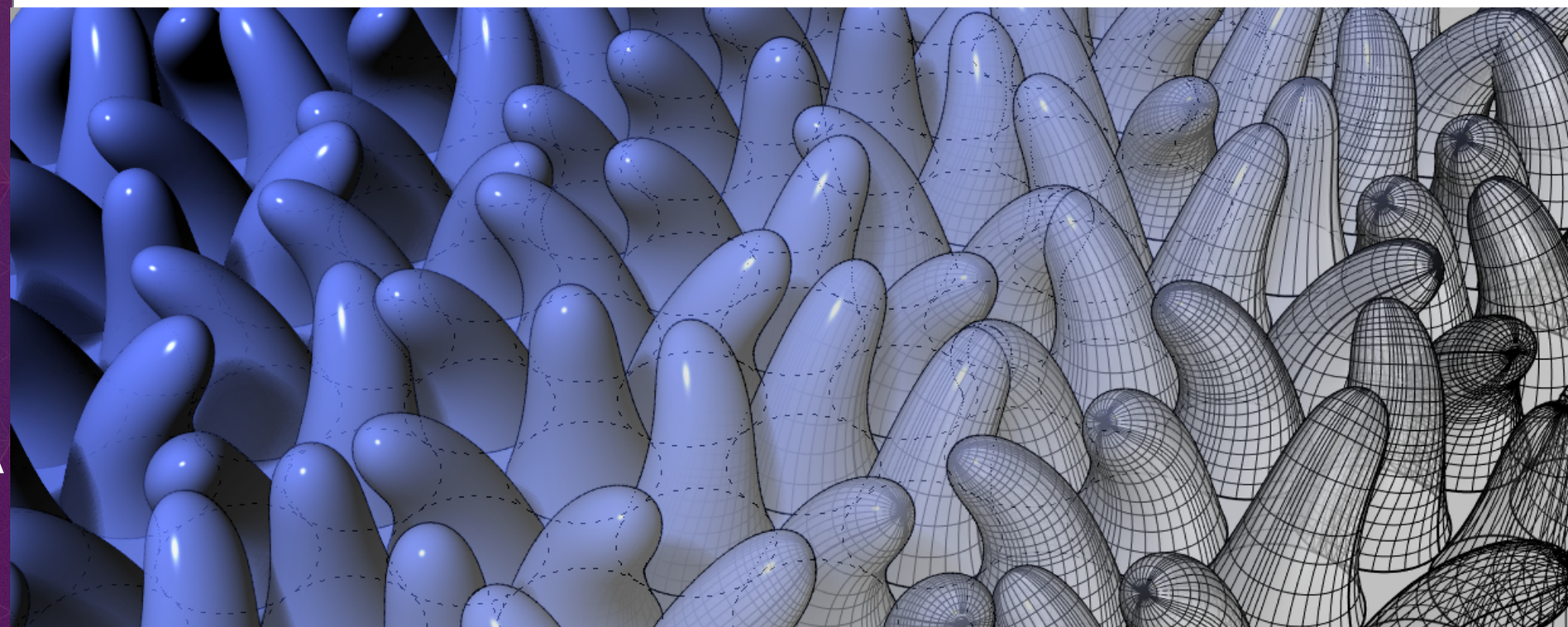

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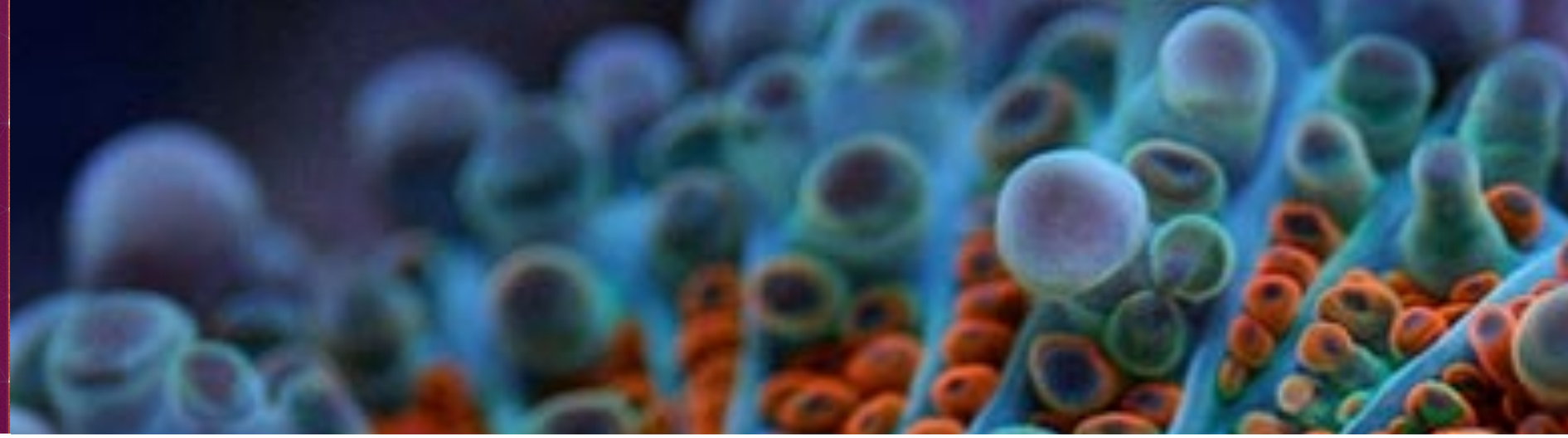

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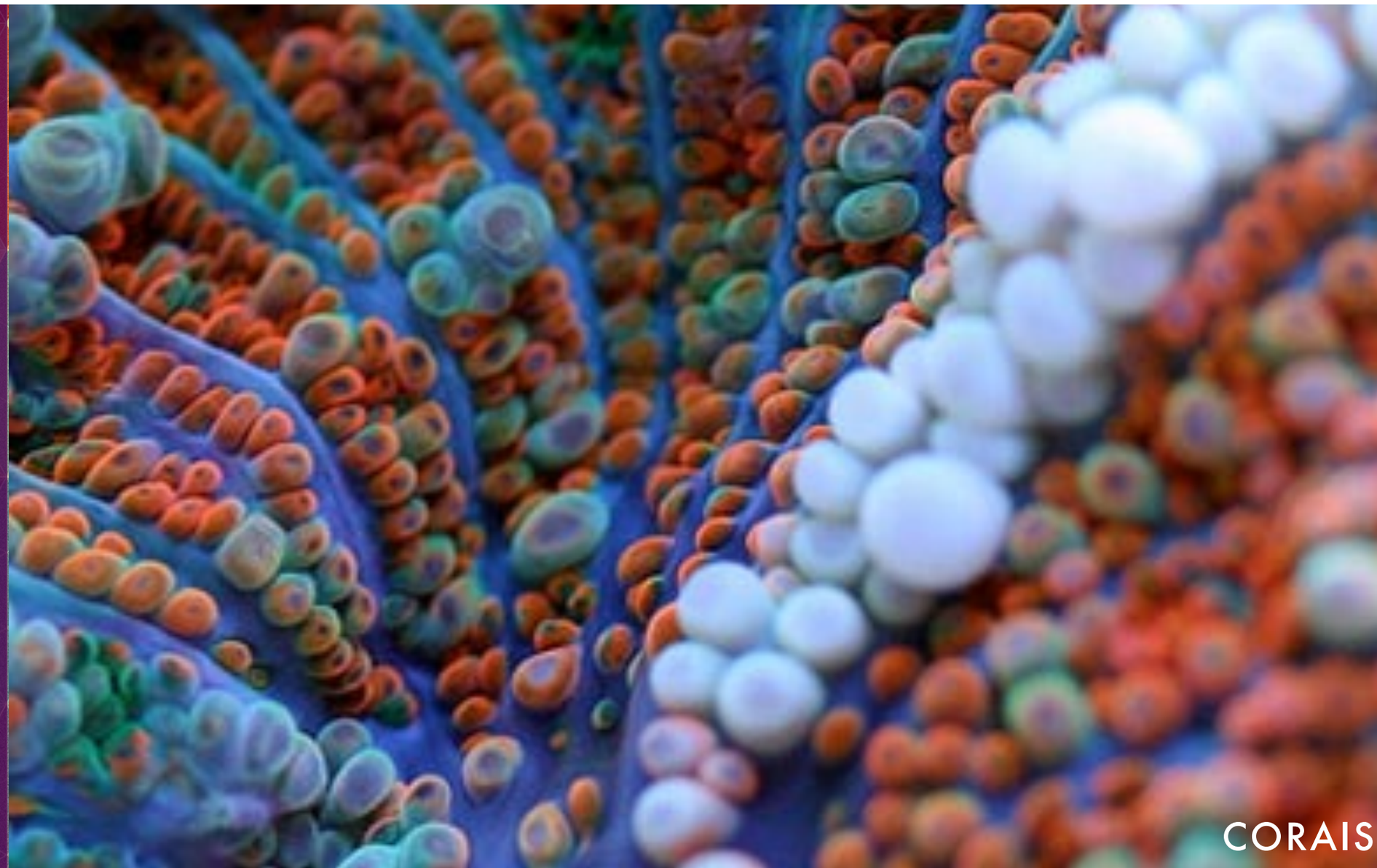

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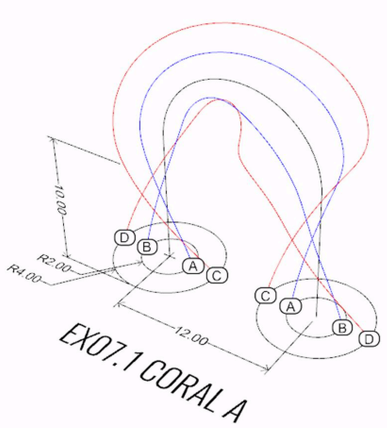

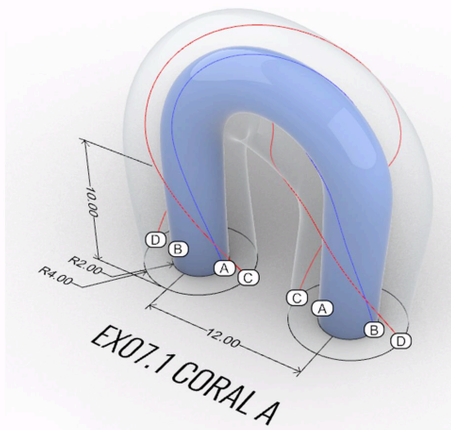

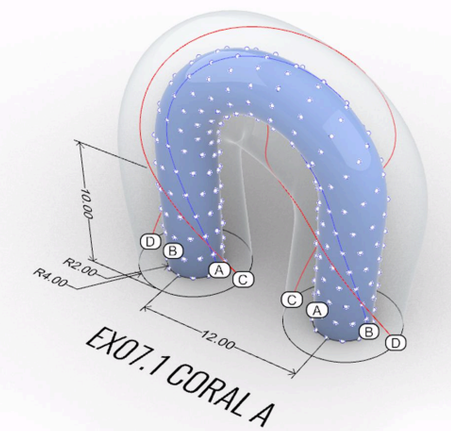

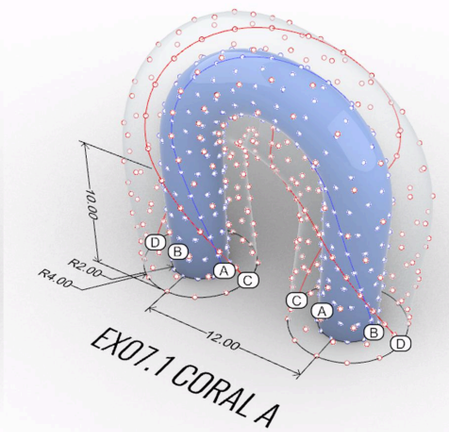

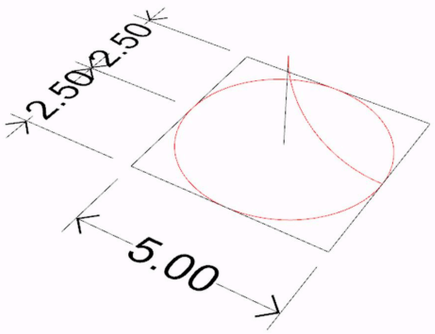

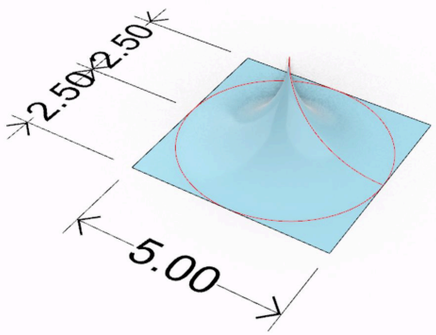

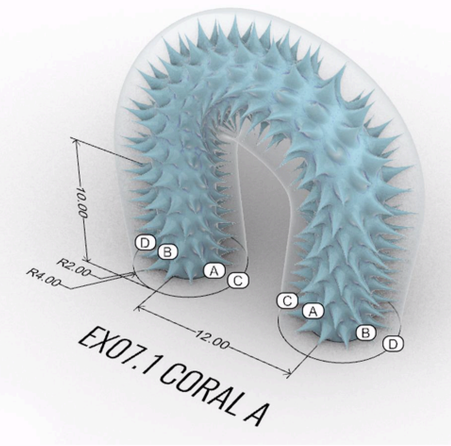

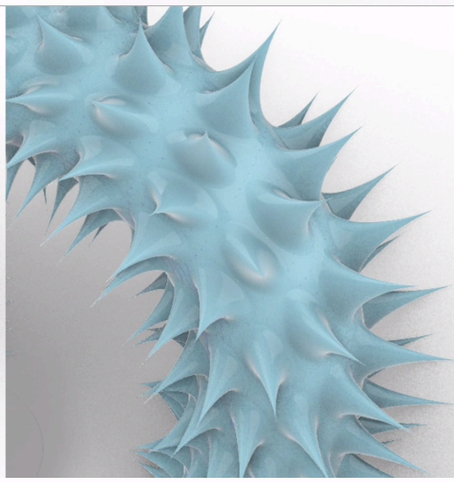

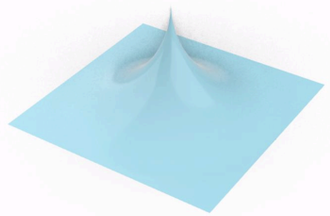

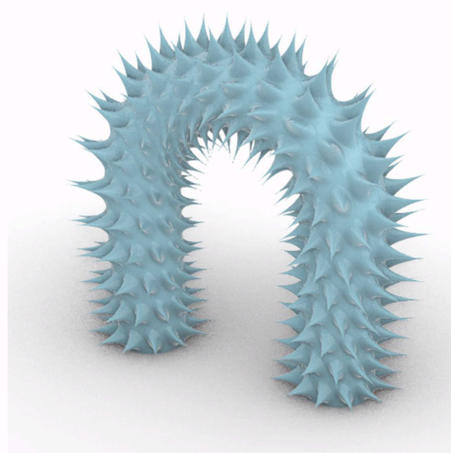

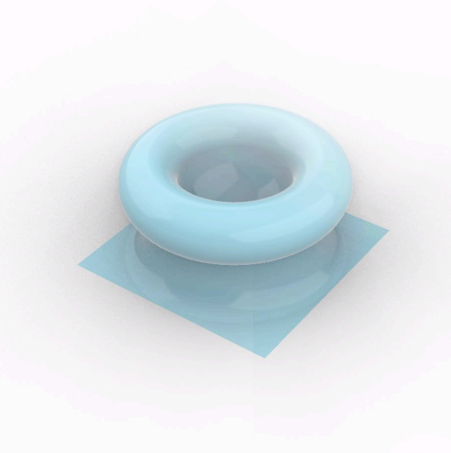



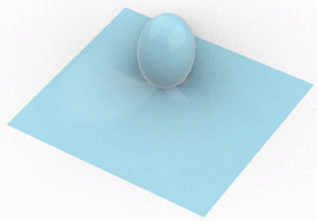

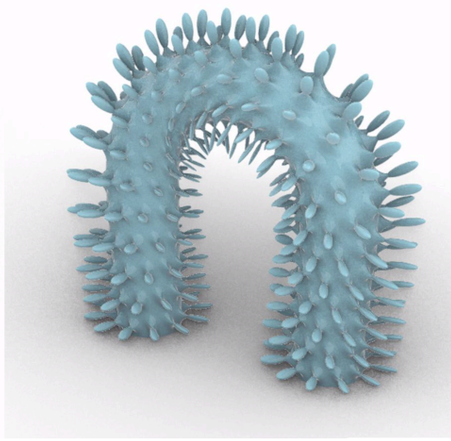

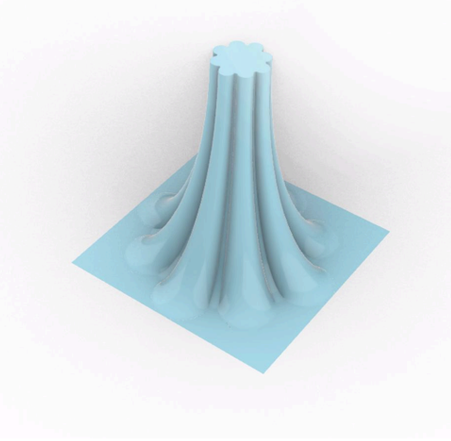

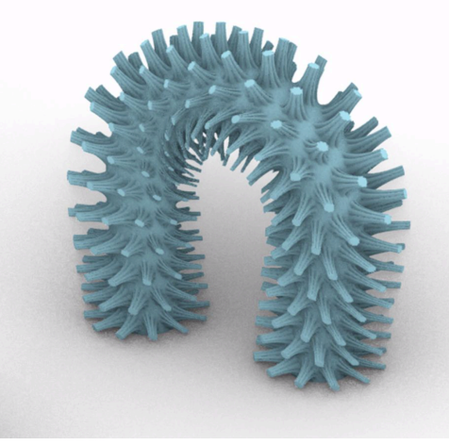

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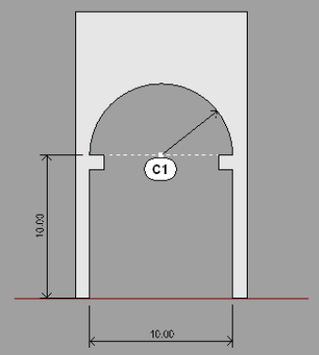
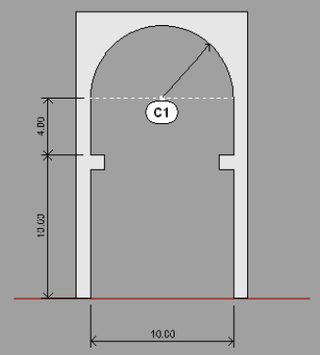


11.01 ARCO ROMANO



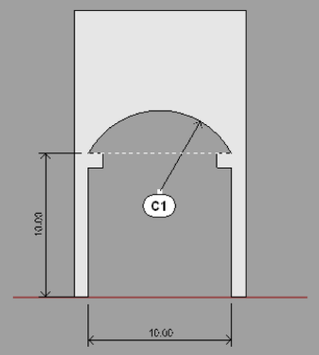
Sinagoga Portuguesa, Rato



11.02 ARCO REALÇADO APERALTADO ROMANO



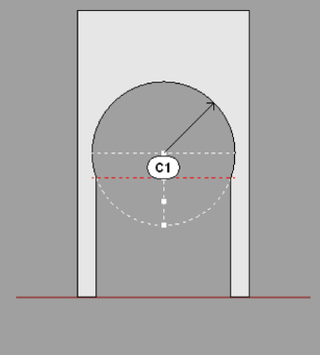
Praça do Príncipe Real, Nº 4



11.03 ARCO ABATIDO



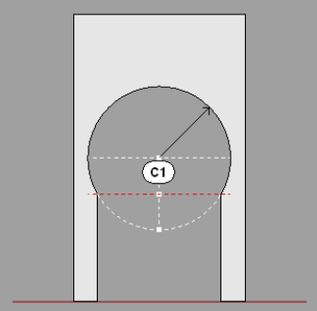
Palacete Conceição e Silva, Avenida da Liberdade



11.04 ARCO VIZIGÓTICO



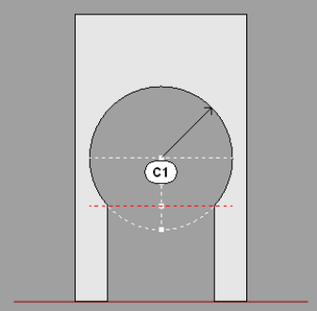
Praça do Príncipe Real, Nº 26



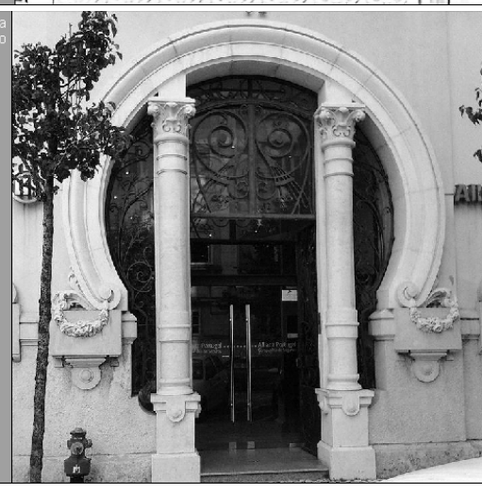
11.05 ARCO ÁRABE



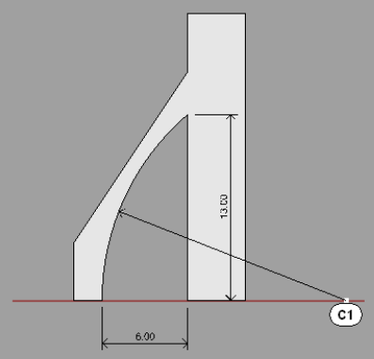
Edifício Allianz, Rua Andrade Corvo



11.06 ARCO CALIFAL



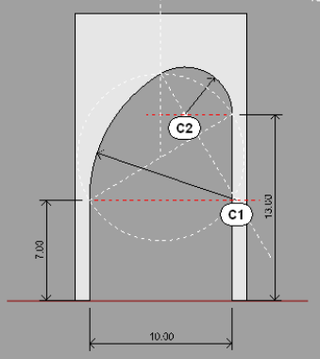
Mãe d'Água das Amoreiras



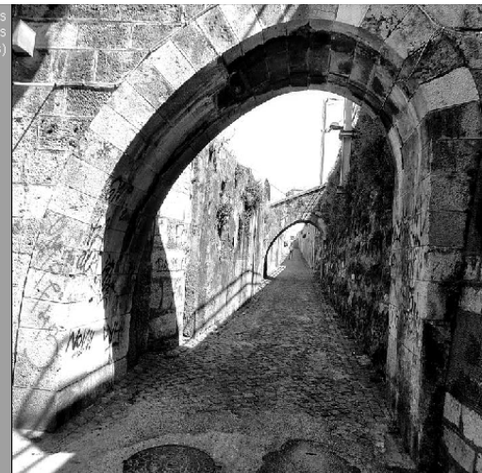
11.07 ARCO BOTANTE



Arco da Vila Dias (Beco dos Toucinheiros)



11.08 ARCO RAMPANTE



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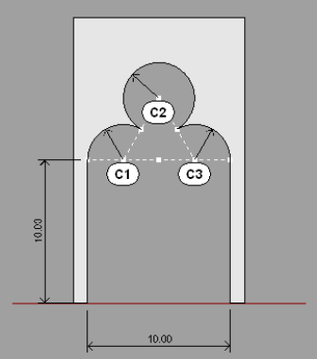
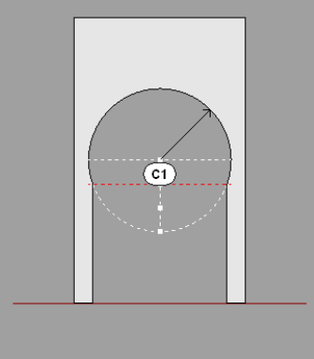
Largo de São Mamede



11.14 ARCO TRILOBULADO A 1/2



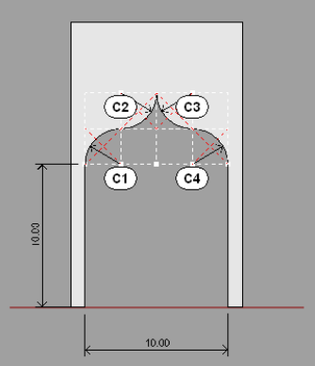
Palacete Conceição e Silva, Avenida da Liberdade



11.04 ARCO VIZIGÓTICO



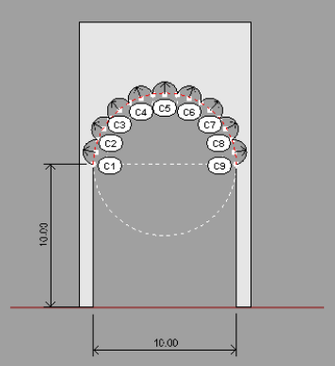
Largo de São Mamede



11.16 CANOPIAL



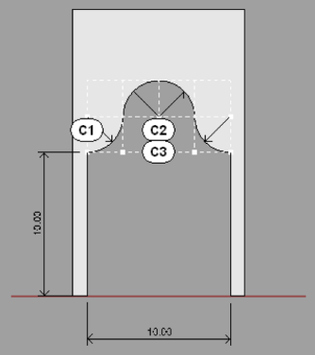
Casa do Alentejo, Rua das Portas de Santo Antão



11.20 ARCO POLILOBULADO



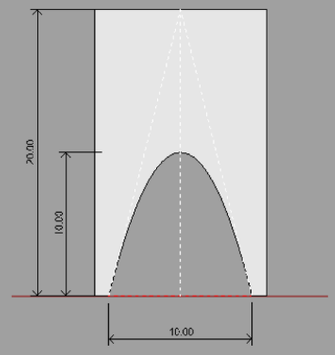
Entrada para o Pátio de D. Fradique (actual Hotel Palácio Belmonte)



11.17 ARCO EM GOLA



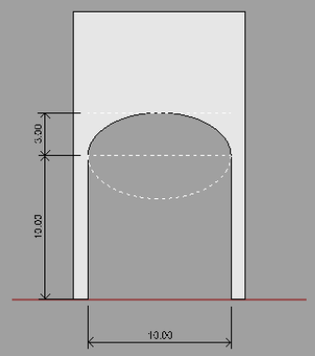
Viaduto Duarte Pacheco



11.18 ARCO EM CATENÁRIA



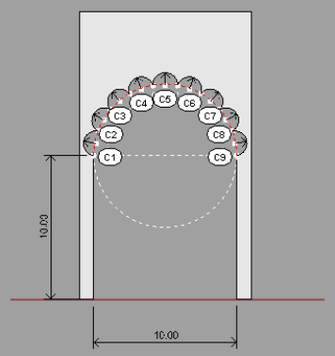
Rua Academia das Ciências



11.19 ARCO EM ELIPSE



Casa do Alentejo, Rua das Portas de Santo Antão



11.20 ARCO POLILOBULADO



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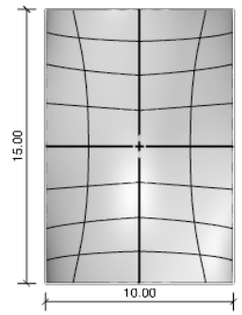

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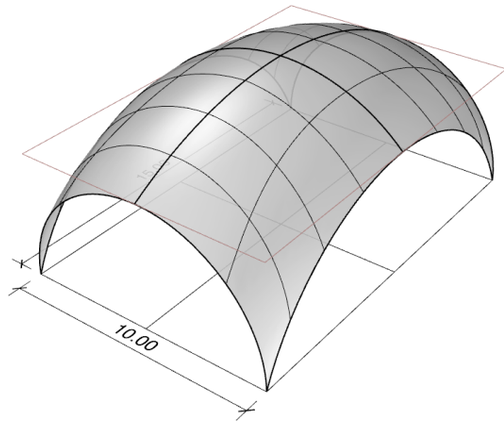

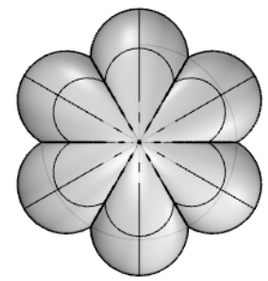

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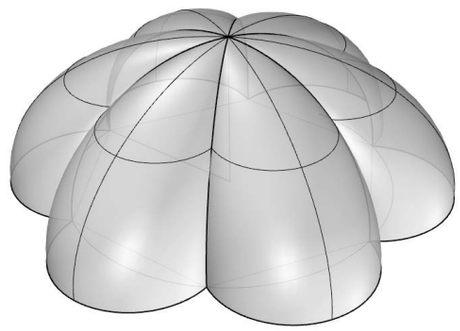
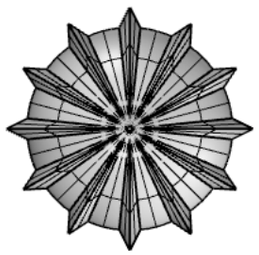
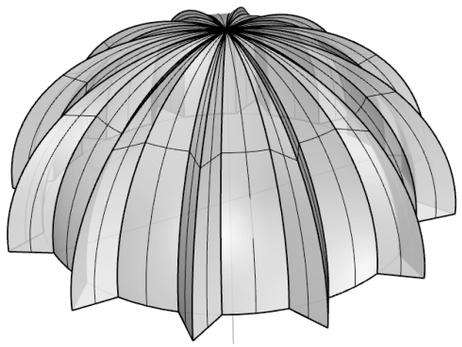
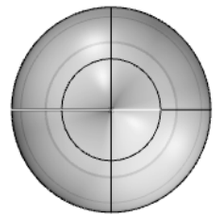


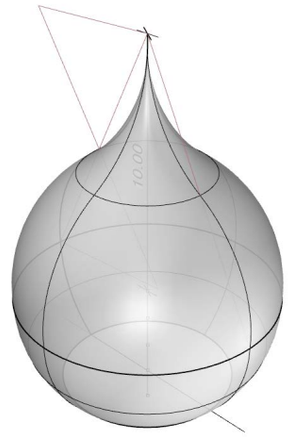


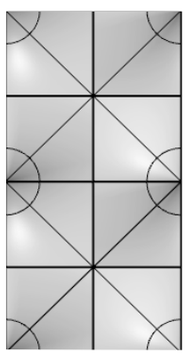
12.23 ABÓBADA "GALLONEDA" OU ADORNADA

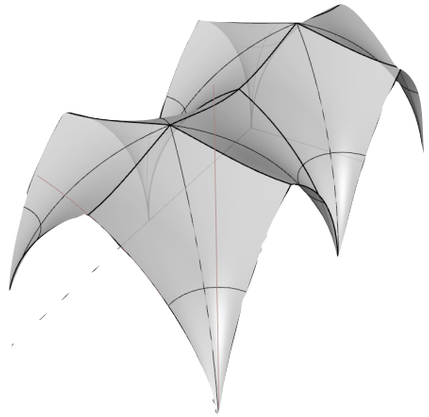


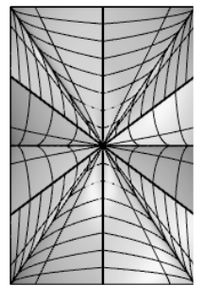


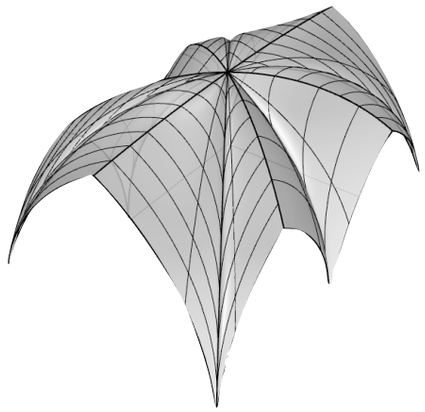
12.24 ABÓBADA DE BOLBO

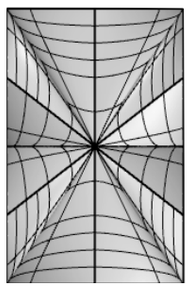


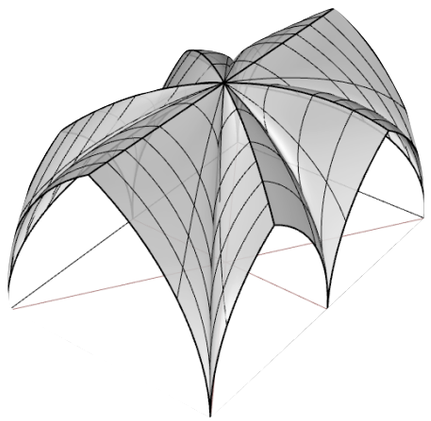


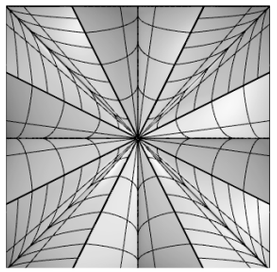


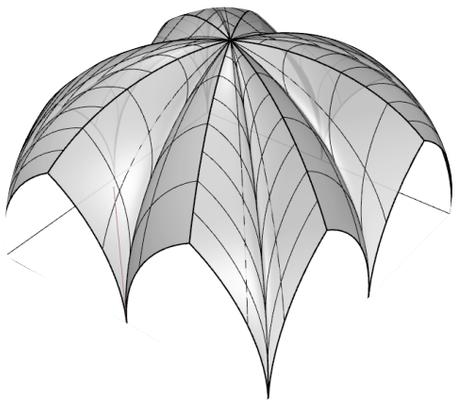












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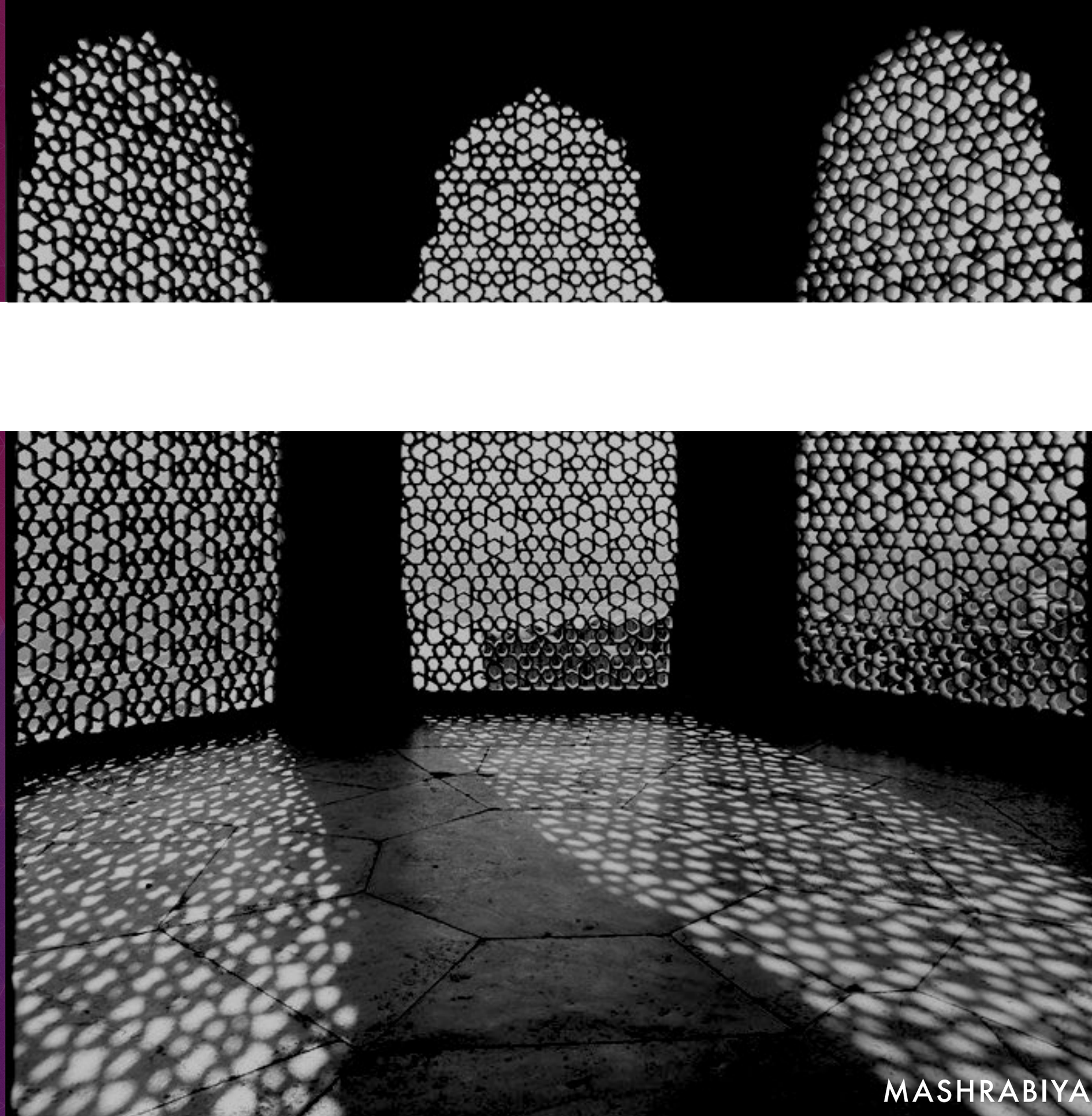

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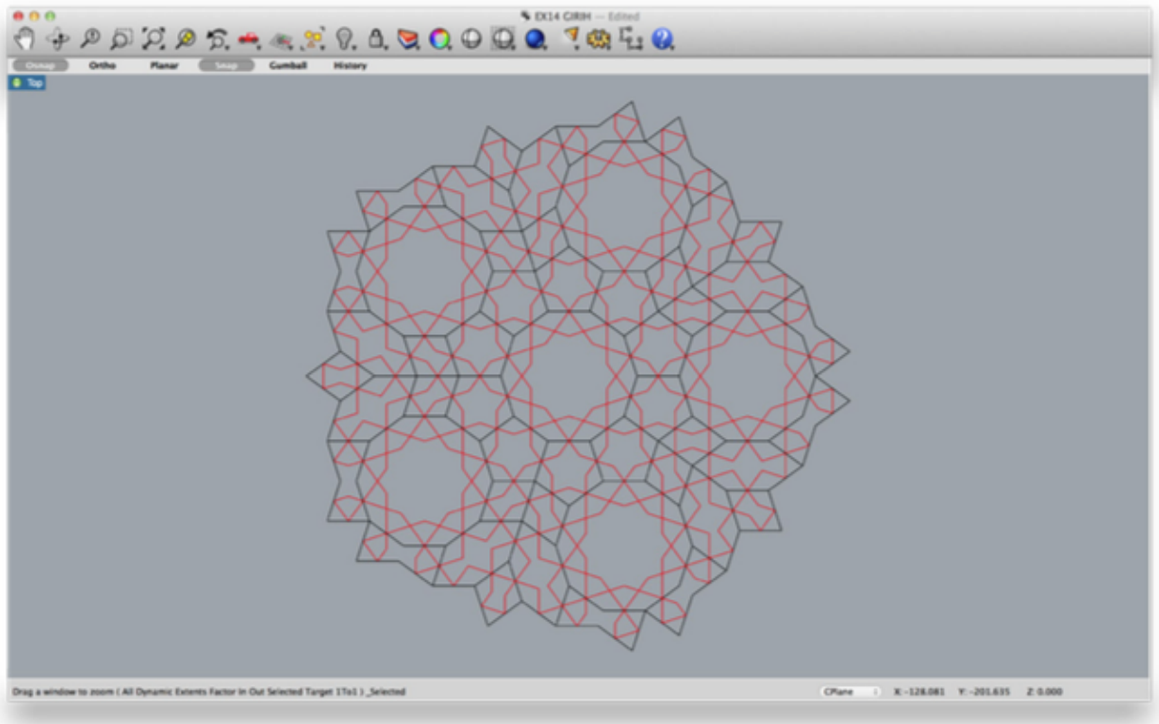

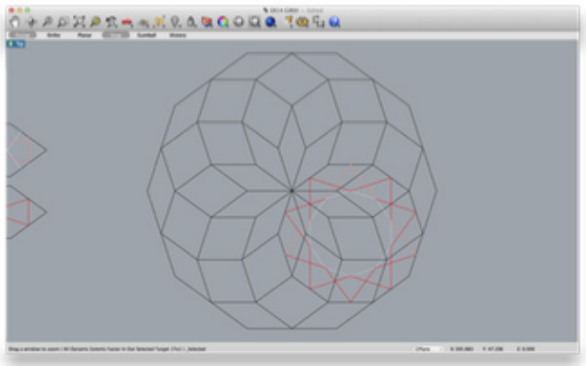

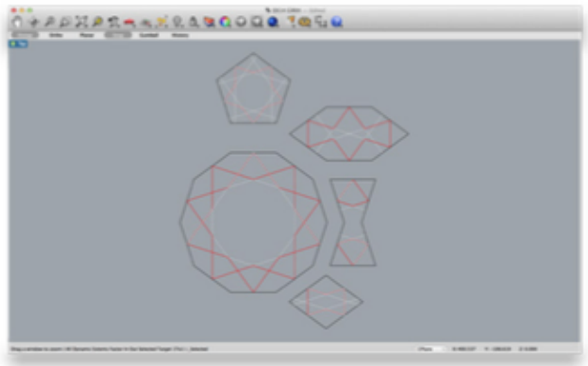

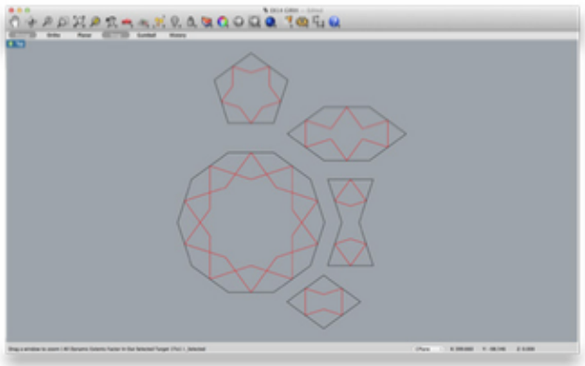

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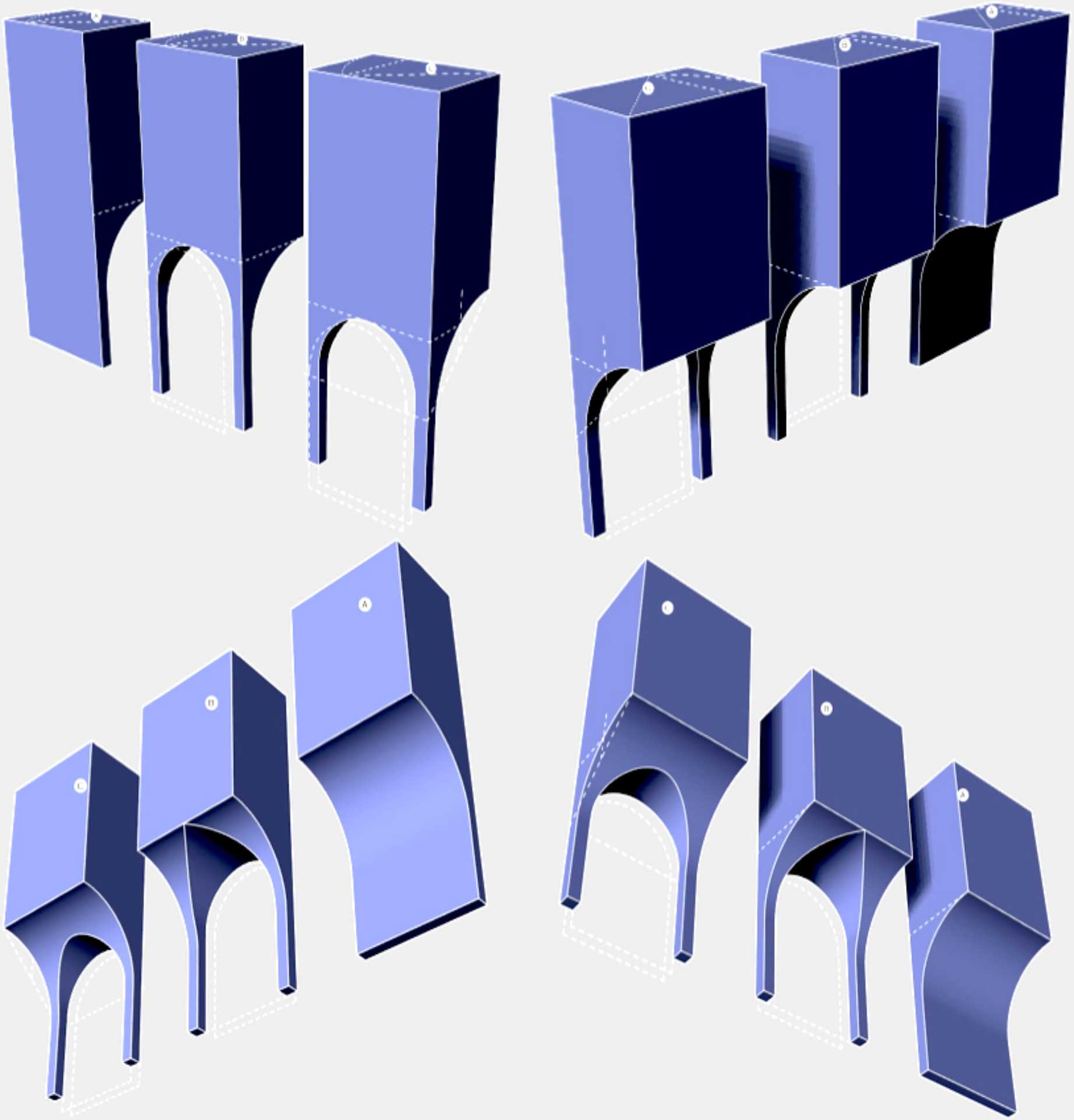

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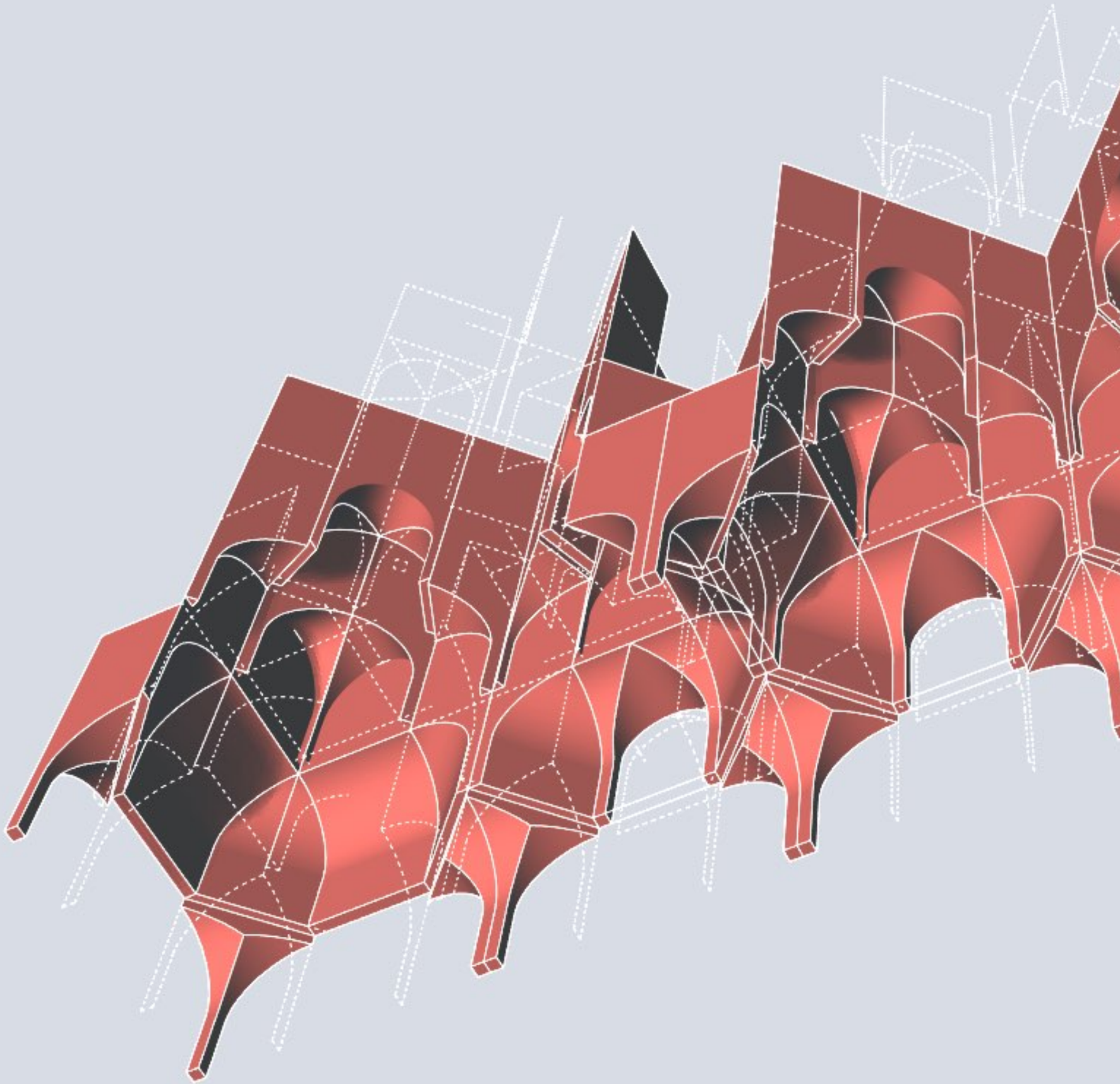

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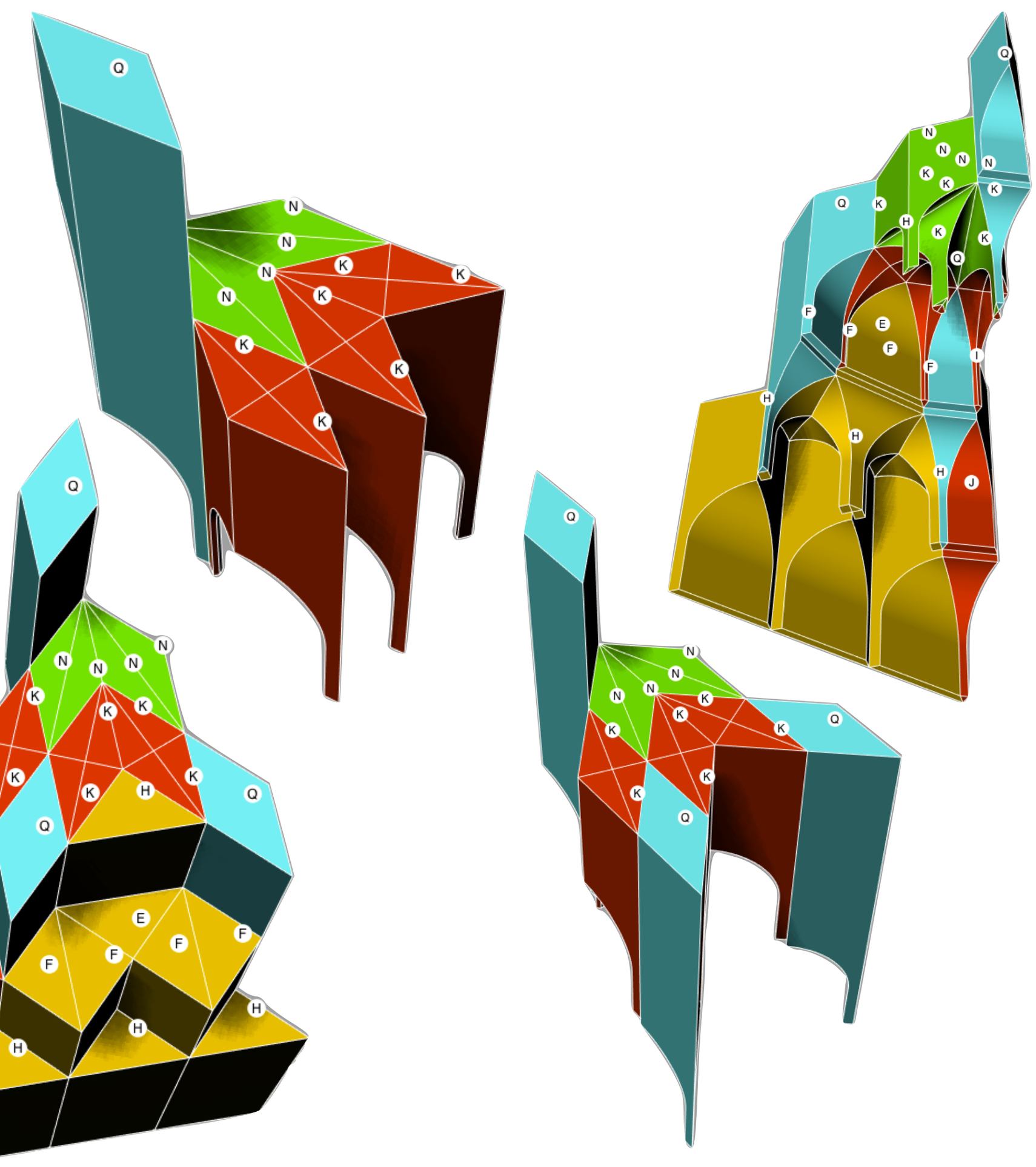

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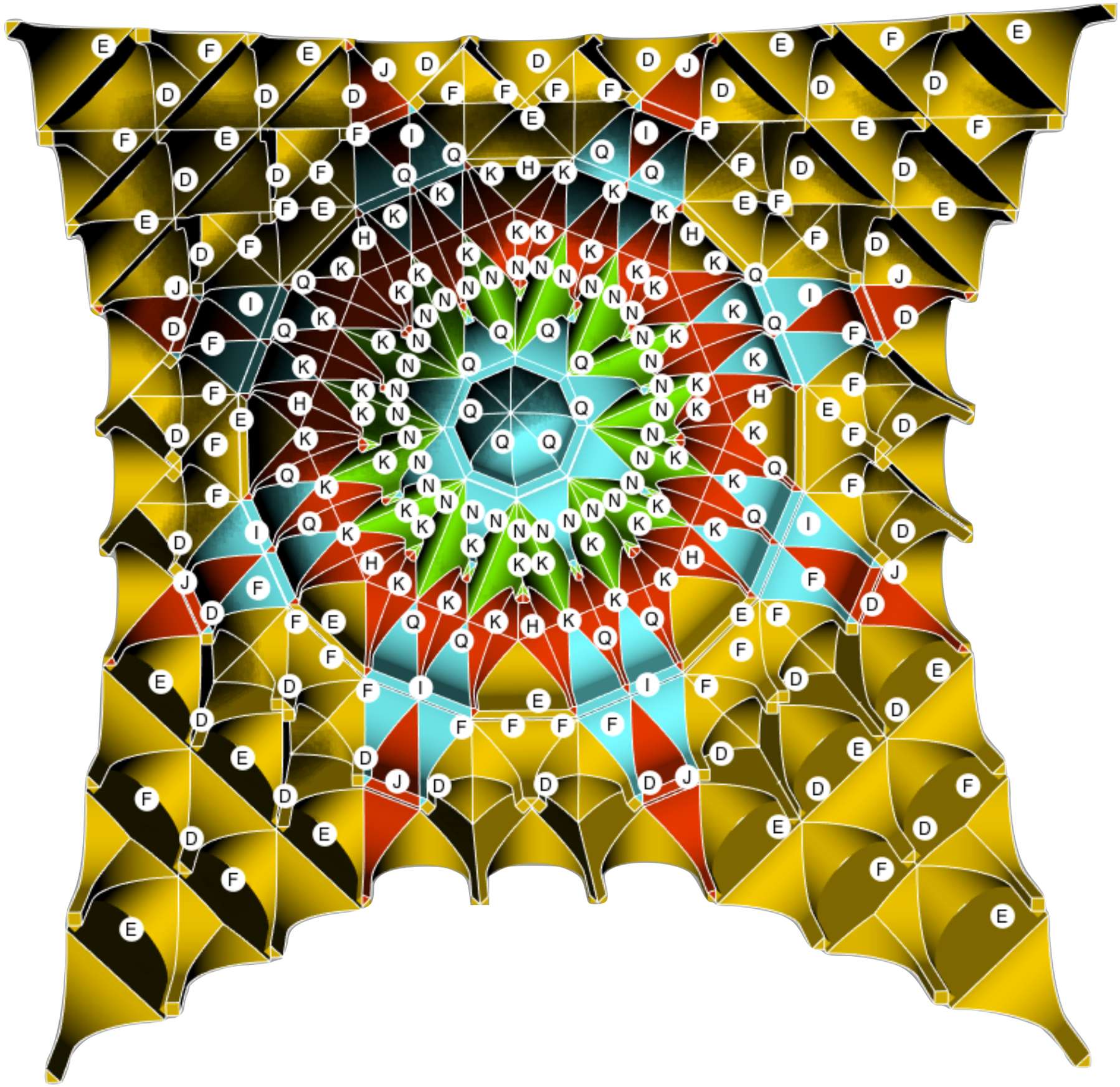

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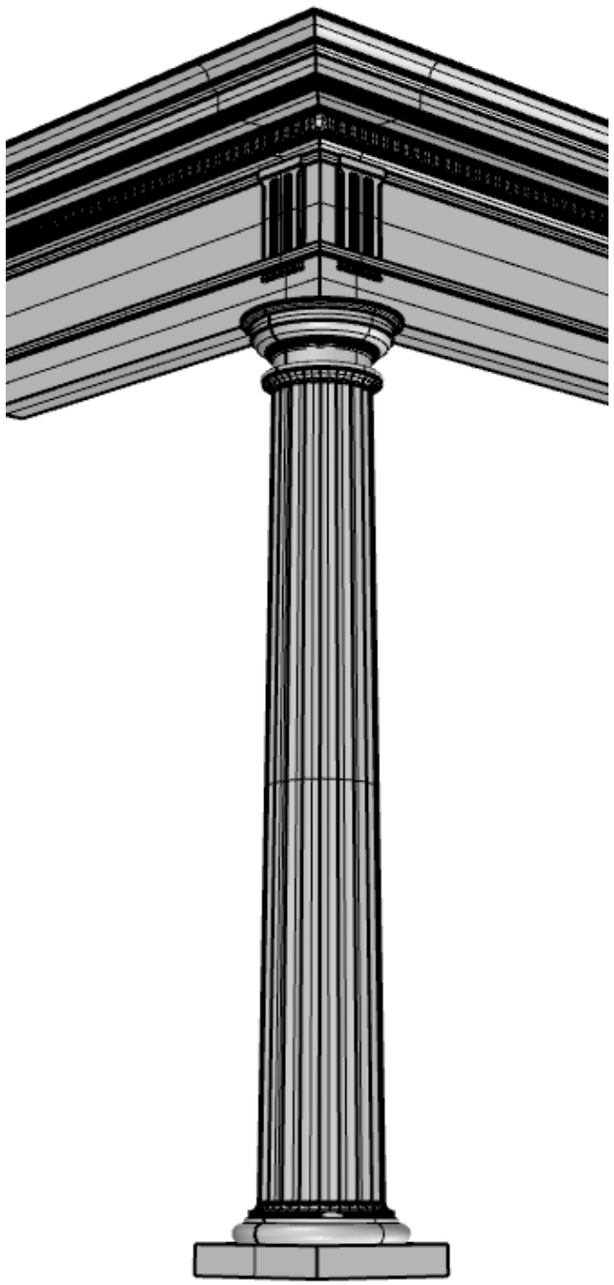



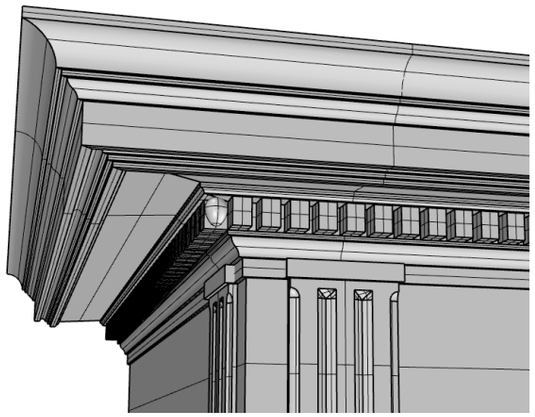



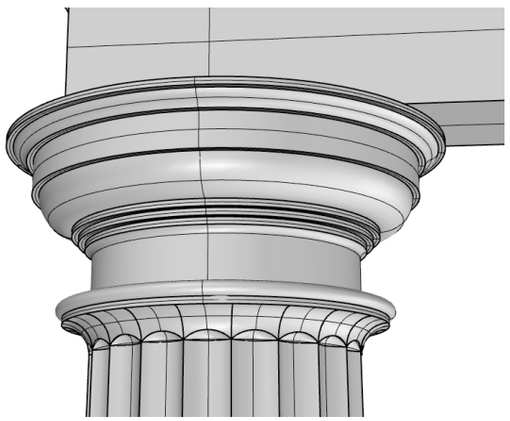

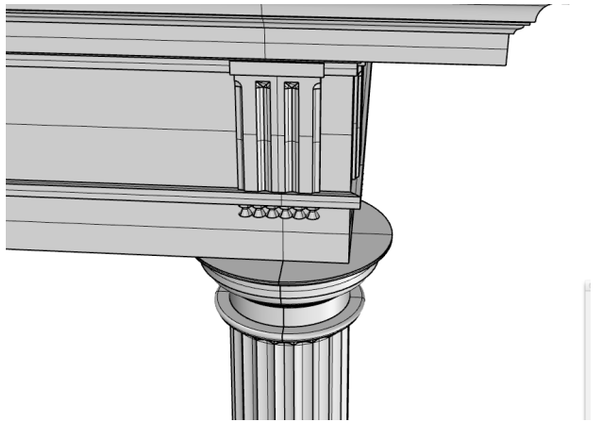

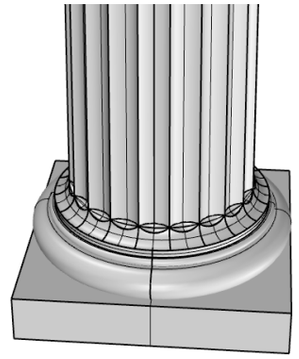

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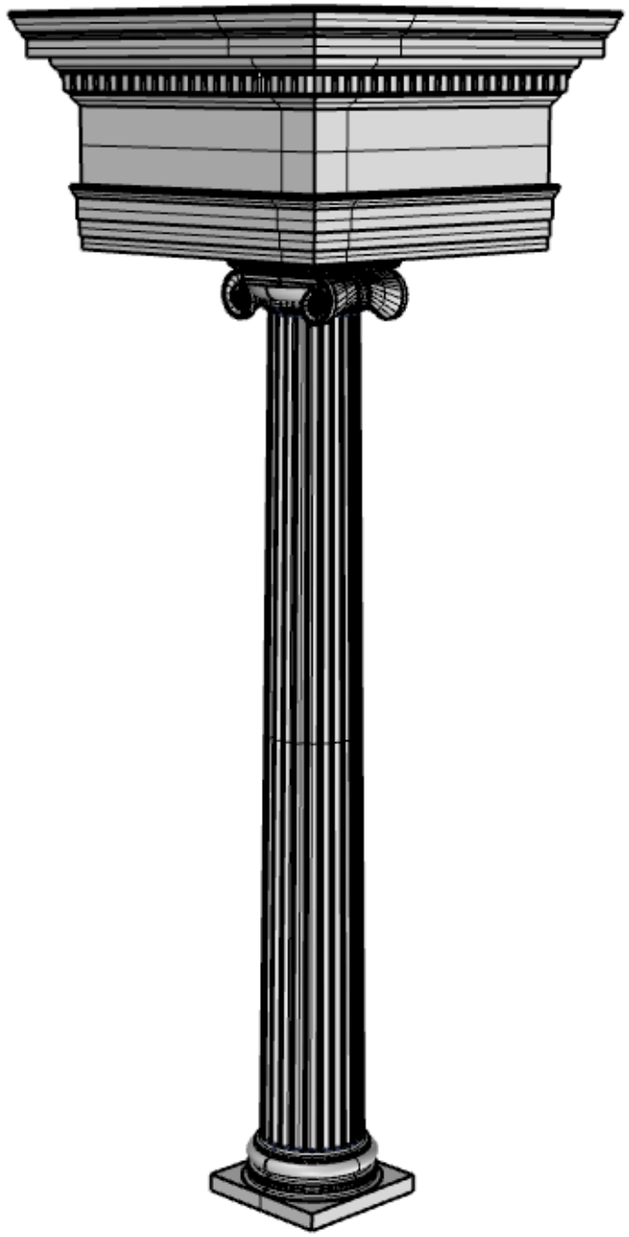

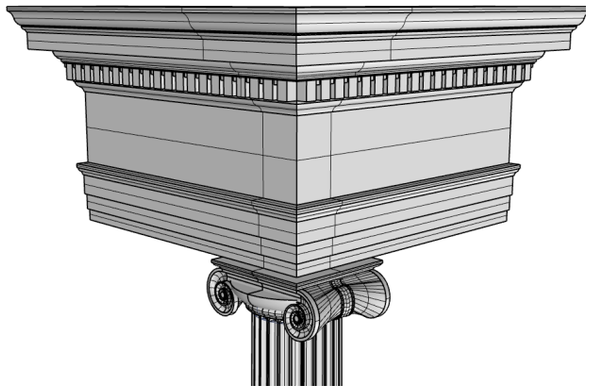

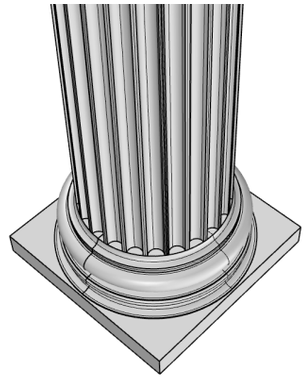

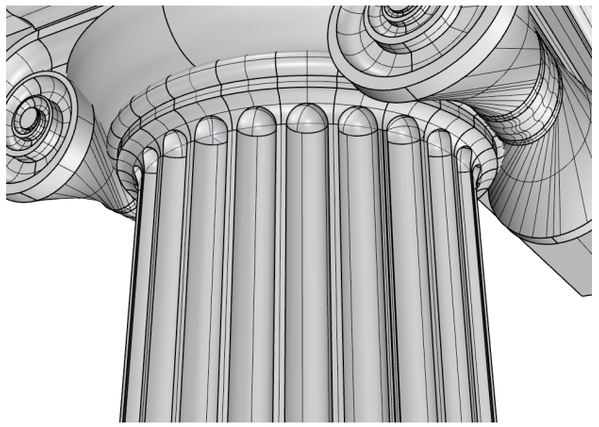

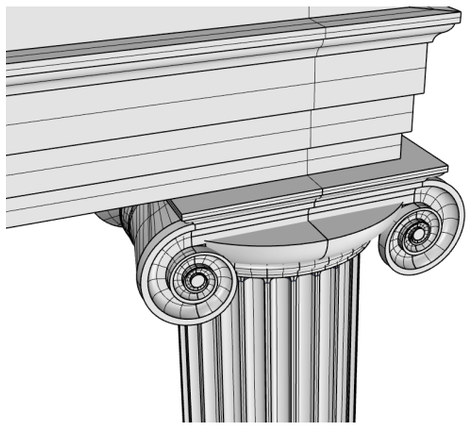

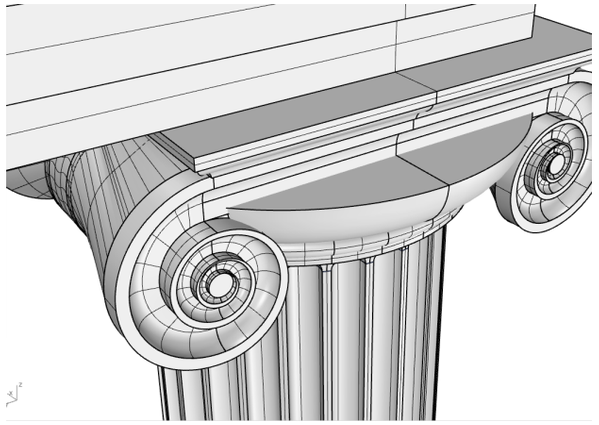

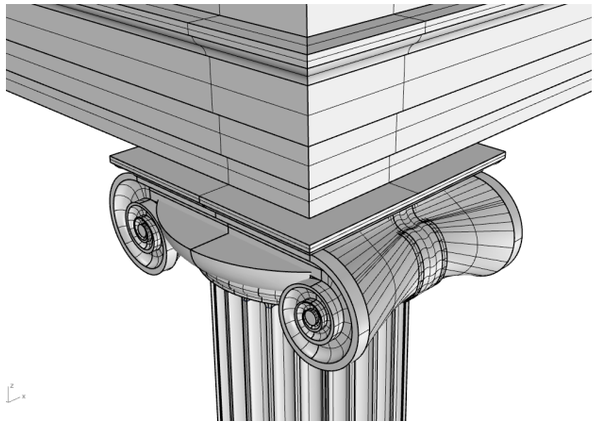

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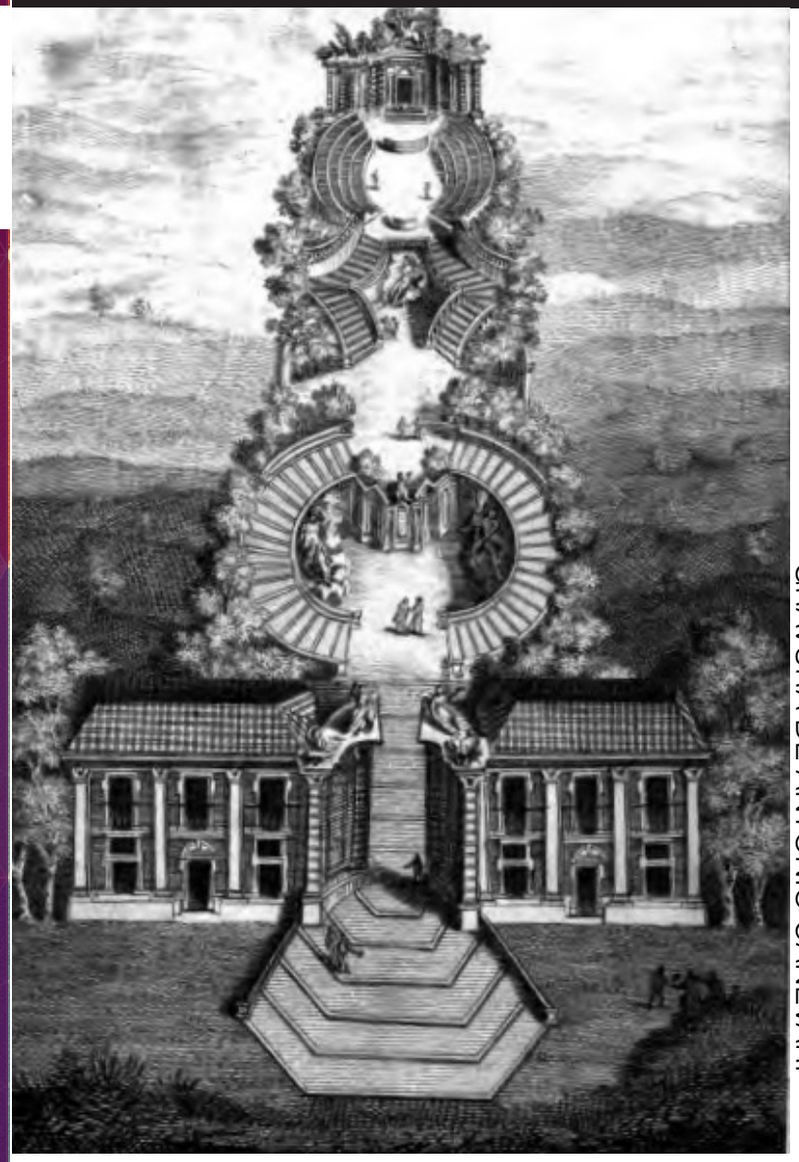
BOSCO PARRASIO, Roma - Itália

Antonio Canevari



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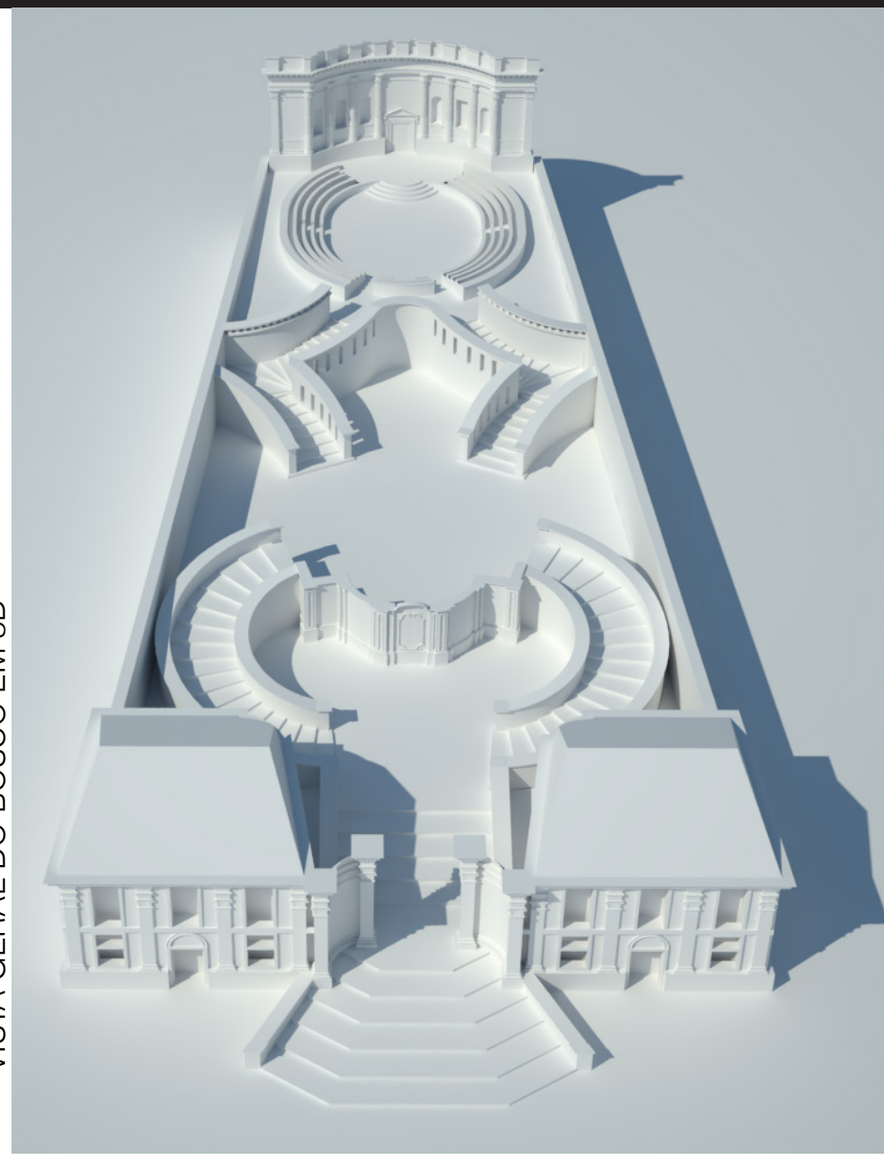

VISTA GERAL DO BOSCO EM 3D

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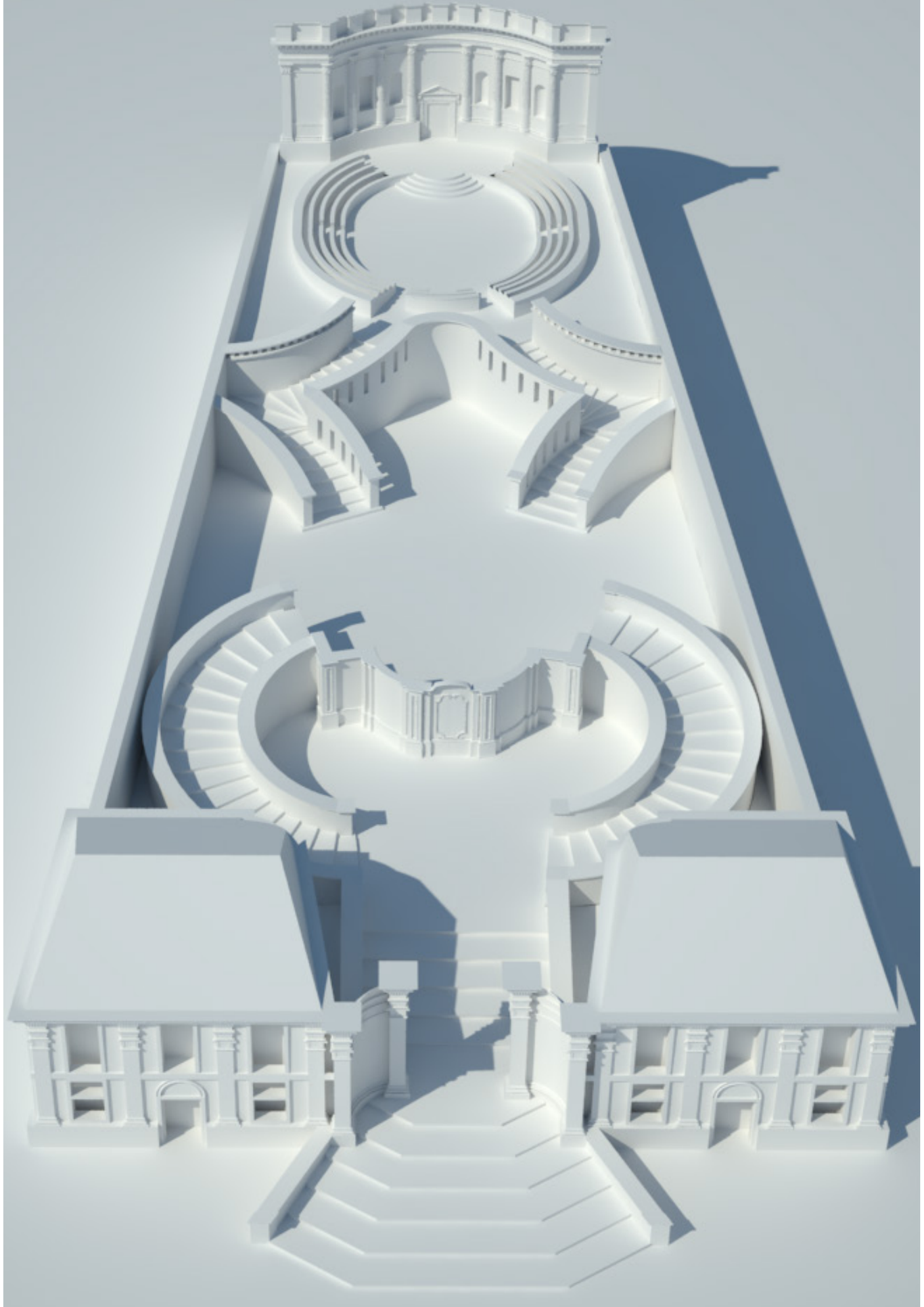

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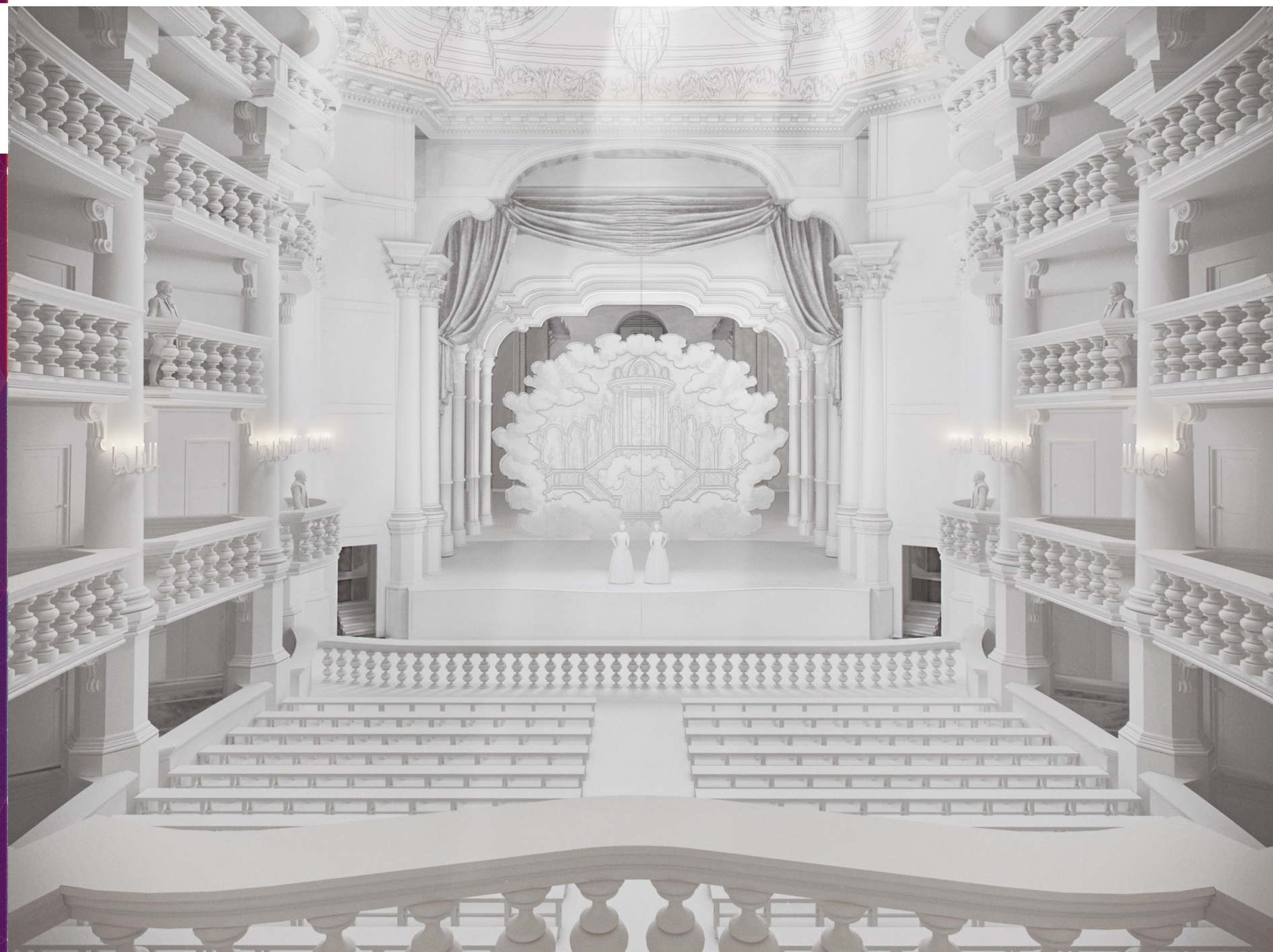

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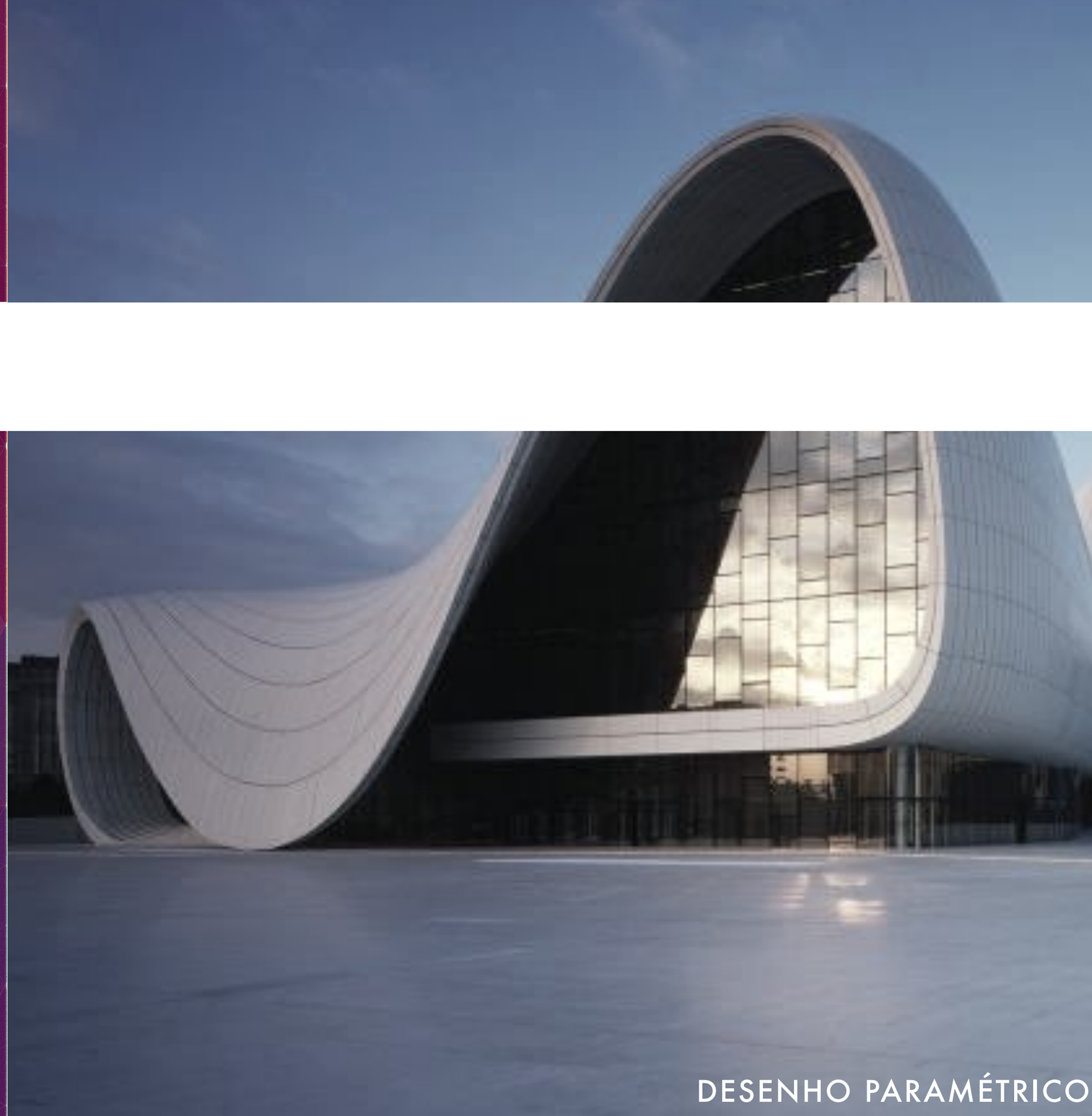

DESENHO PARAMÉTRICO

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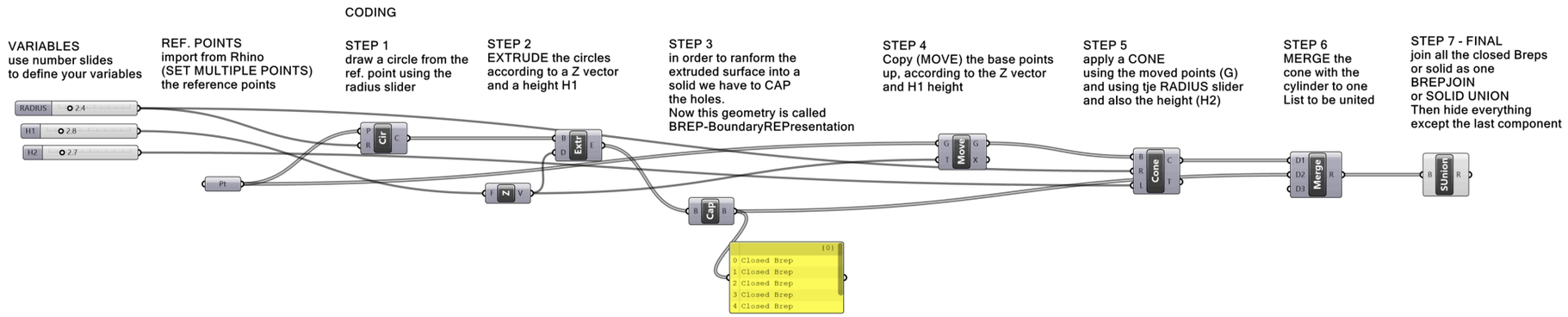
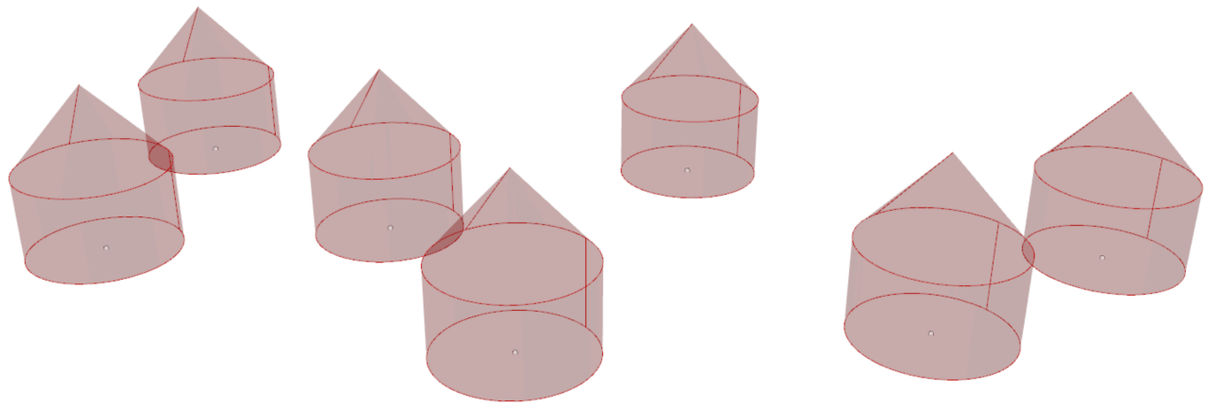
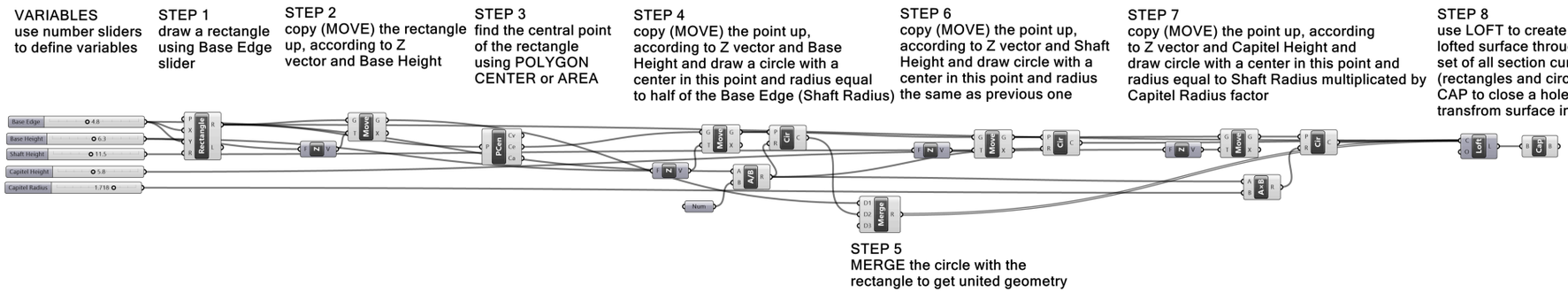
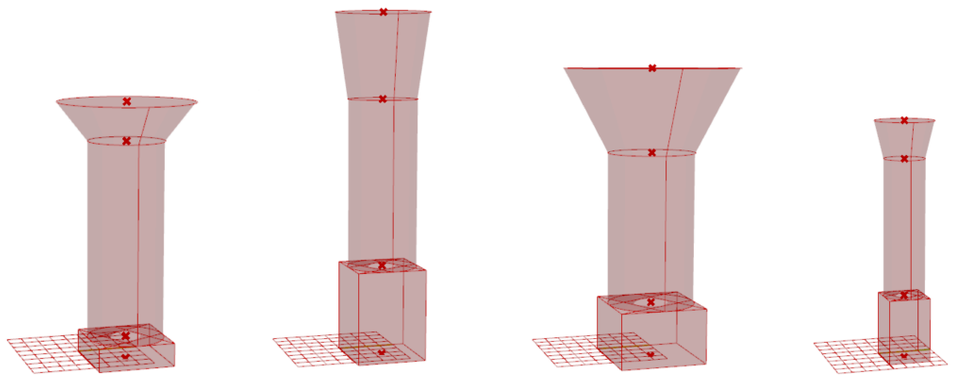






STEP 5
MERGE the circle with the
rectangle to get united geometry



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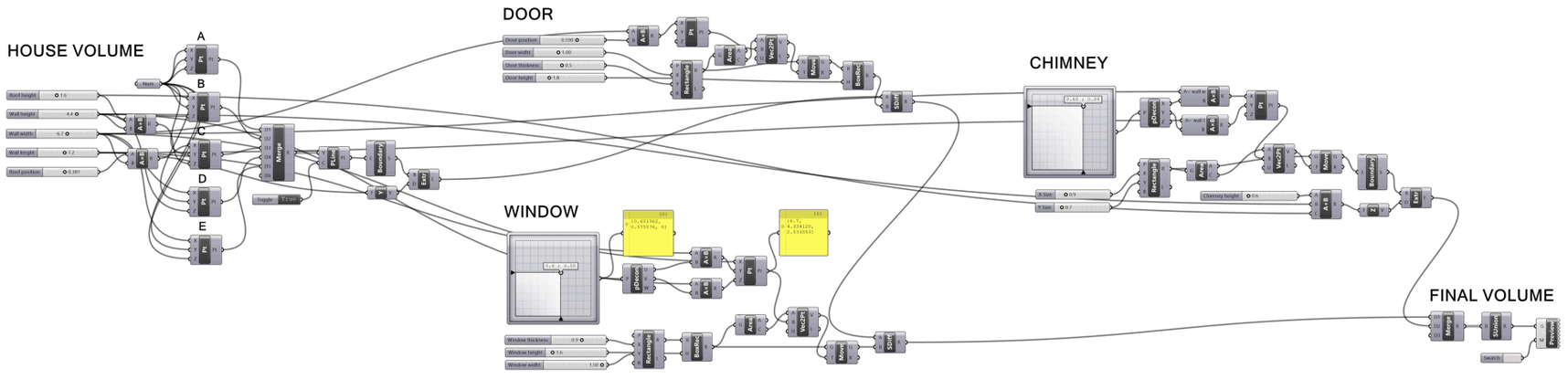



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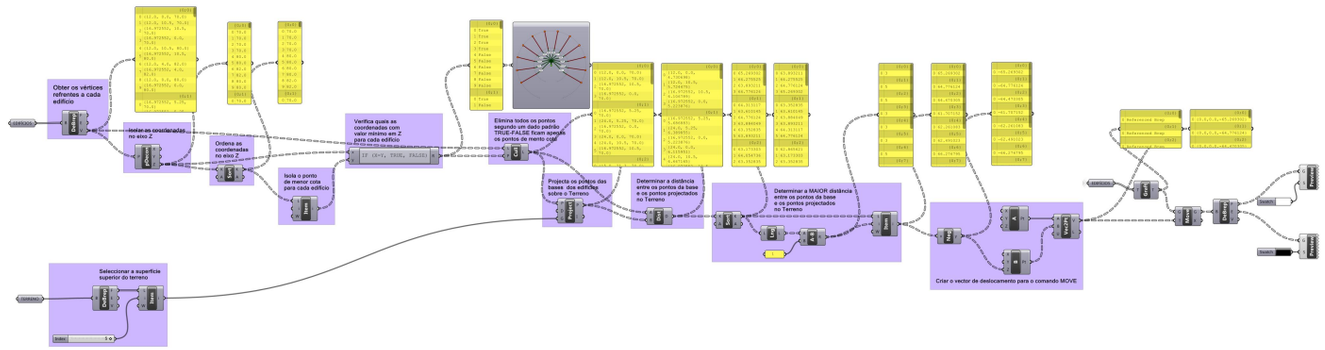

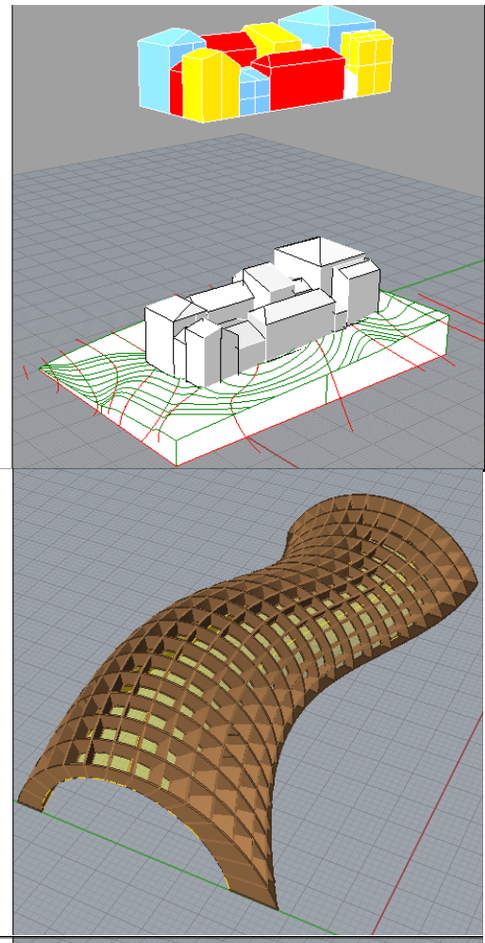

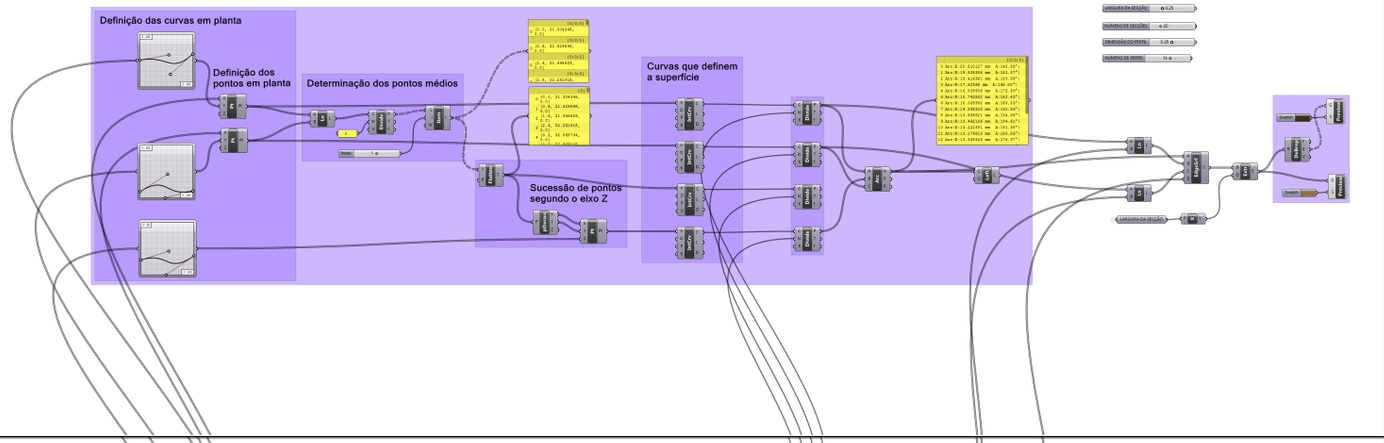

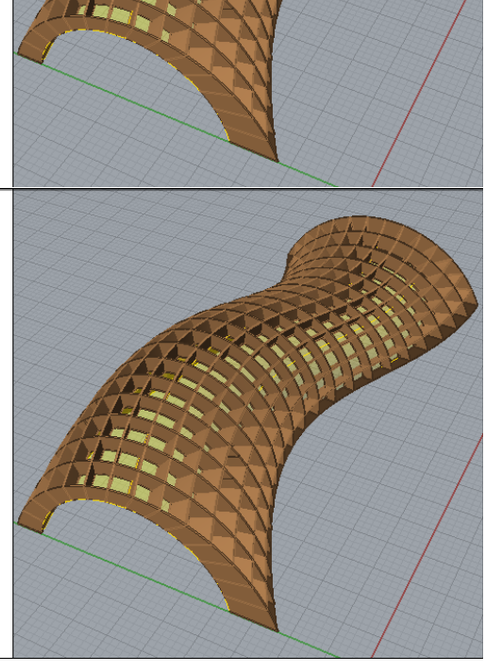

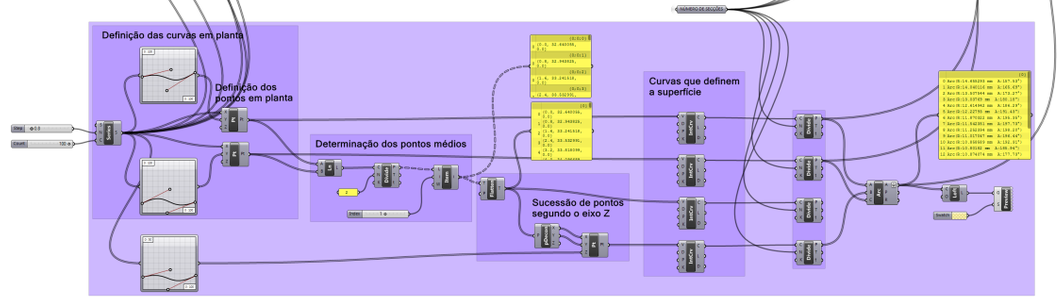

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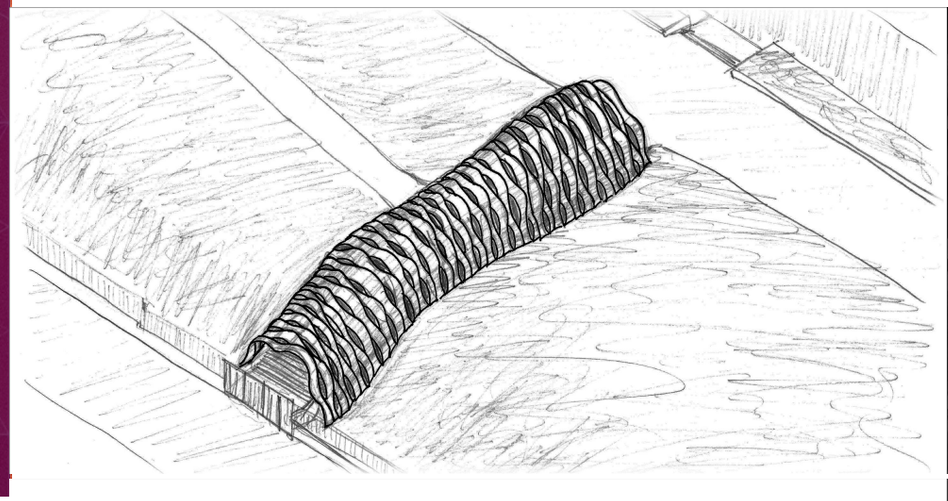
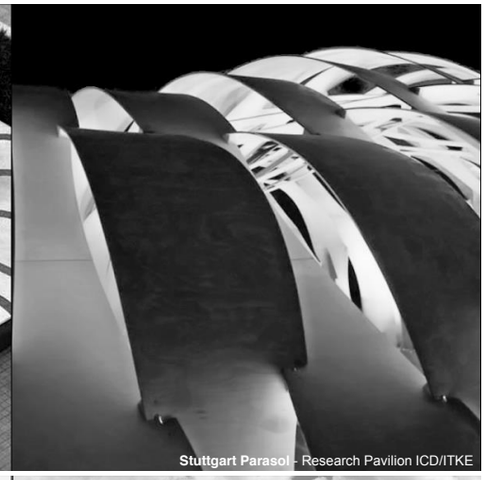


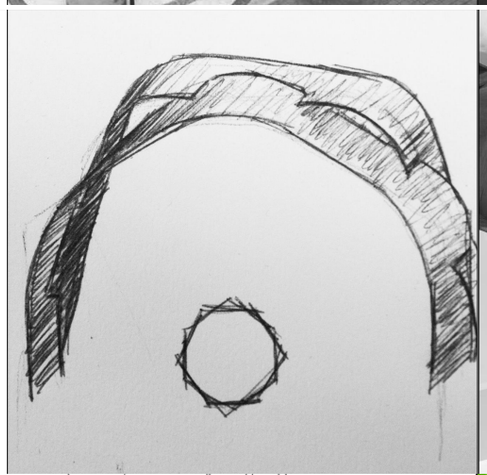


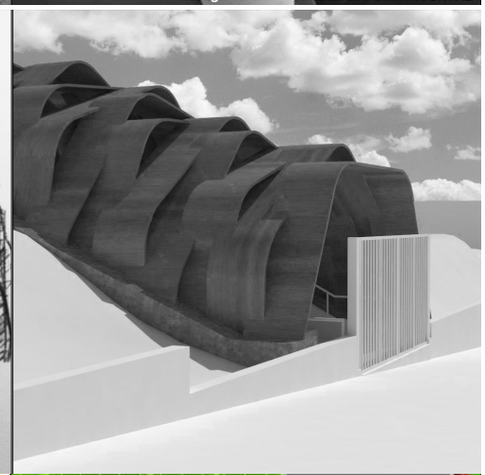


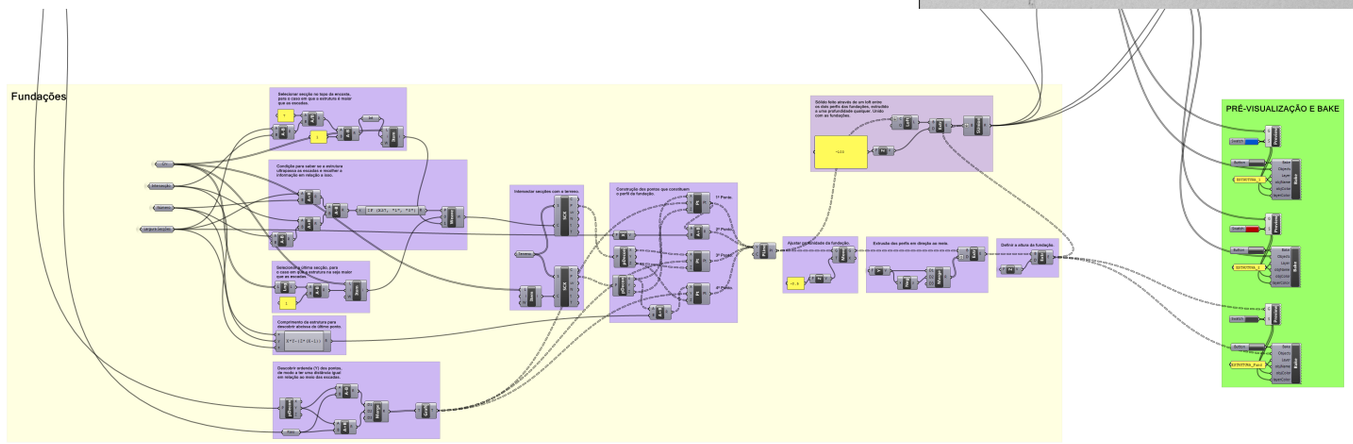
O conceito para o exercício final parte da criação de um túnel feito de faixas de madeira que se entrecruzam, baseada no exemplo do Stuttgart Parasol.

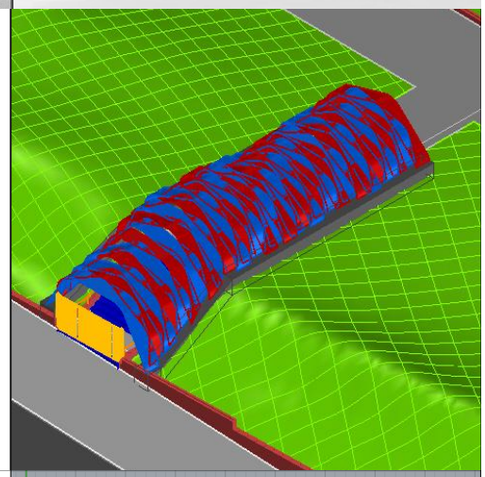
Para a formalização desses perfis, utilizou-se o hexágono como elemento base, no qual são boleados os vértices, de modo a obter uma forma mais orgânica. Aos perfis foi aplicada uma rotação incremental, que dá dinâmica à estrutura, e uma rotação de 30º aos perfis pares, para que estes se alternem com os ímpares.

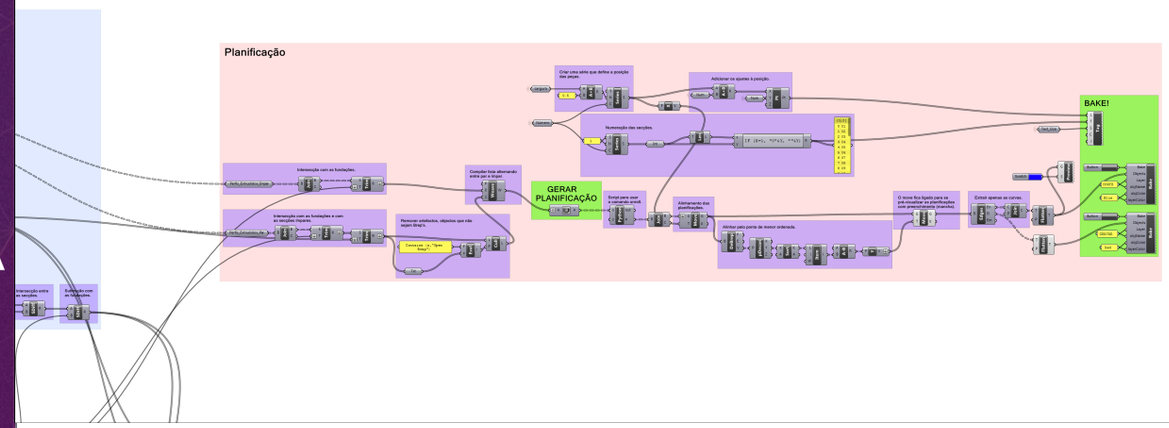
Estes foram gerados segundo uma curva definida por uma *função sinc* (seno cardinal), que define o eixo longitudinal da estrutura, permitindo-lhe acompanhar a talude da entrada e possuir um leve ondular na zona plana do terreno.

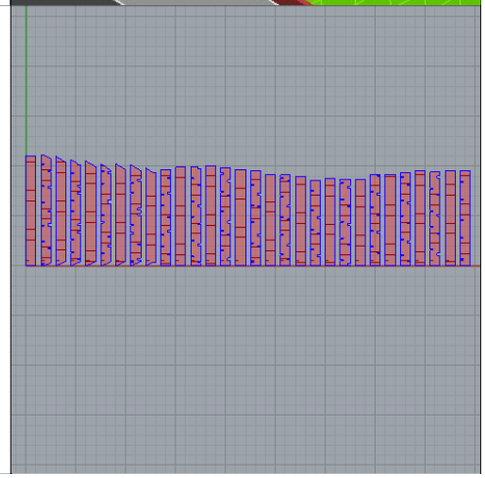












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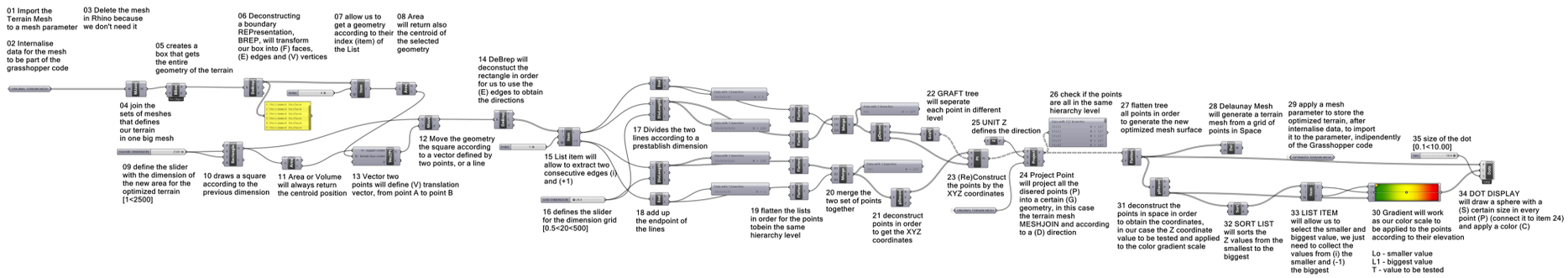

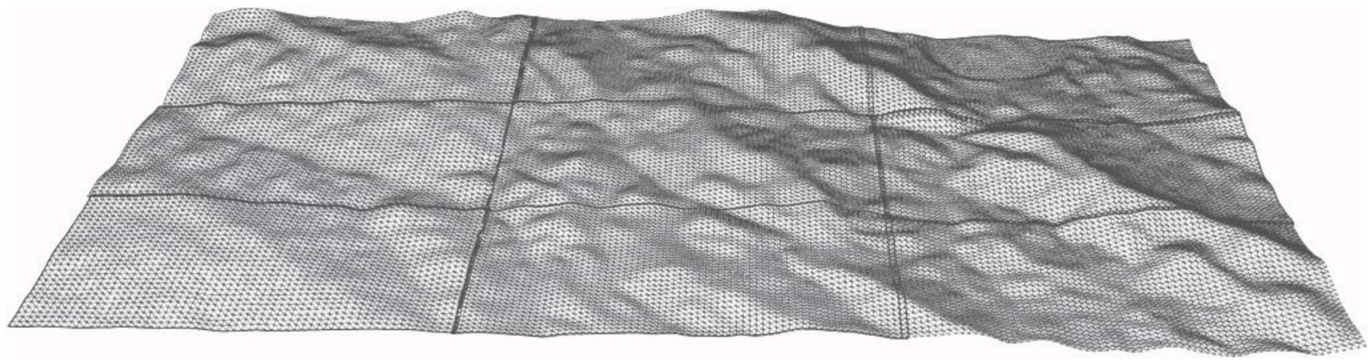

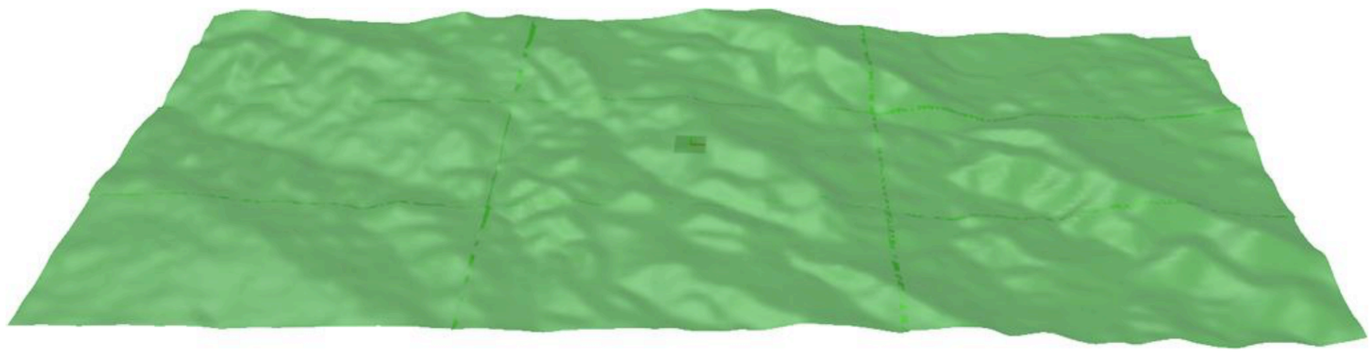

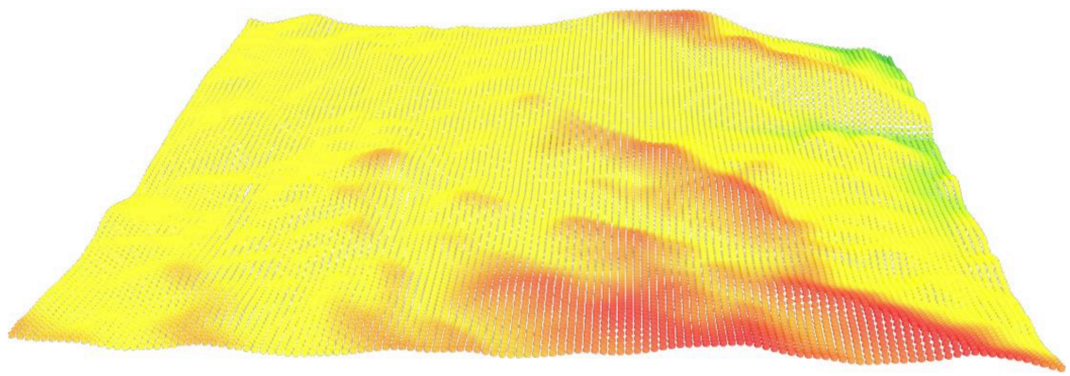

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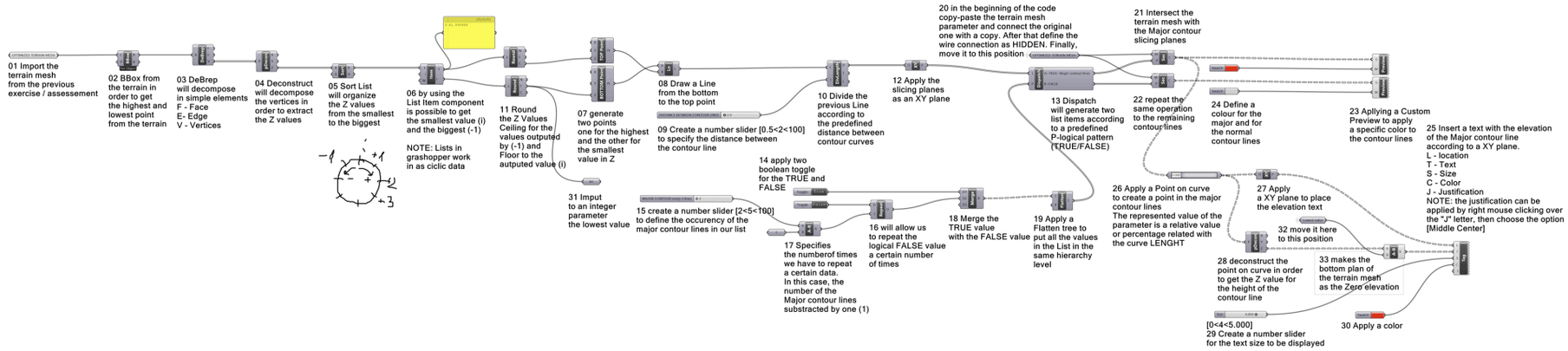

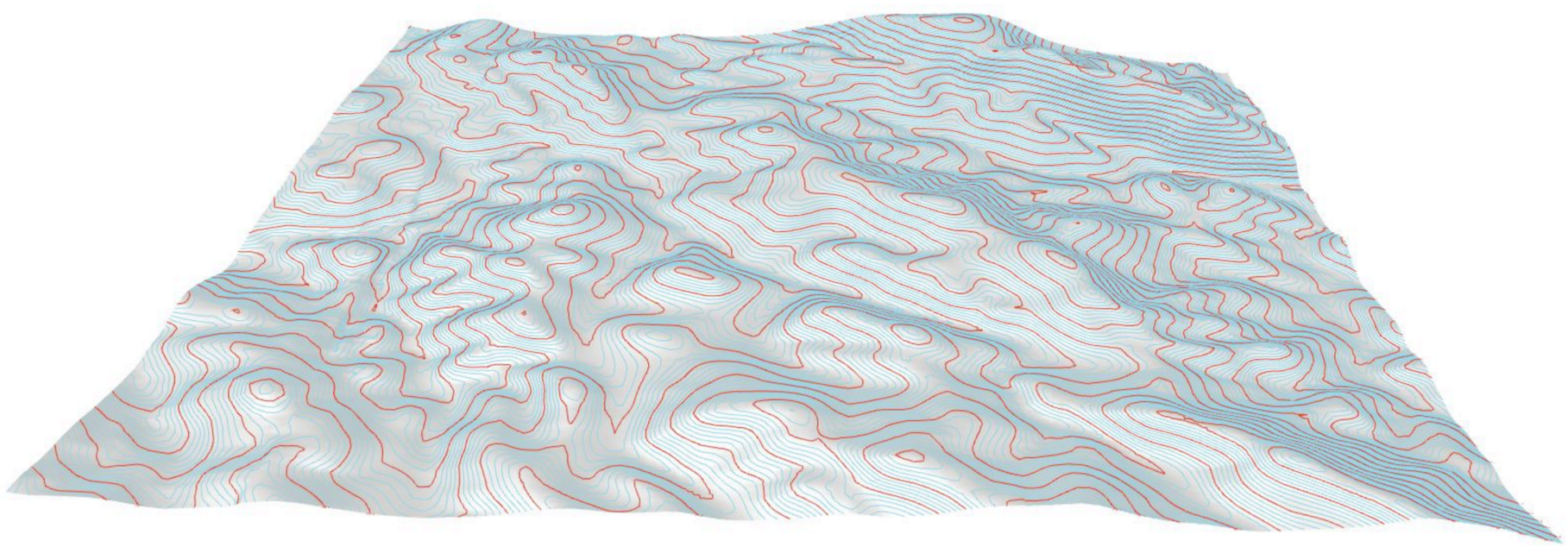

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Trabalho de grupo

teamwork

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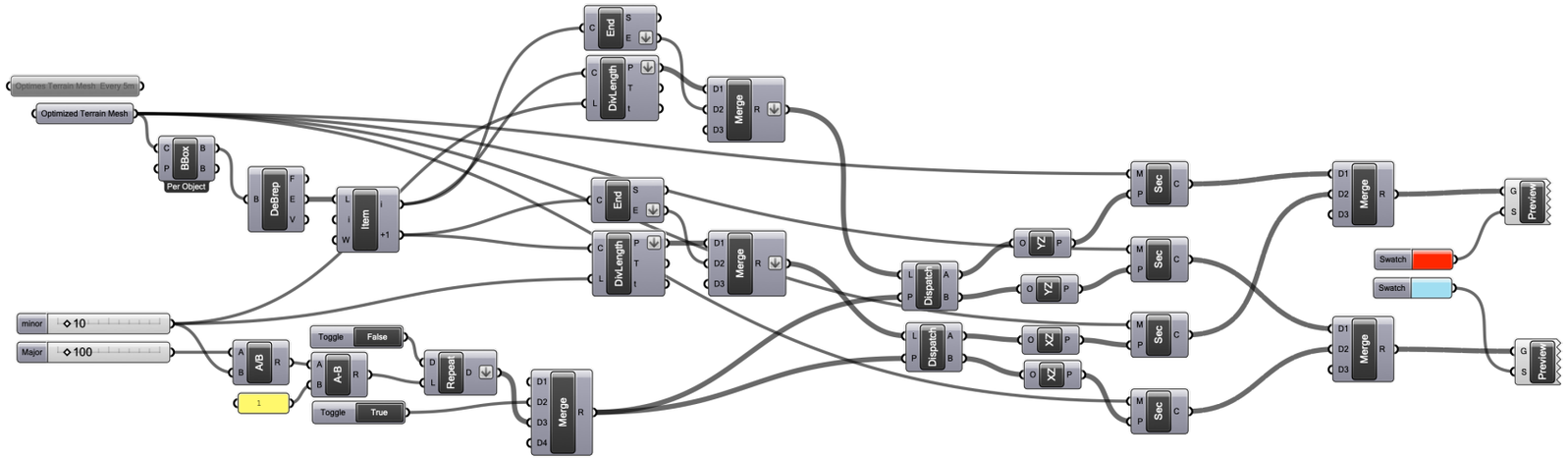

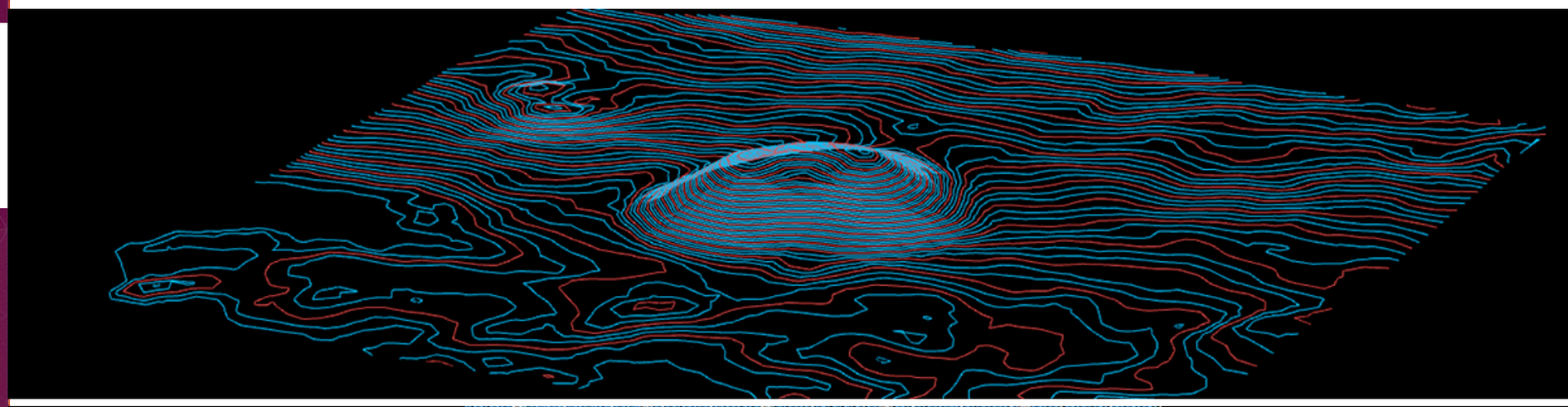

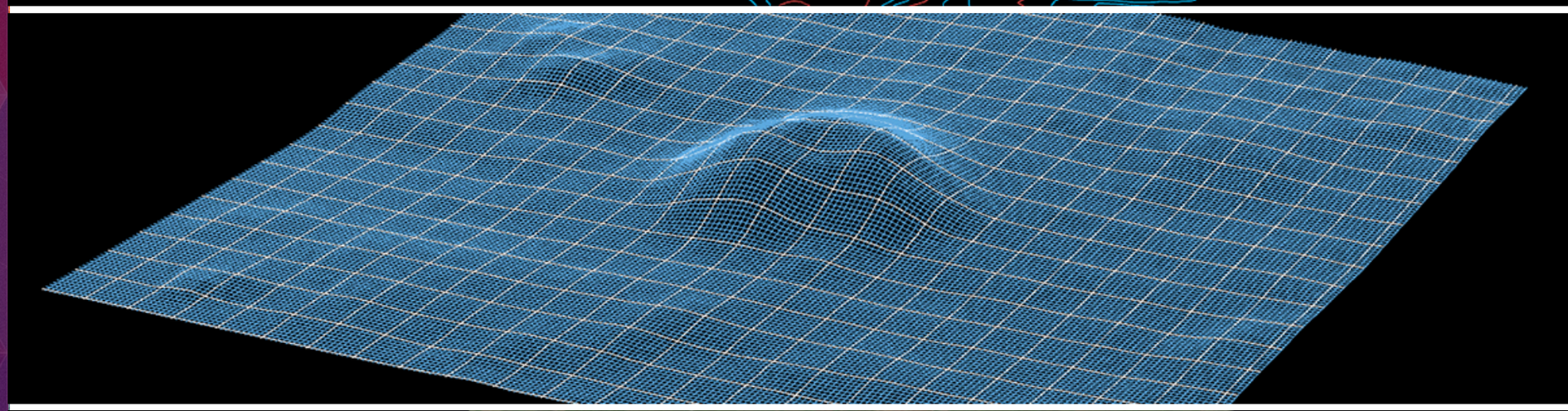



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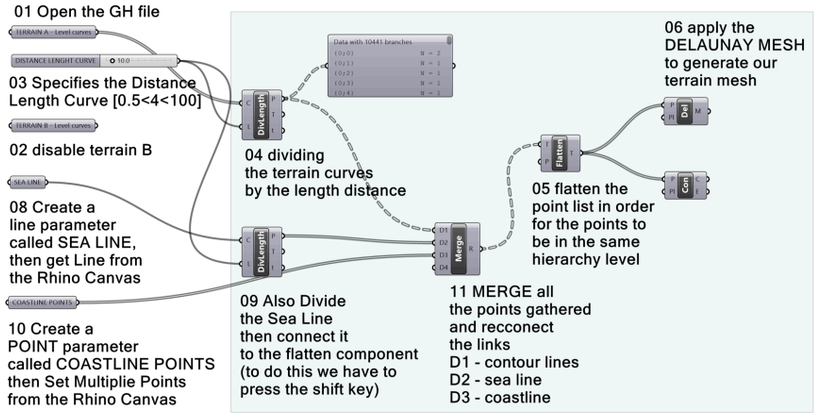
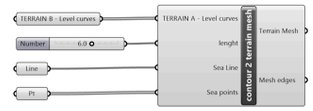
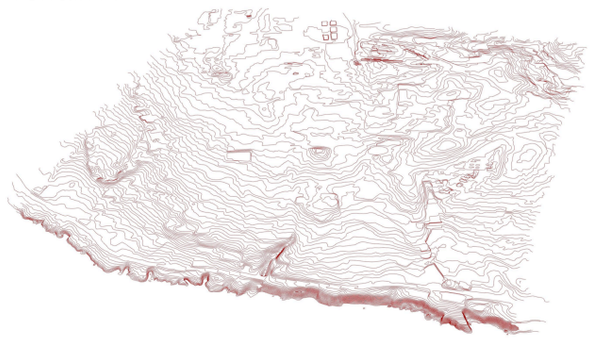


TERRAIN B



Terrain A



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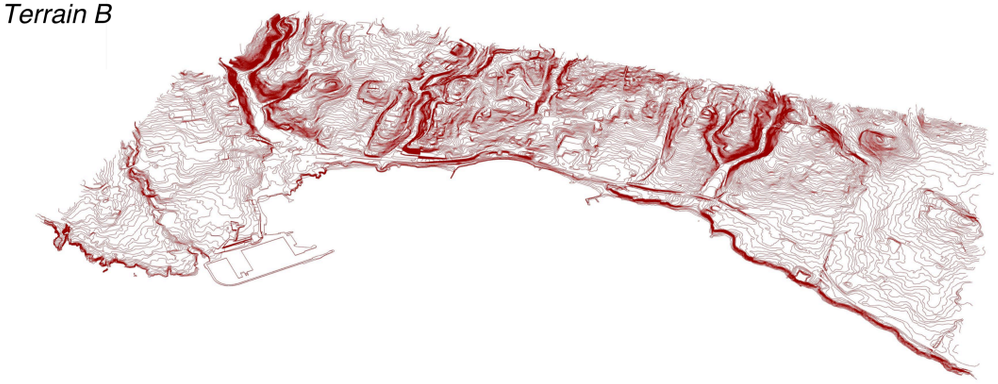
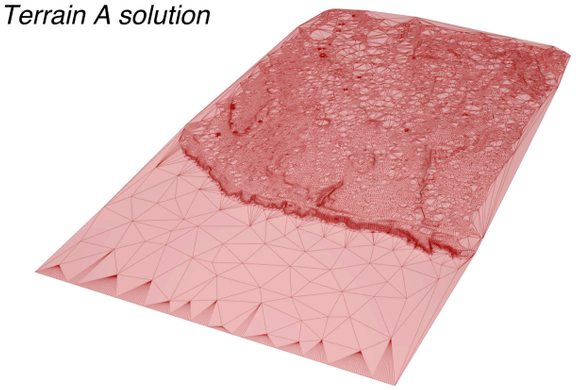


Terrain A solution



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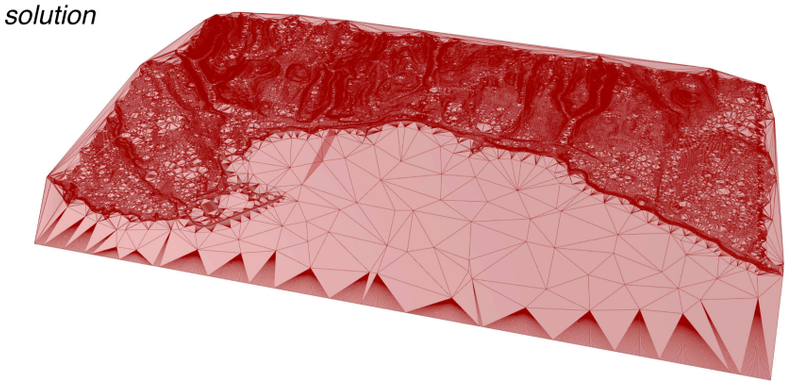

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Portfolio *portfolio*

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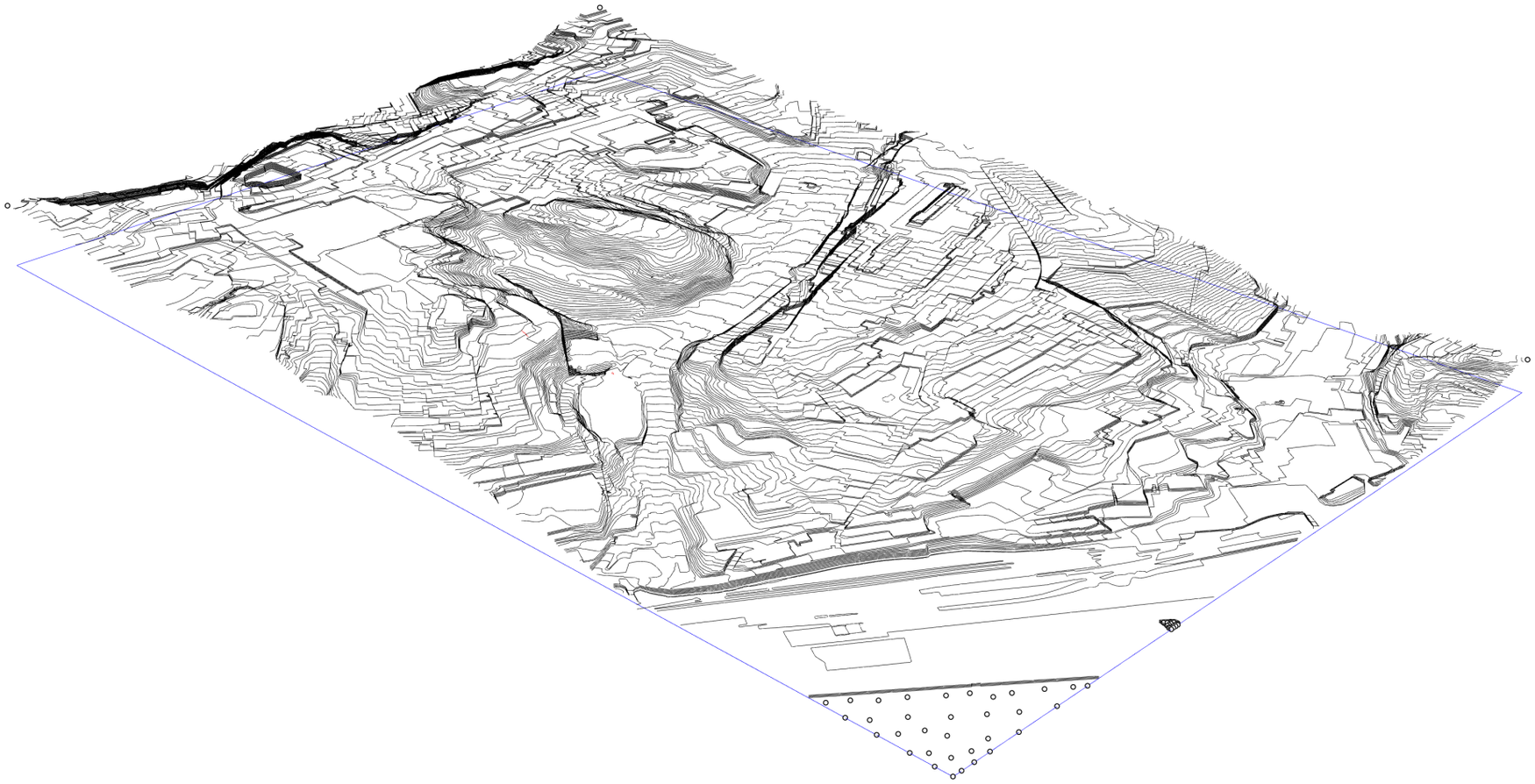

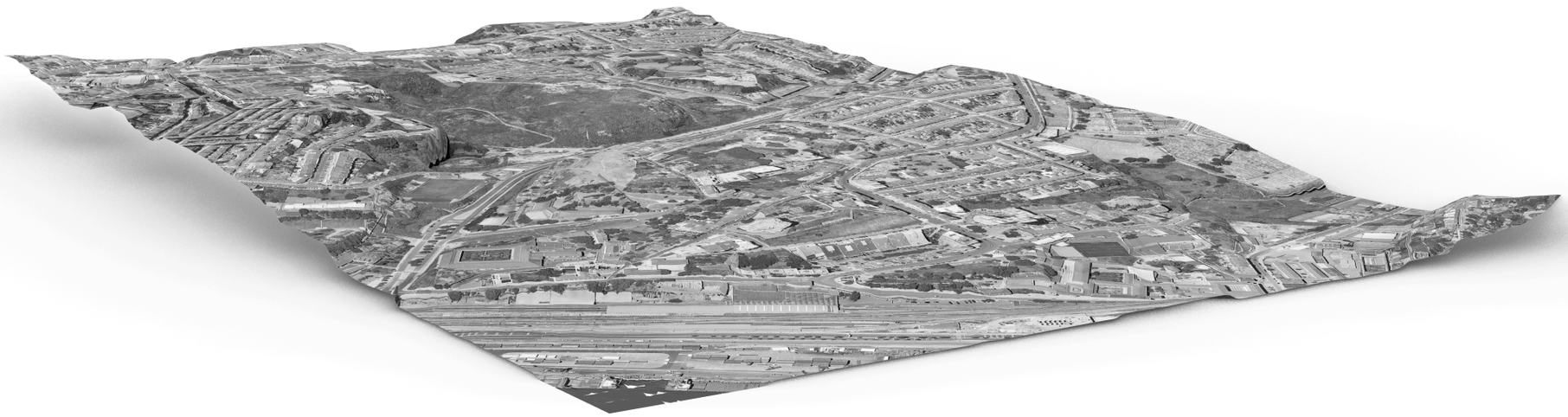

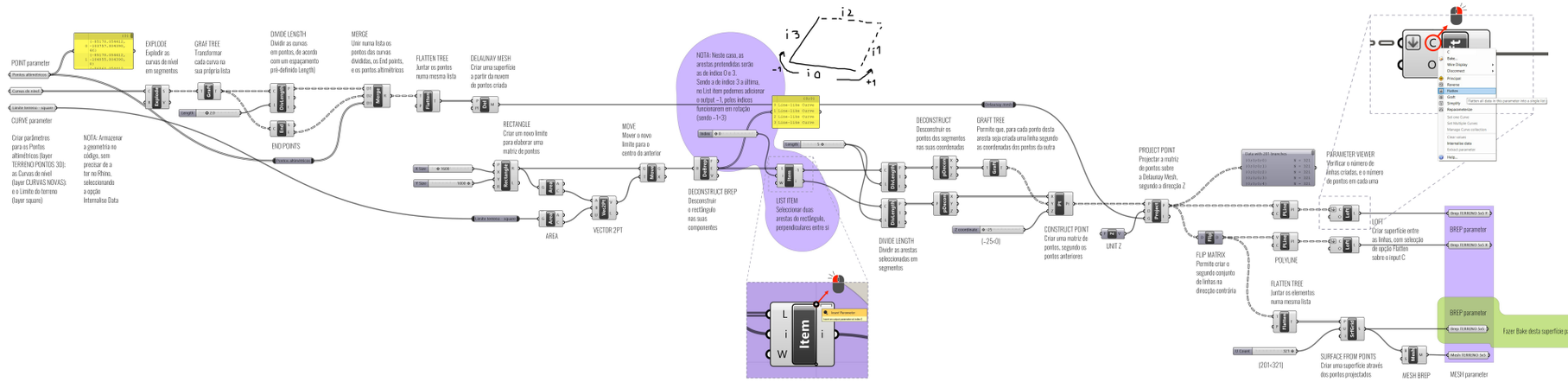

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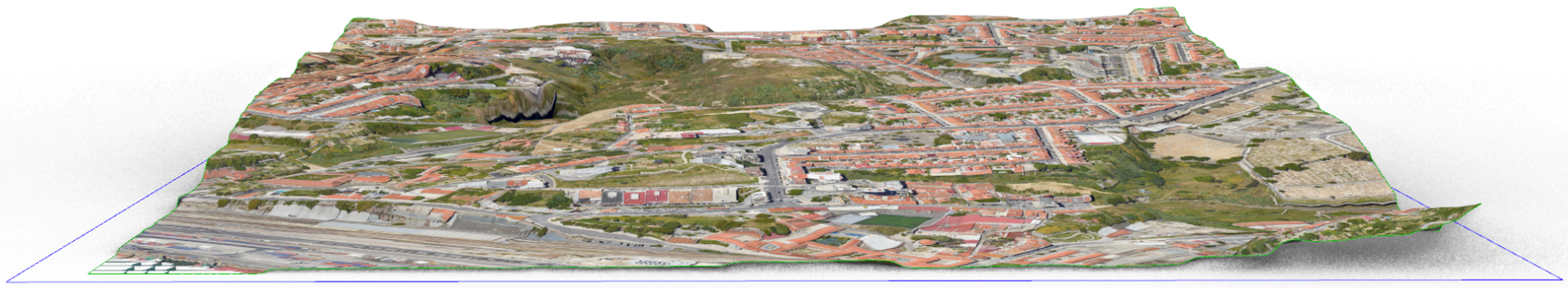

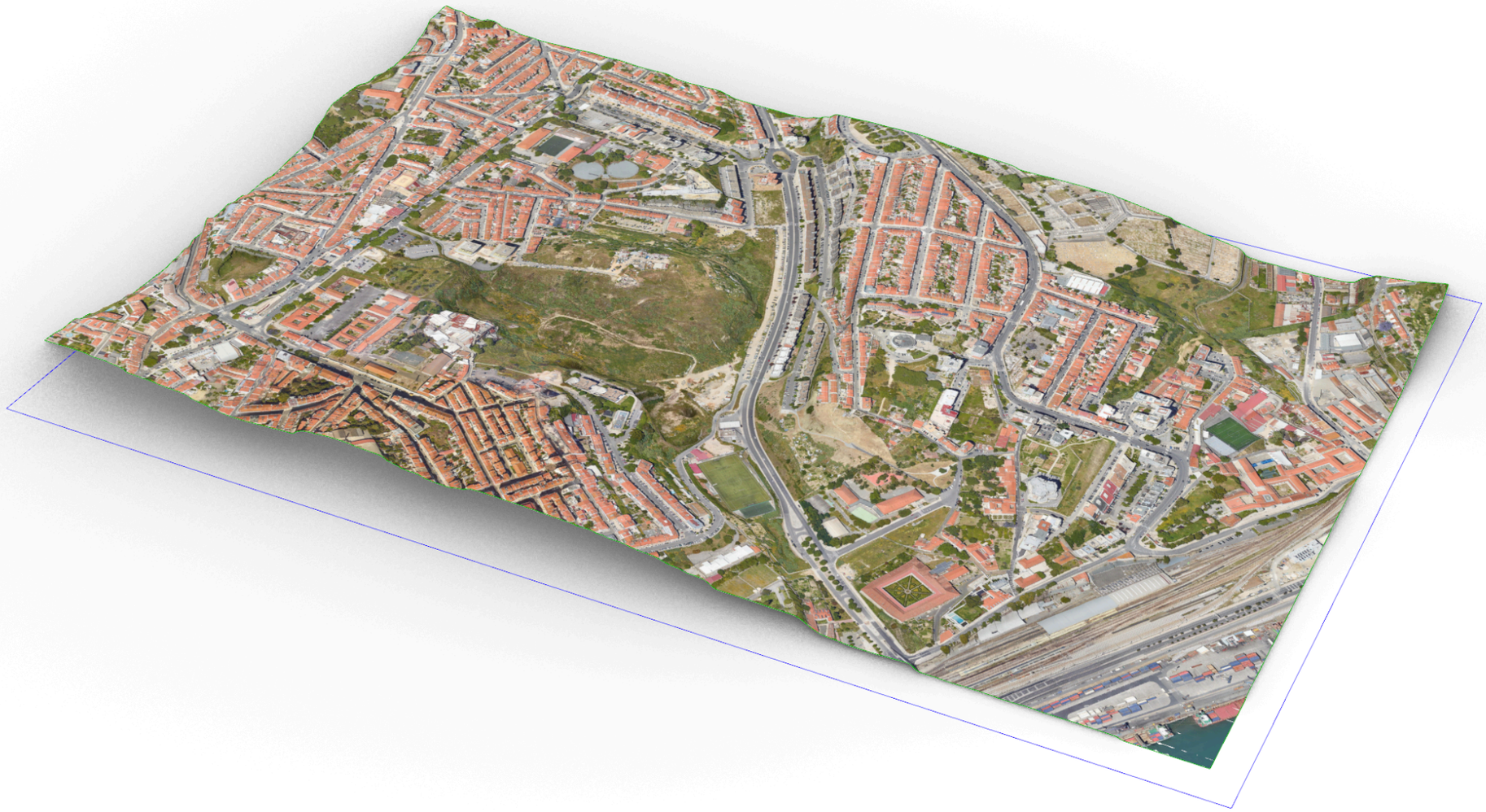

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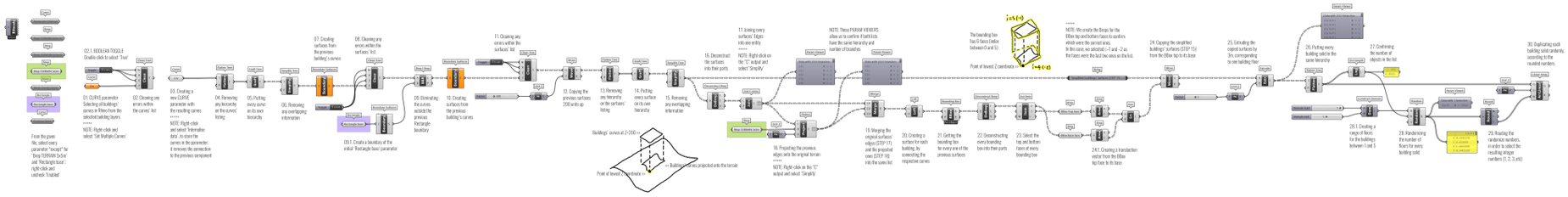

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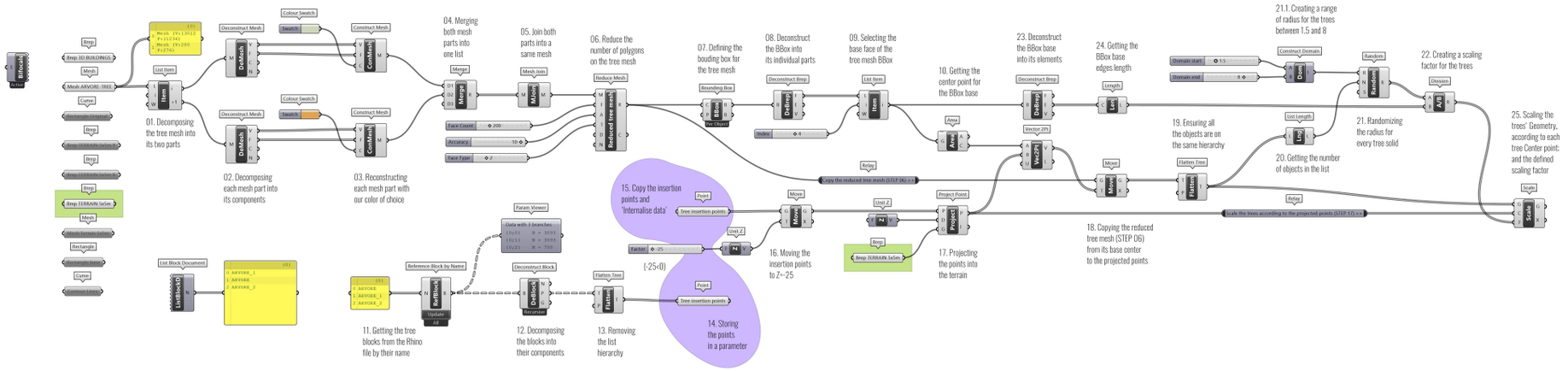



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TRABALHO DE GRUPO

MODELAÇÃO GEOMÉTRICA GENERATIVA

generative and geometric modeling



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1 - Local de trabalho

Escolha o local de trabalho da lista abaixo, forme um grupo de 3 elementos (para as praças de 3ª categoria) ou de 4 elementos (para as praças de 1ª e 2ª Categoria)

ID	PAÍS	DISTRITO	CONCELHO	FREGUESIA	DESIGNAÇÃO DA PRAÇA	CATEGORIA	INAUGURAÇÃO	PRORIETÁRIO
01	Portugal	Lisboa	Lisboa	Nossa Senhora de	Praça de Toiros do Campo Pequeno	*1ª*	1892	Casa Pia
02	Portugal	Lisboa	Vila Franca de Xira	Vila Franca de Xira	Praça de Toiros Palha Blanco	*1ª*	1901	Santa Casa da Misericórdia
03	Portugal	Santarém	Almeirim	Almeirim	Praça de Toiros de Almeirim	*1ª*	1954	Santa Casa da Misericórdia
04	Portugal	Santarém	Coruche	Coruche	Praça de Toiros de Coruche	*1ª*	1960	Santa Casa da Misericórdia
05	Portugal	Santarém	Santarém	Santarém	Praça de Toiros de Celestino Graça	*1ª*	1964	Santa Casa da Misericórdia
06	Portugal	Setúbal	Moita	Moita	Praça de Toiros Daniel do Nascimento	*1ª*	1950	Sociedade Moitense de Tauromquia, SA.
07	Portugal	Setúbal	Montijo	Montijo	Praça de Toiros Amadeu Augusto dos	*1ª*	1957	Santa Casa da Misericórdia
08	Portugal	Setúbal	Setúbal	São Sebastião	Praça de Toiros Carlos Relvas	*1ª*	1889	Câmara Municipal
09	Portugal	Beja	Beja	Beja	Praça de Toiros José Varela Crujo	*2ª*	1907	António Semende e Ferreira Paulo
10	Portugal	Coimbra	Figueira da Foz	São Julião da Figueira da	Coliseu Figueirense	*2ª*	1895	Coliseu Figueirense, AS.
11	Portugal	Évora	Estremoz	Estremoz	Praça de Toiros de Estremoz	*2ª*	1904	Santa Casa da Misericórdia
12	Portugal	Évora	Évora	Évora	Arena d'Évora	*2ª*	2007	Particular
13	Portugal	Évora	Montemor-o-Novo	Montemor-o-Novo	Praça de Toiros de Montemor-o-Novo	*2ª*	1882	*[s.d.]*
14	Portugal	Évora	Reguengos de	Reguengos de Monsaraz	Praça de Toiros José Mestre Batista	*2ª*	1926	Santa Casa da Misericórdia
15	Portugal	Guarda	Sabugal	Aldeia da Ponte	Praça de Toiros de Aldeia da Ponte	*2ª*	1981	Associação Amigos da Aldeia da ponte
16	Portugal	Leiria	Caldas da Rainha	Caldas da Rainha	Praça de Toiros de Caldas da Rainha	*2ª*	1883	SCAI, Sociedade de Construções do
17	Portugal	Leiria	Nazaré	Nazaré	Praça de Toiros da Nazaré	*2ª*	1897	Confraria de Nossa Senhora da Nazaré
18	Portugal	Leiria	Pombal	Abiul	Praça de Toiros de Abiul	*2ª*	1850	Junta de freguesia
19	Portugal	Portalegre	Portalegre	Portalegre	Praça de Toiros José Elias Martins	*2ª*	1936	Privado



ELEIÇÃO DO GRUPO & PRAÇA DE TOIROS

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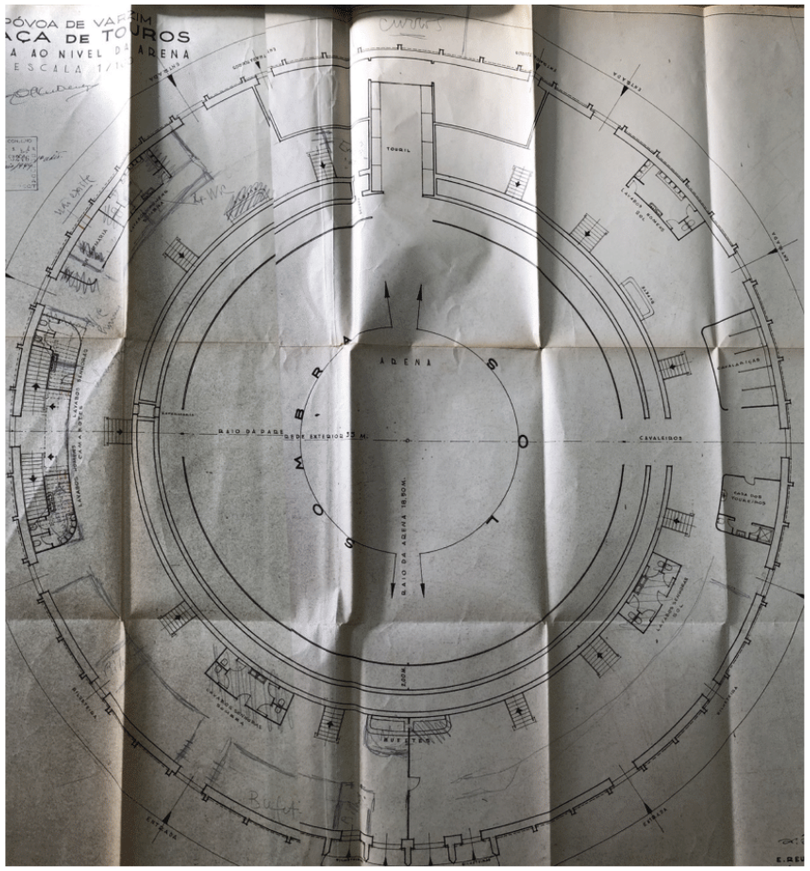

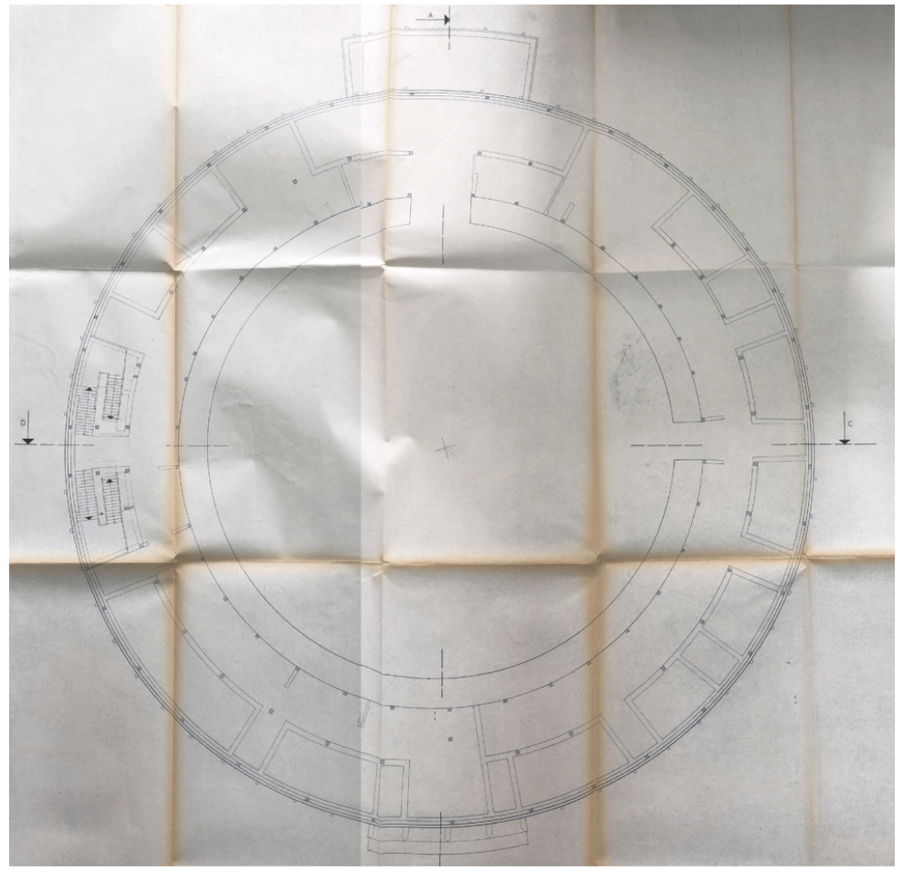

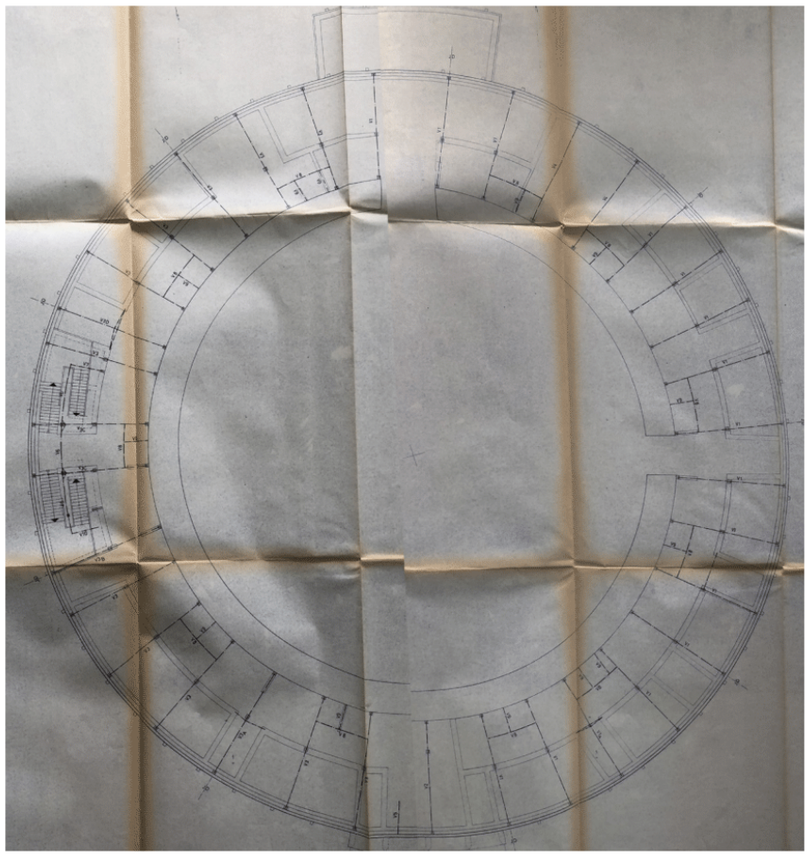

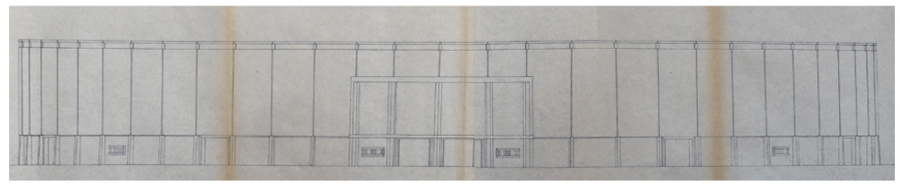

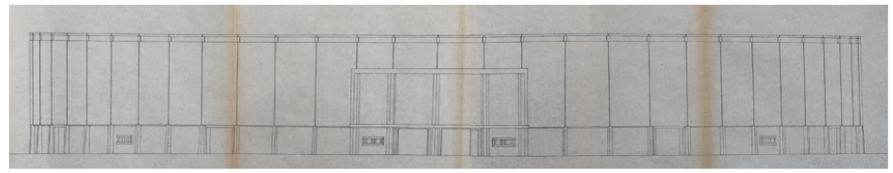

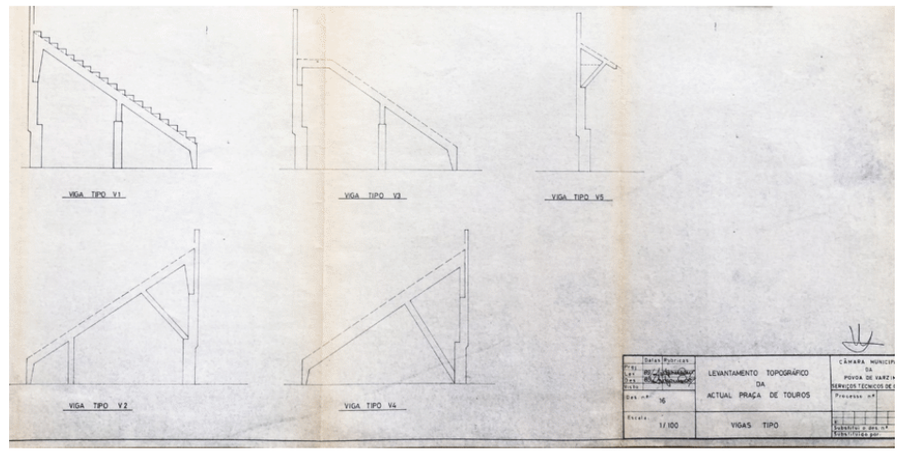

PESQUISA DOCUMENTAL - IGAC

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Trabalho de grupo

teamwork

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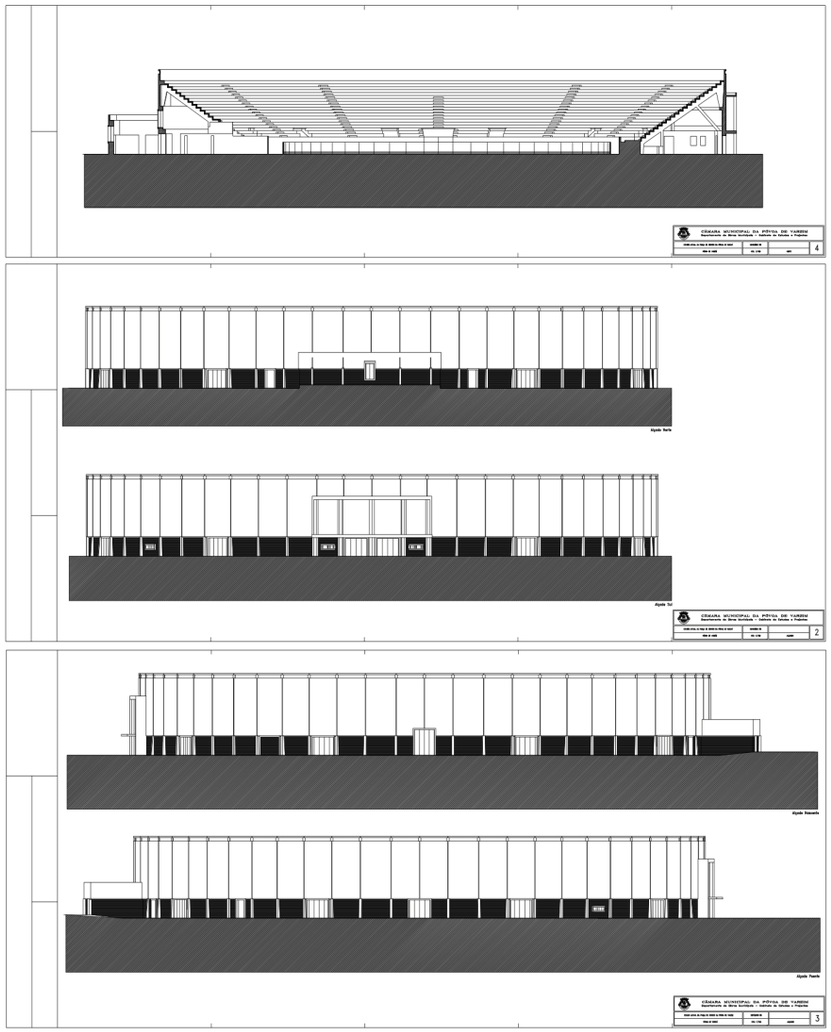



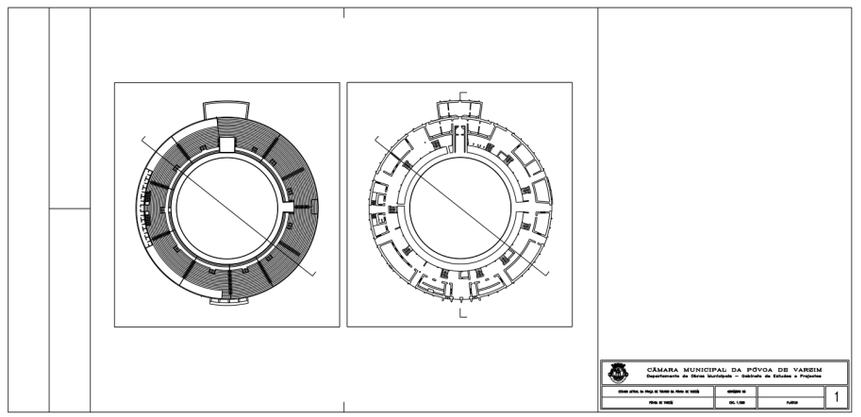

PESQUISA DOCUMENTAL - CÂMARA MUNICIPAL

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PESQUISA DOCUMENTAL - PROPRIETÁRIO

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LEGENDA FOTOLEVANTAMENTO

1 CANON
2 NIKON





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Levantamento FOTOGRÁFICO

16 .4

PESQUISA DE CAMPO - LOCAL

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PESQUISA DE CAMPO - REGISTRO FOTOGRÁFICO

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PESQUISA DE CAMPO - LEVANTAMENTO DIMENSIONAL

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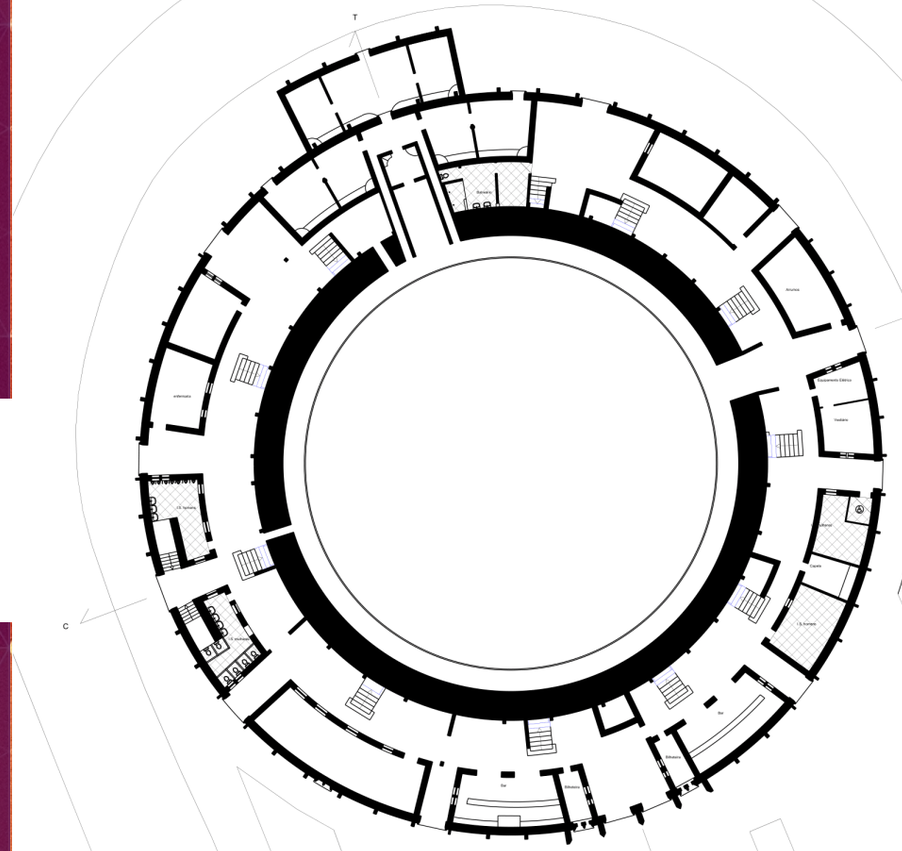

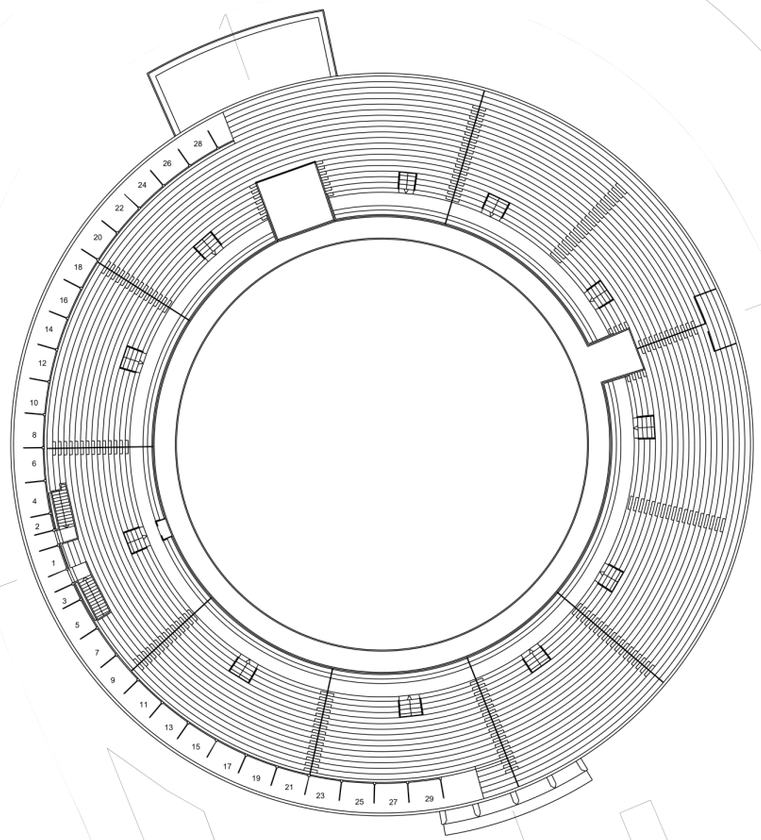

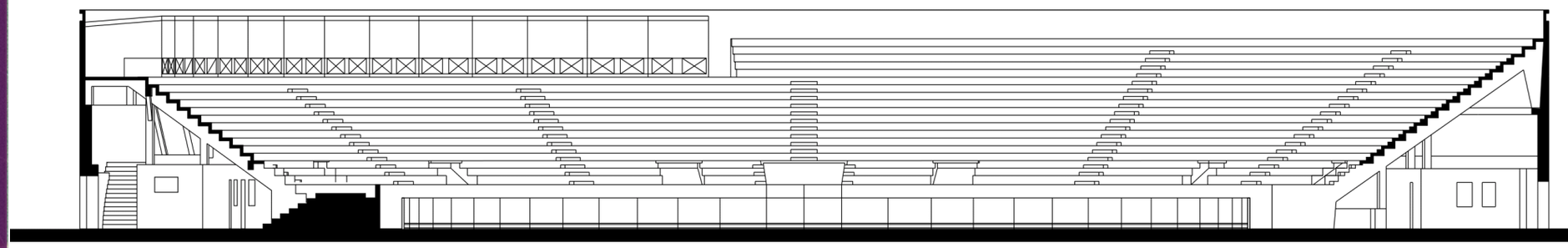

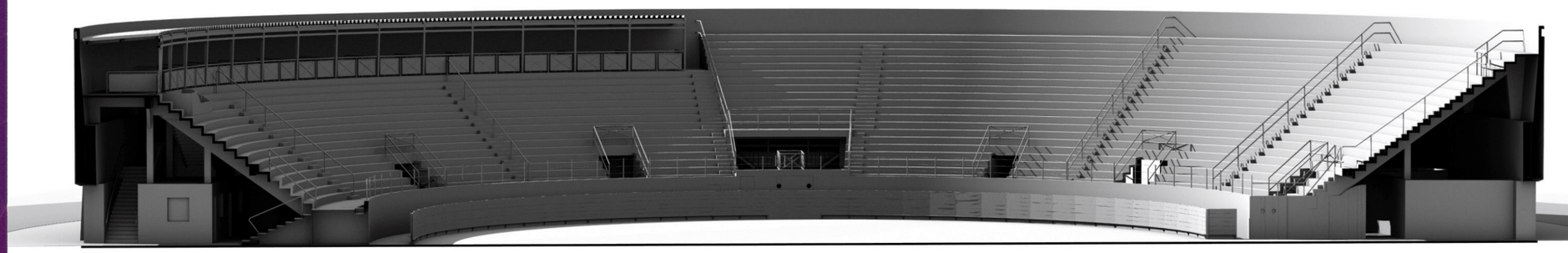

MODELO 2D & 3D - PLANTAS E CORTES

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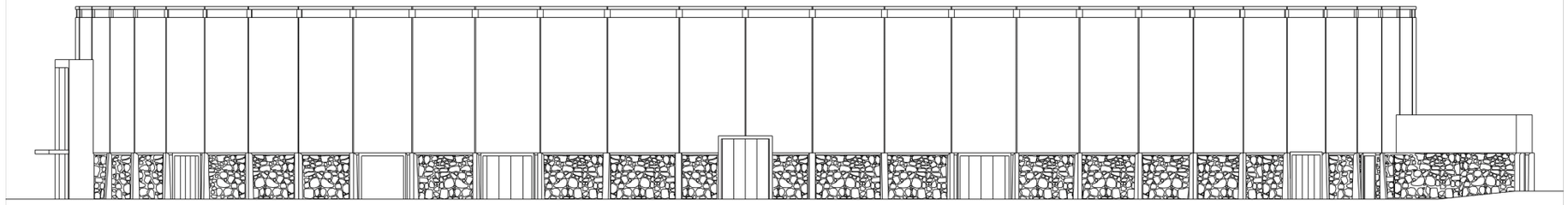

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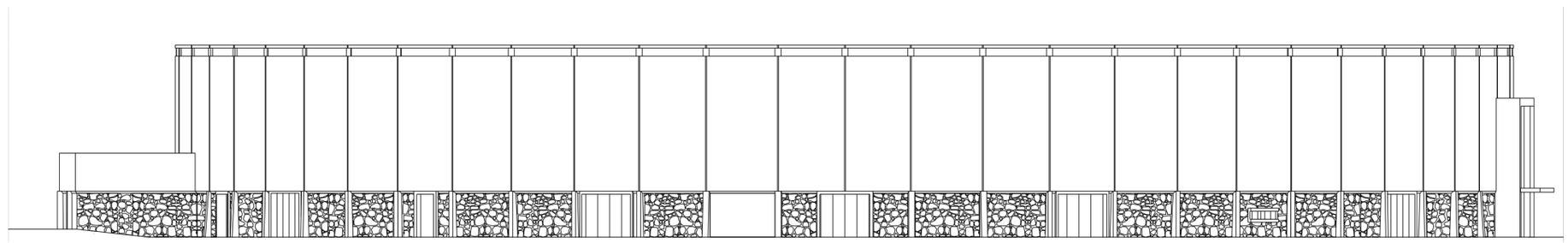

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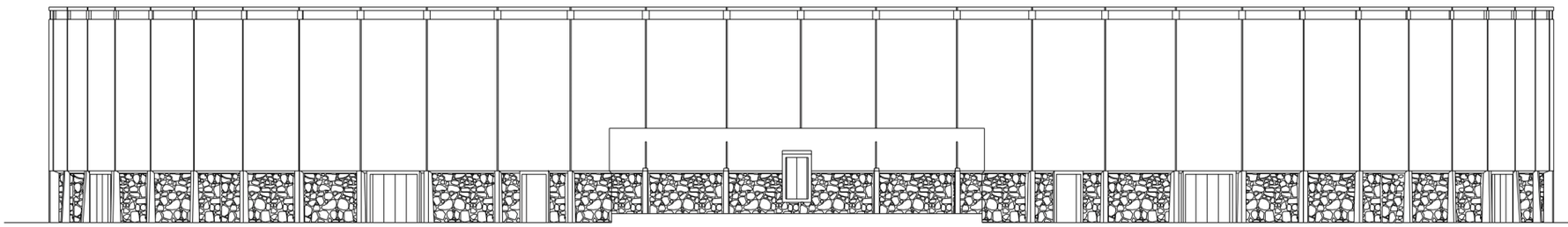

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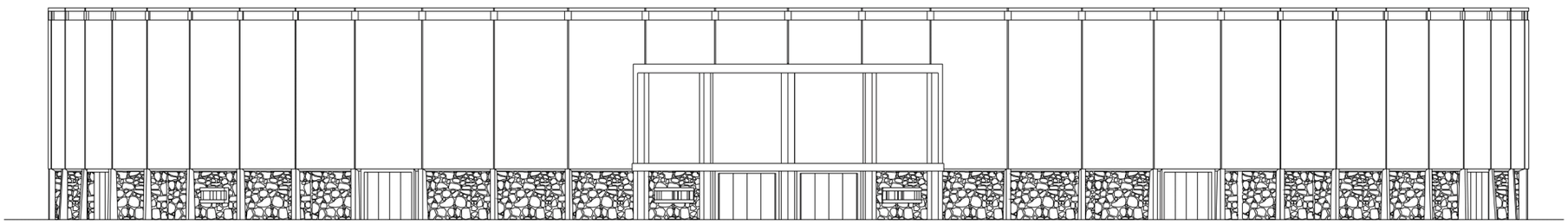

MODELO 2D - ALÇADOS

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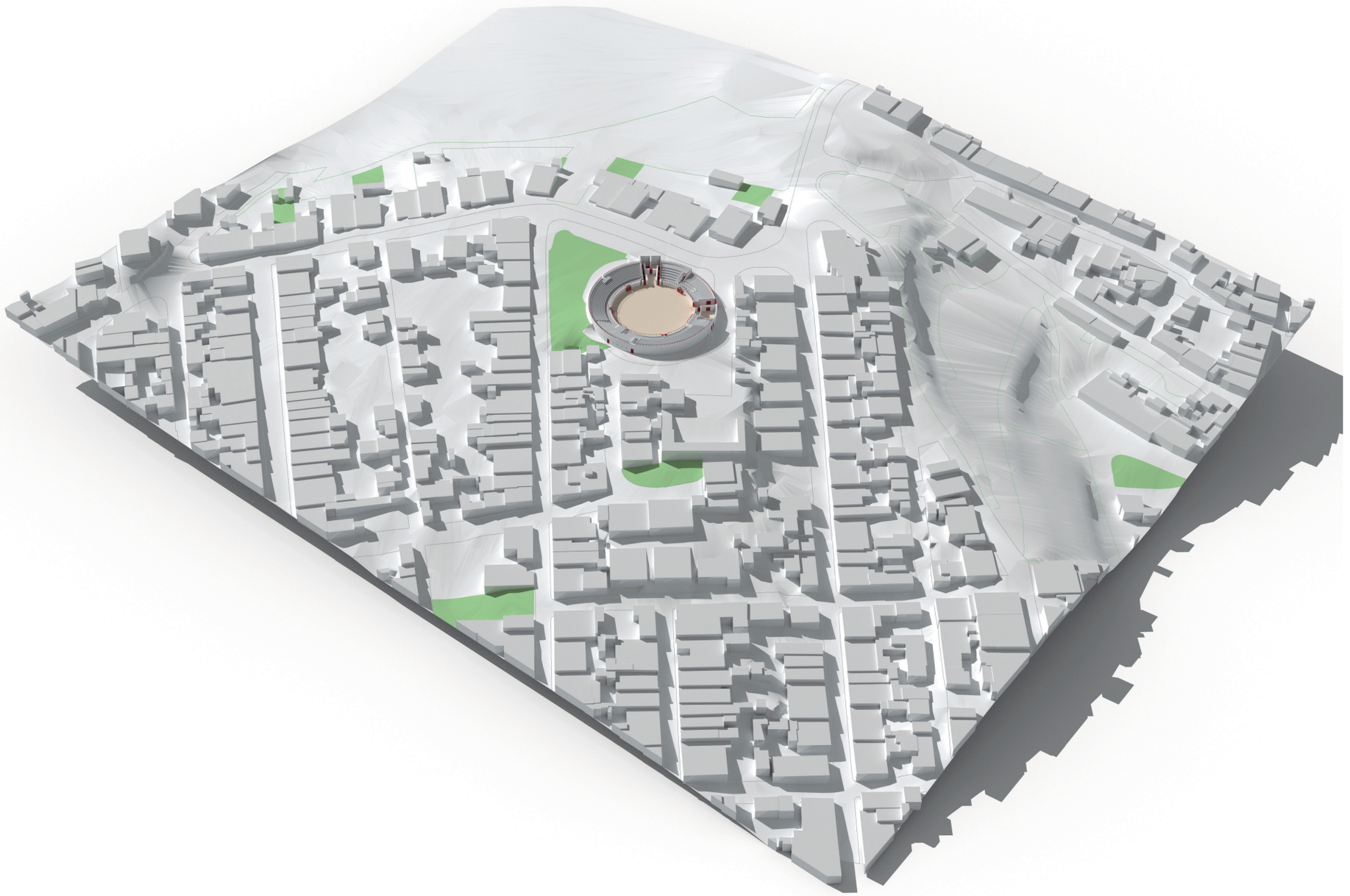

MODELO URBANO

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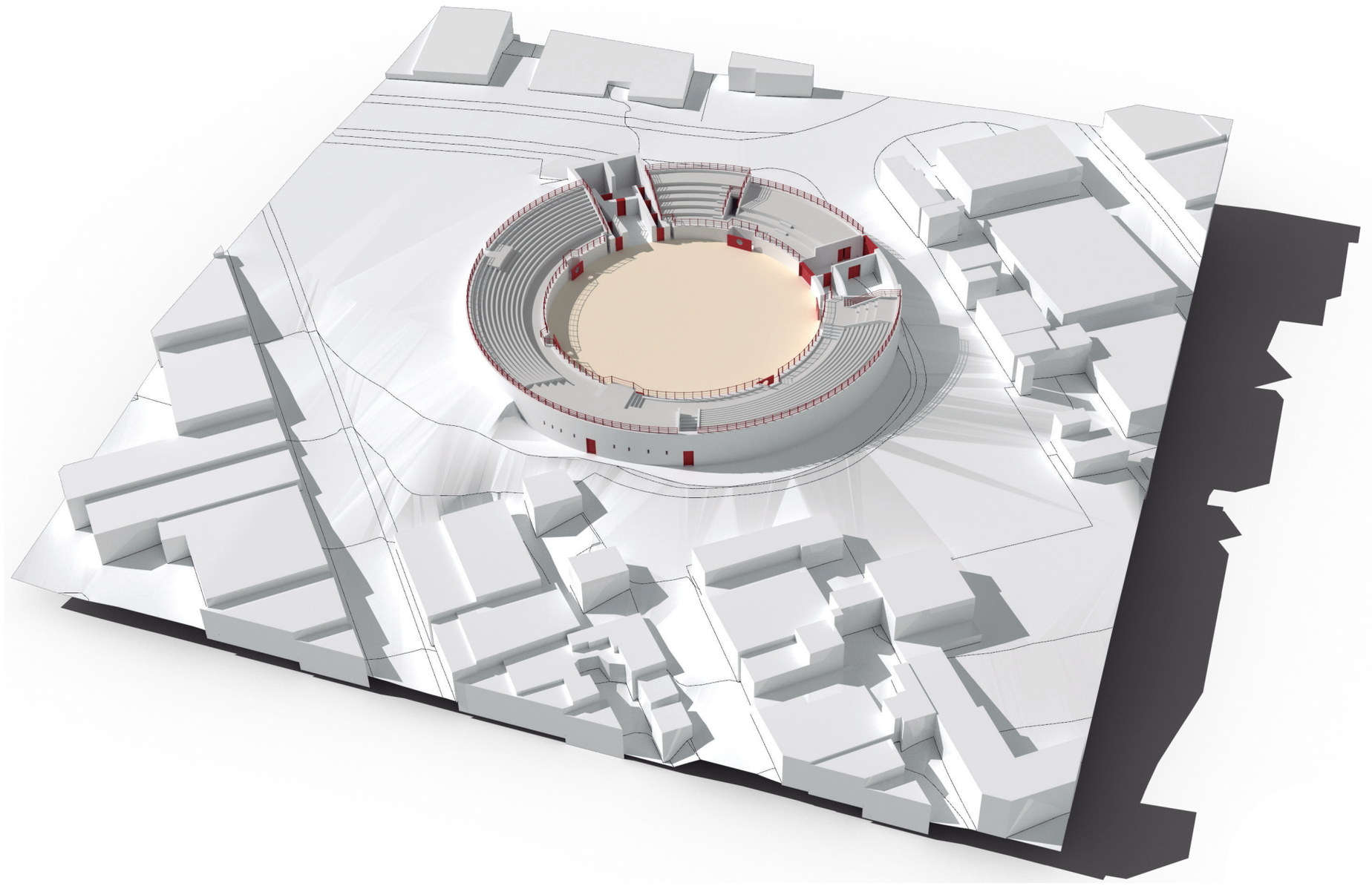

MODELO SECTORIAL

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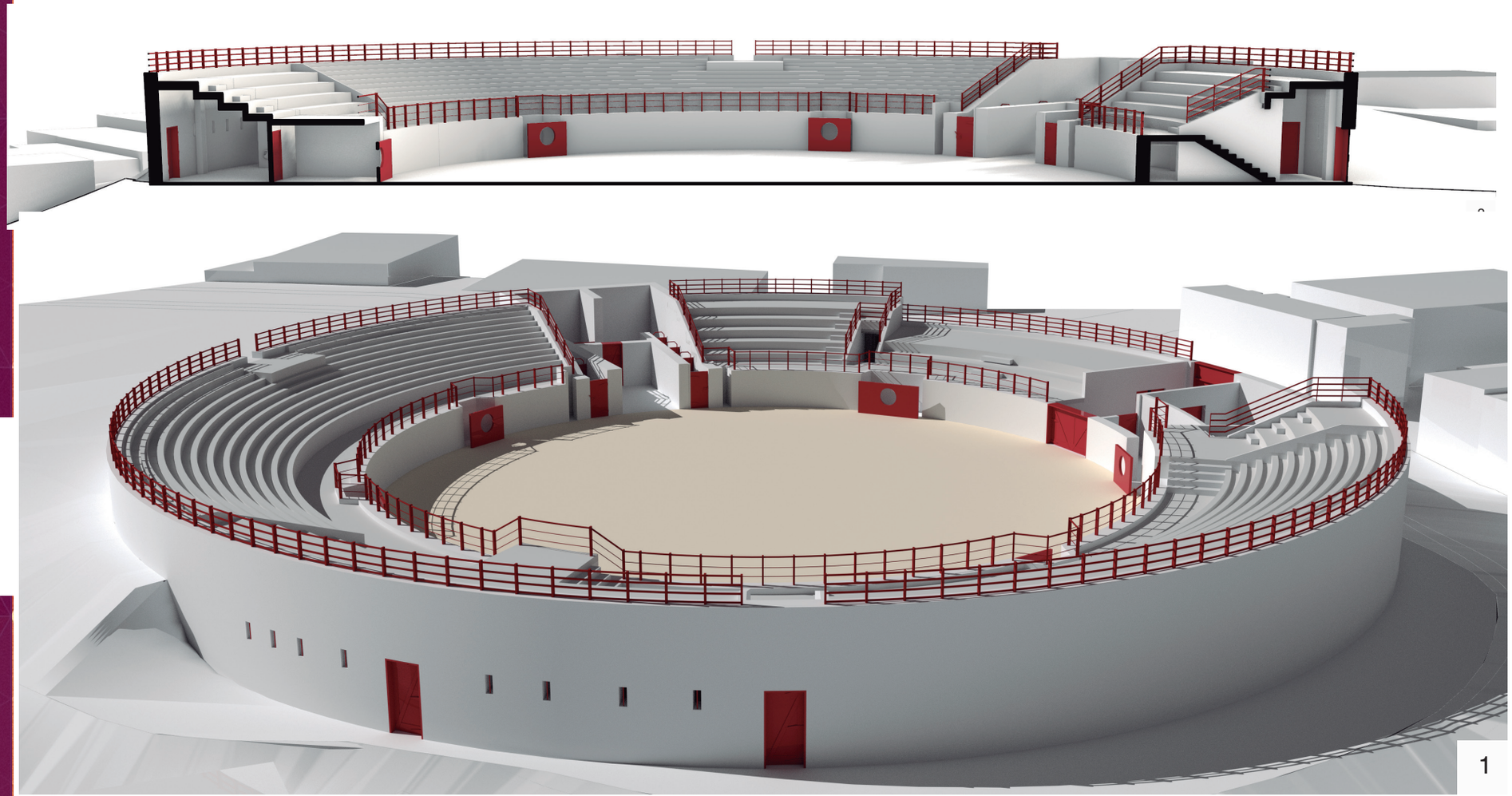

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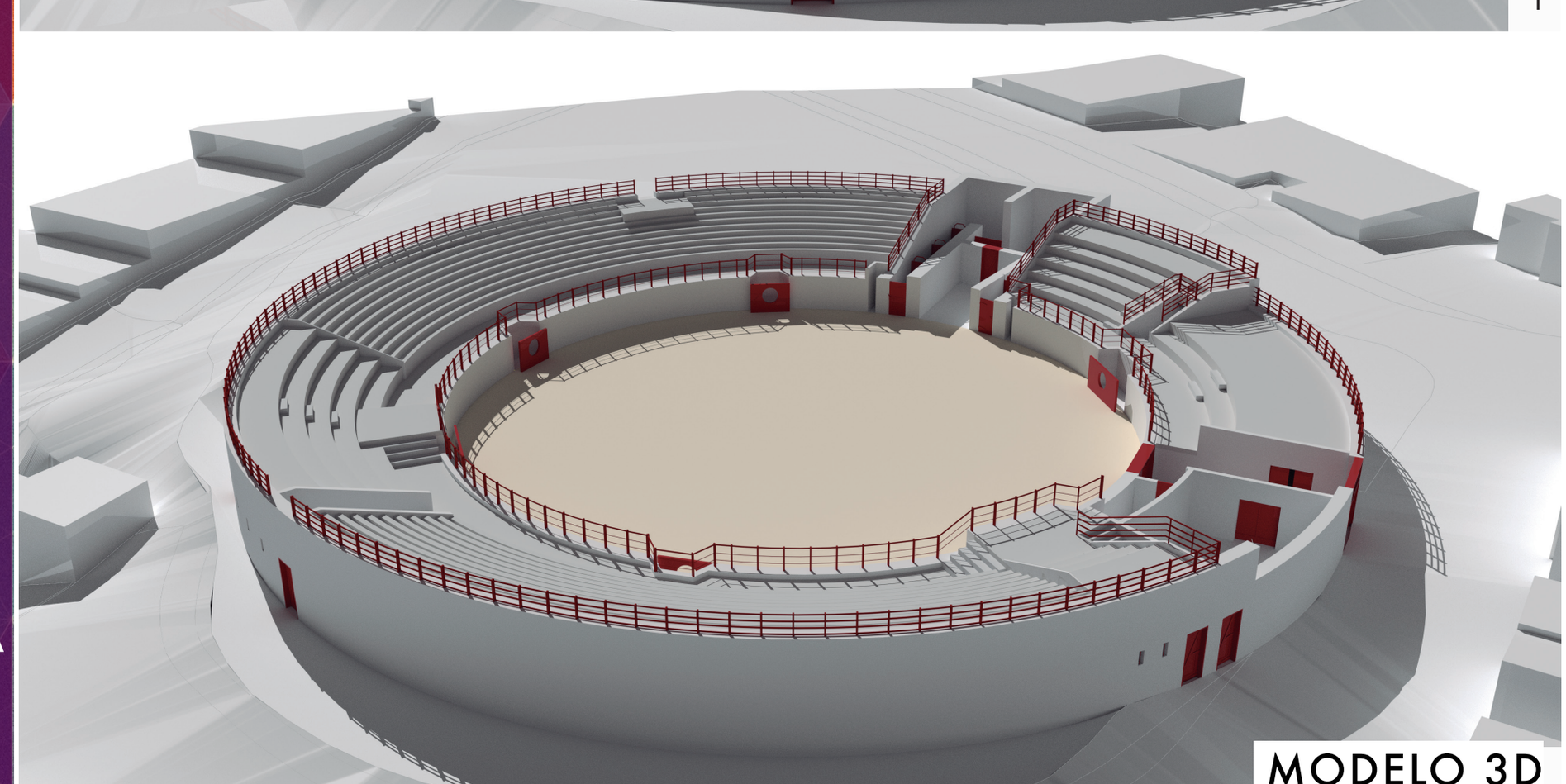

MODELO 3D

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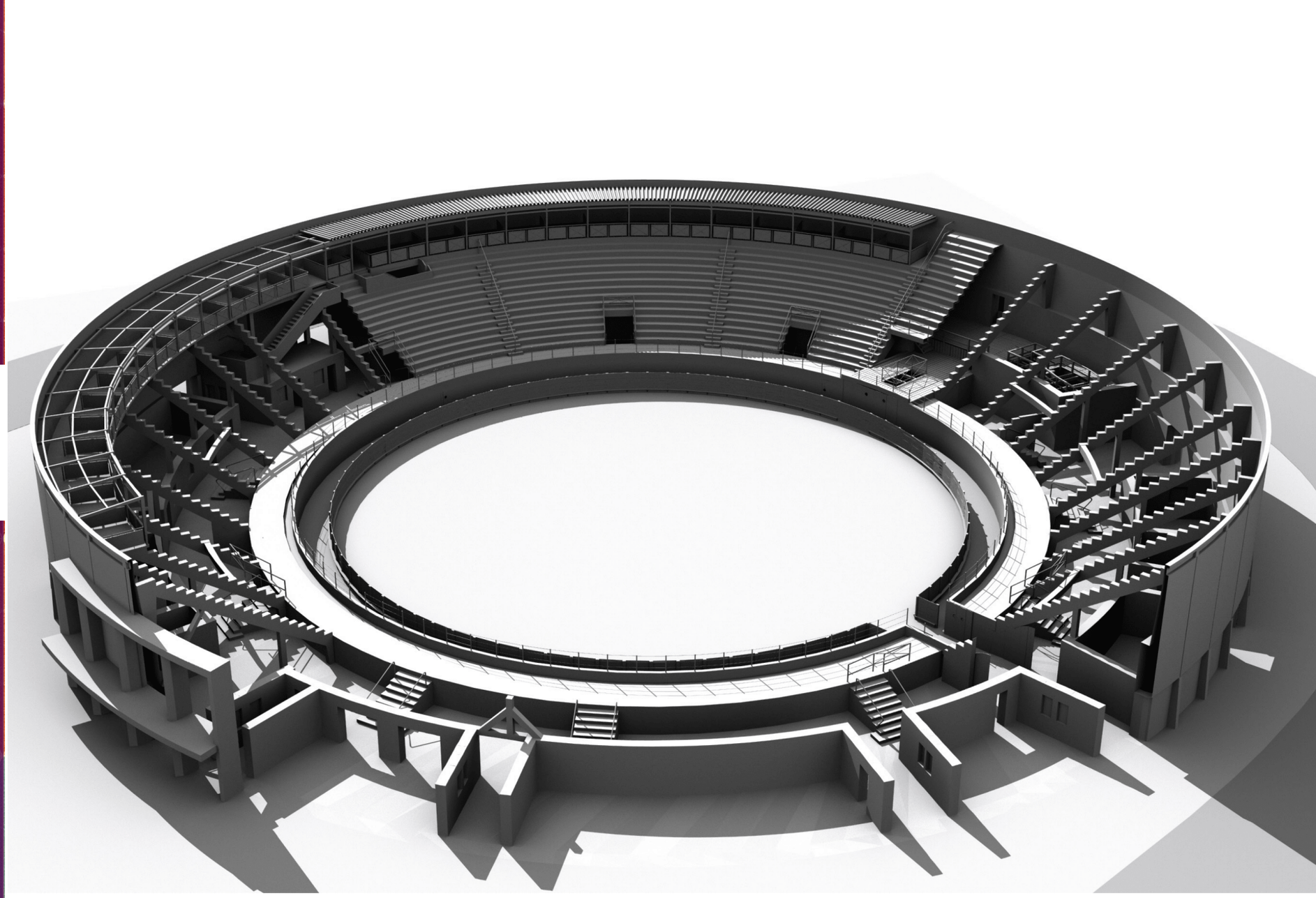

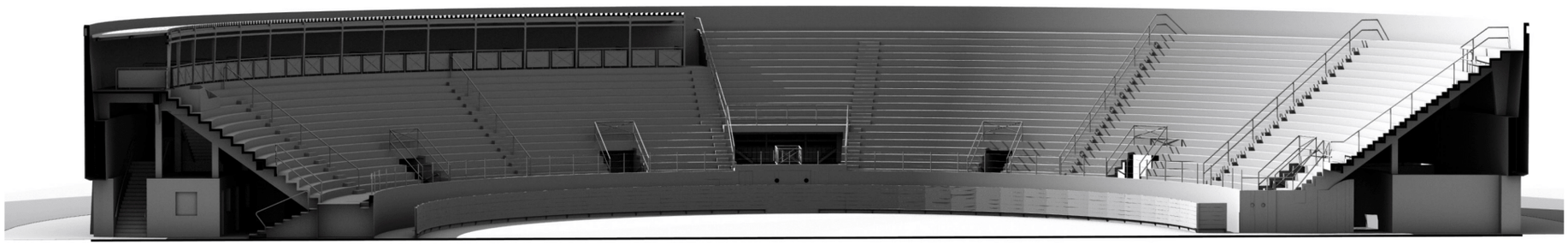

MODELO ANATÓMICO

U LISBOA
UNIVERSIDADE DE LISBOA

FACULDADE DE ARQUITECTURA
UNIVERSIDADE DE LISBOA

ANO LETIVO 2024-2025

MODELAÇÃO GEOMÉTRICA GENERATIVA

generative and geometric modeling

Trabalho de grupo

teamwork

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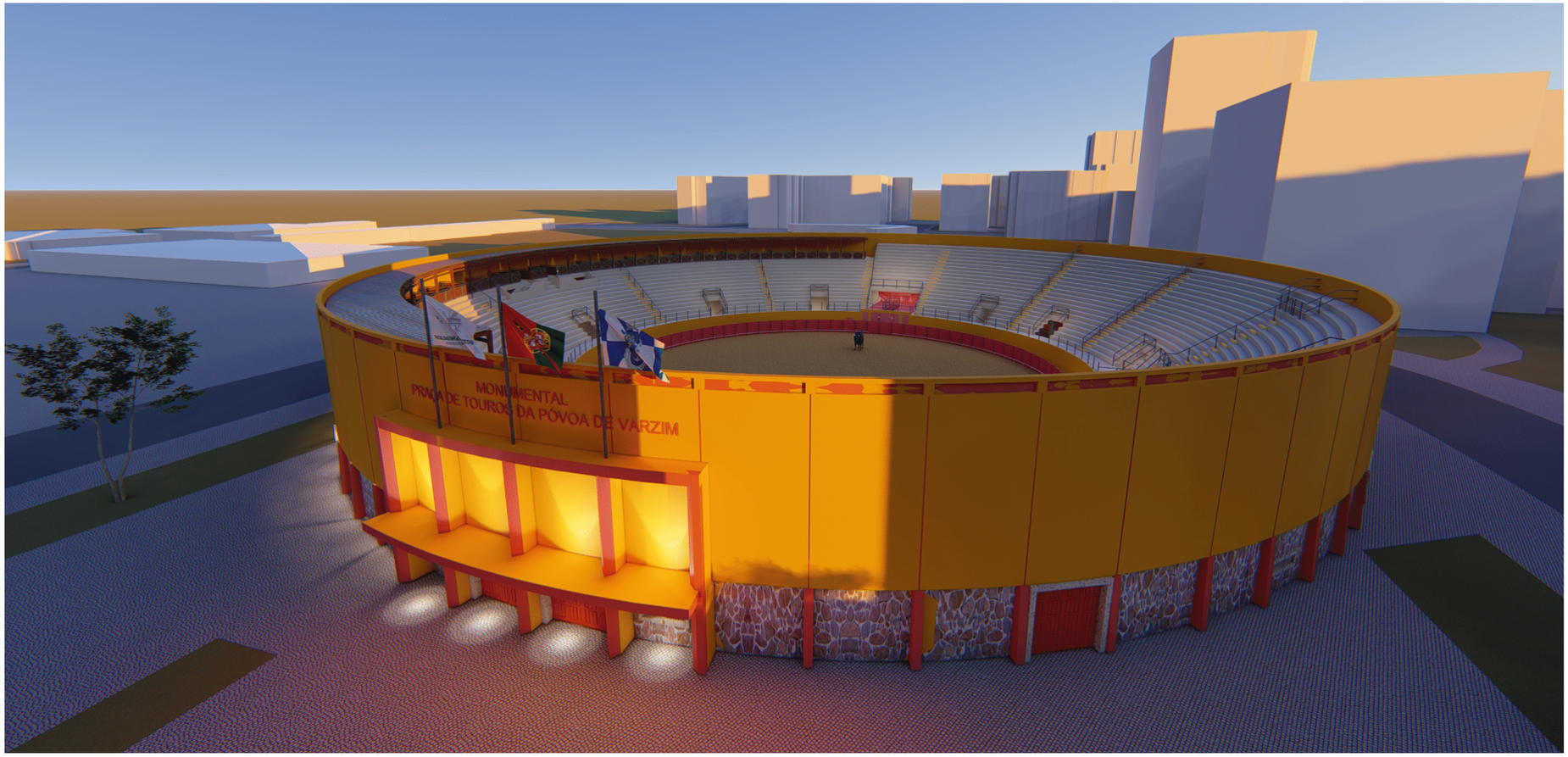

MODELO RENDERIZADO

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UNIVERSIDADE DE LISBOA

ANO LETIVO 2024-2025

MODELAÇÃO GEOMÉTRICA GENERATIVA

generative and geometric modeling

Programas

Hardware and software

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food 4 Rhino WIP
APPS FOR RHINO AND GRASSHOPPER

http://www.rhino3d.com/download/grasshopper/1.0/wip

http://www.food4rhino.com

http://www.food4rhino.com/project/panelingtools

http://www.food4rhino.com/project/lunchbox

http://www.grasshopper3d.com/

http://mac-torrents.com/

http://mactorrent.co/torrents.php









MODELAÇÃO GEOMÉTRICA GENERATIVA

generative and geometric modeling

Entregas

submission of assignments

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ANO LETIVO 2024-2025

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sempre sempre para o email,
através do wetransfer (https://wetransfer.com).

1ª Entrega *1st submission*	**02 março**	até às 22:00	via email
2ª Entrega *2nd submission*	**16 março**	até às 22:00	via email
3ª Entrega *3rd submission*	**30 março**	até às 22:00	via email
4ª Entrega *4th submission*	**13 abril**	até às 22:00	via email
5ª Entrega *5th submission*	**11 maio**	até às 22:00	via email
Entrega FINAL *final submission*	**24 maio**	até às 24:00	via email

januario.mgg@gmail.com