

3D MODELLING AND DESIGN

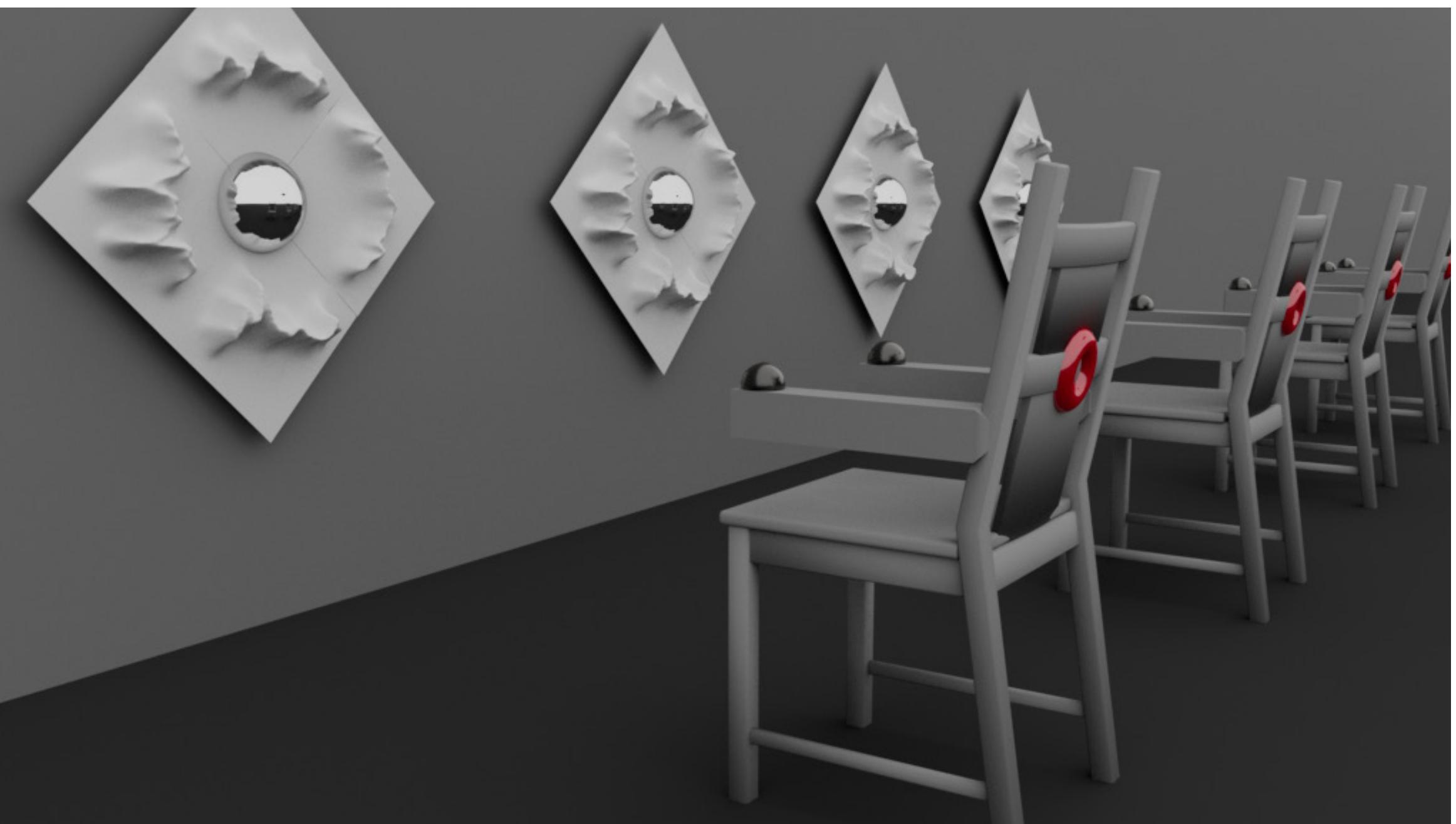
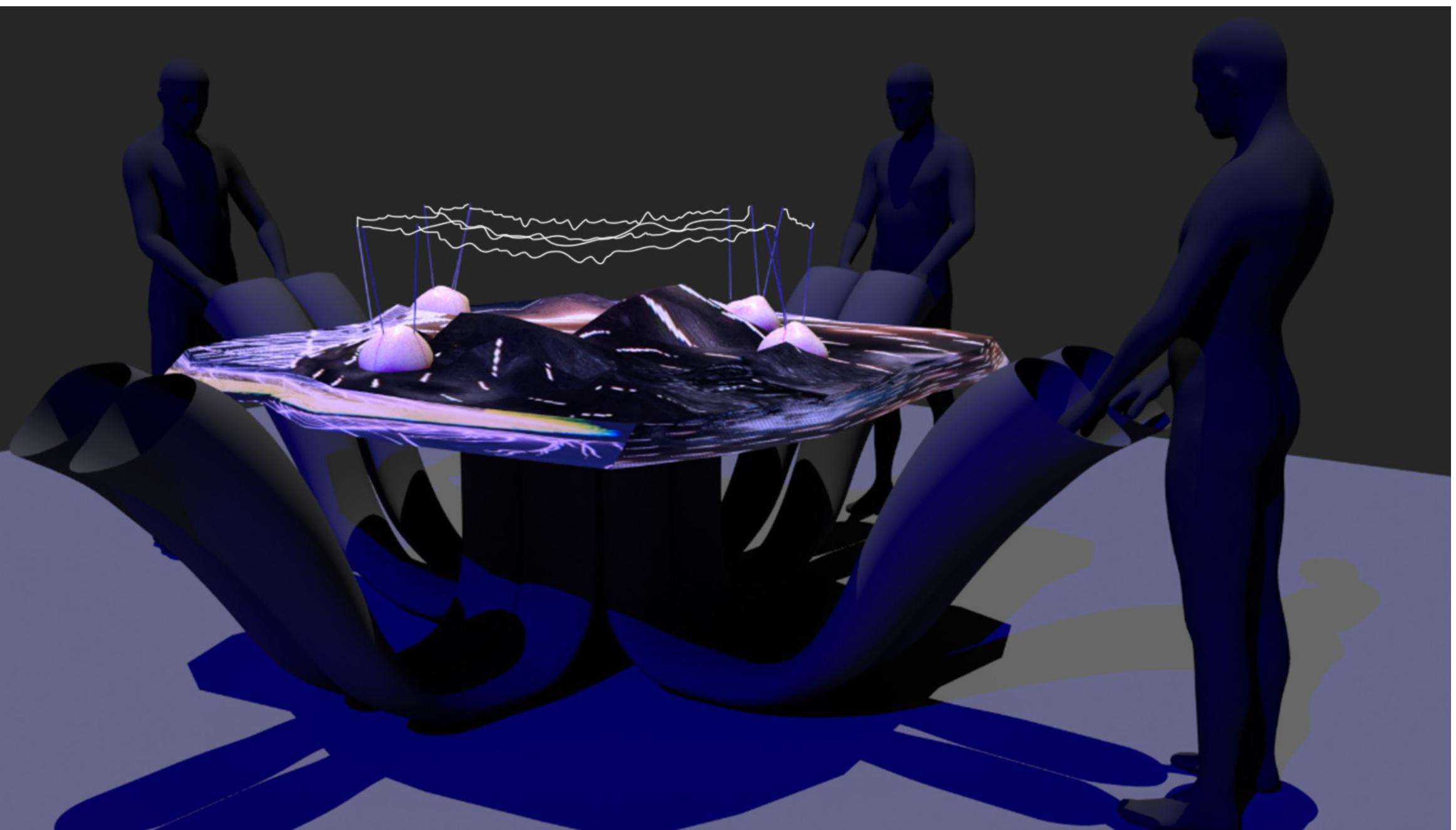
Somatic Interventions sculpture gathers data through sensing interfaces that are housed in long extended tubes. It also produces its internal chemistry based on an artificial-life algorithm. In the act of participation, the biological and artificial chemistries are blended through complex internal state machines and behavioural modules. This group project was developed as fully functioning virtual prototype.

The images show here are developmental stages of designs and application. One of my roles were to model three-dimensional prototypes that were imported into Unity and TouchDesigner for development, testing and documentation. I used Autodesk Maya to model, texture and render these scenes. The wires in top right image were added in post-production with Adobe Photoshop.

Artwork: *Somatic Interventions*, 2021.

Creators: Nick Fox-Gieg, Hrysovalanti Fereniki Maheras, Kieran Maraj, Ilze Briede [Kavi].

Inspiration: "Designs for an Overpopulated Planet: No. 1, Foragers" by Dunne & Raby, 2009.



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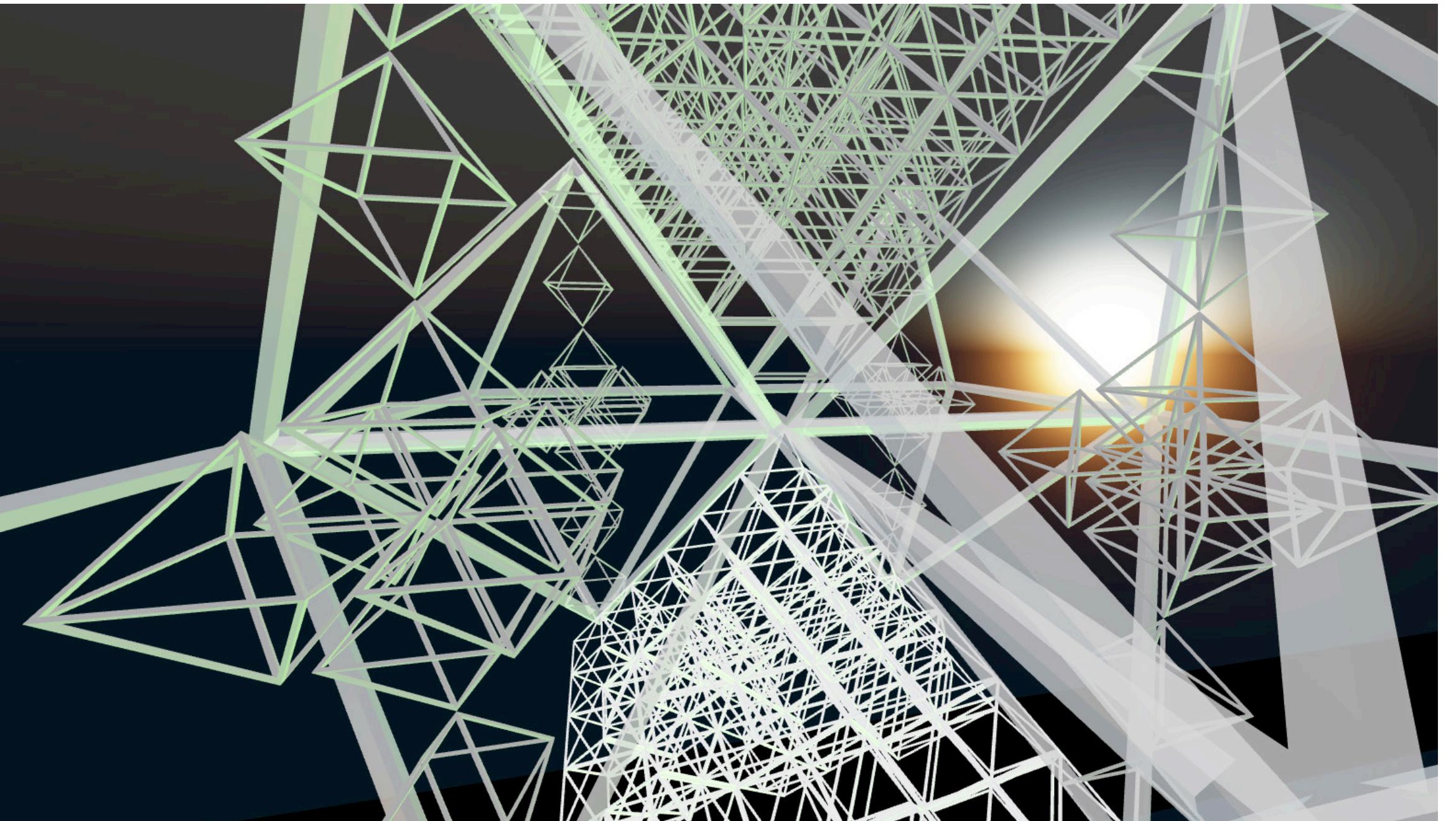
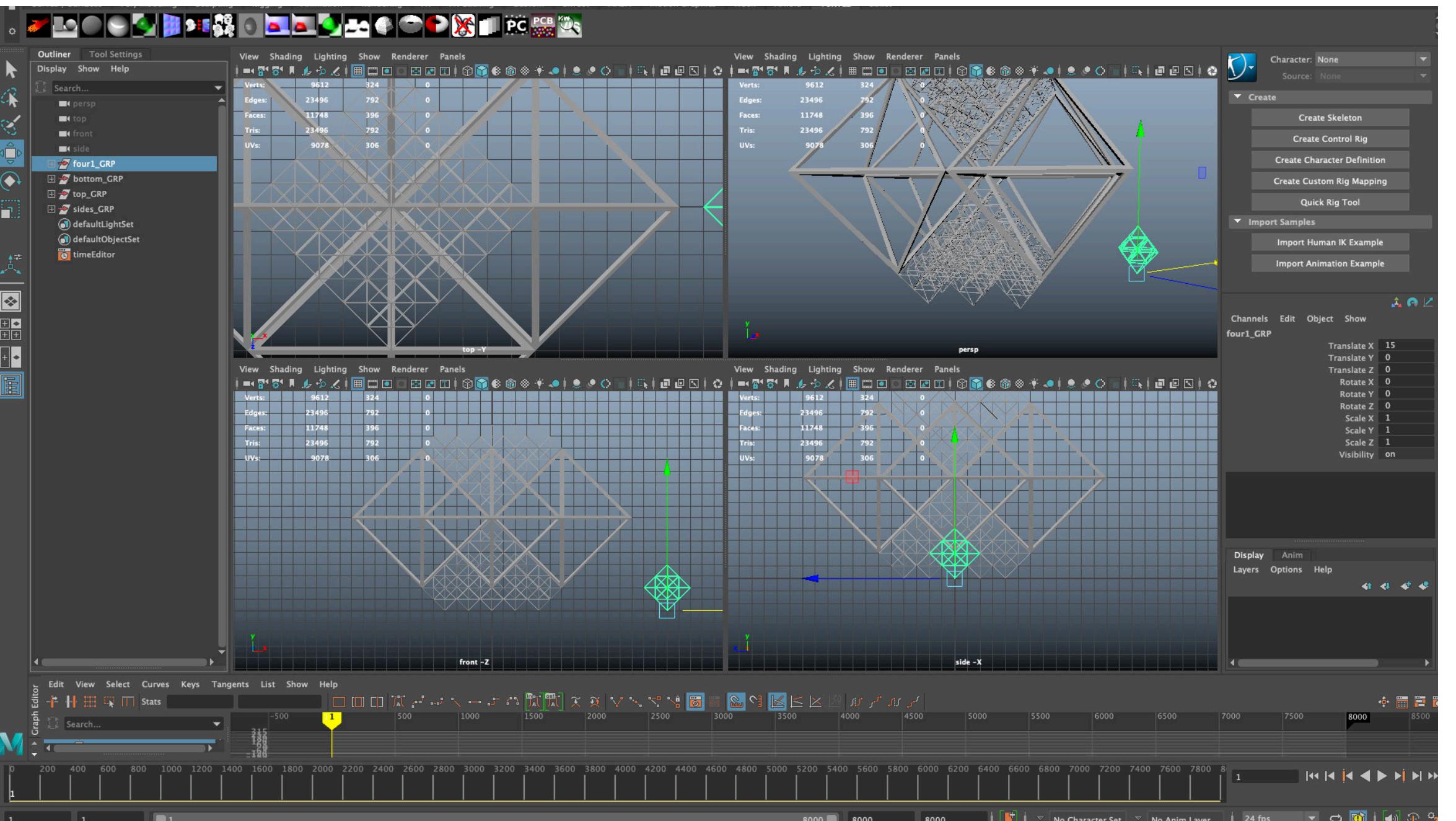
Russian Avant-guard and Bauhaus has always been my inspiration when thinking about unique and experimental structures. So when my collaborator Michael Palumbo and I were invited to create an artwork for the virtual reality group exhibition [Re\[new\]All](#), I saw an opportunity to explore constructions of magnificent scale.

Drawing inspiration from my native cultural background in Latvian folk art and traditions, I modelled a giant “straw mobile” matrix. The scale was purposely exaggerated and invited visitors to fly through and inspect the moving parts of the meshed architecture and hidden soundbites. I built and animated the form inside Autodesk Maya and then finished the scenery using Mozilla Hubs editor. This piece was exhibited virtually, and here is a short [video documentation](#) that showcases all participating artworks.

Artwork: *Grains of Universe*, 2021.

Artists: Michael Palumbo - sound design,
Ilze Briede [Kavi] - 3D form and animation.

Inspiration: Konrad Wachsmann, perspective drawings of twisted net, 1950-51.



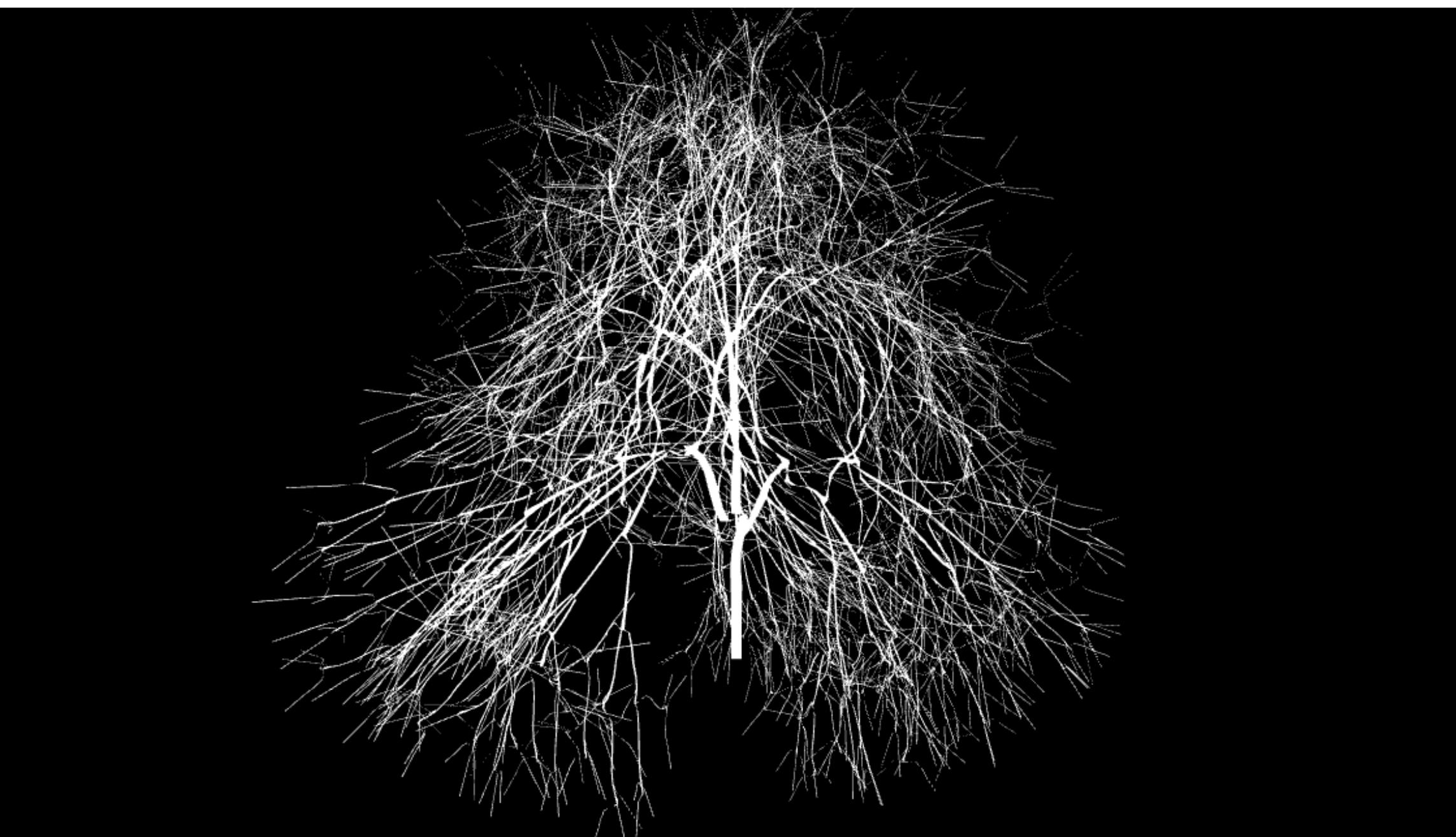
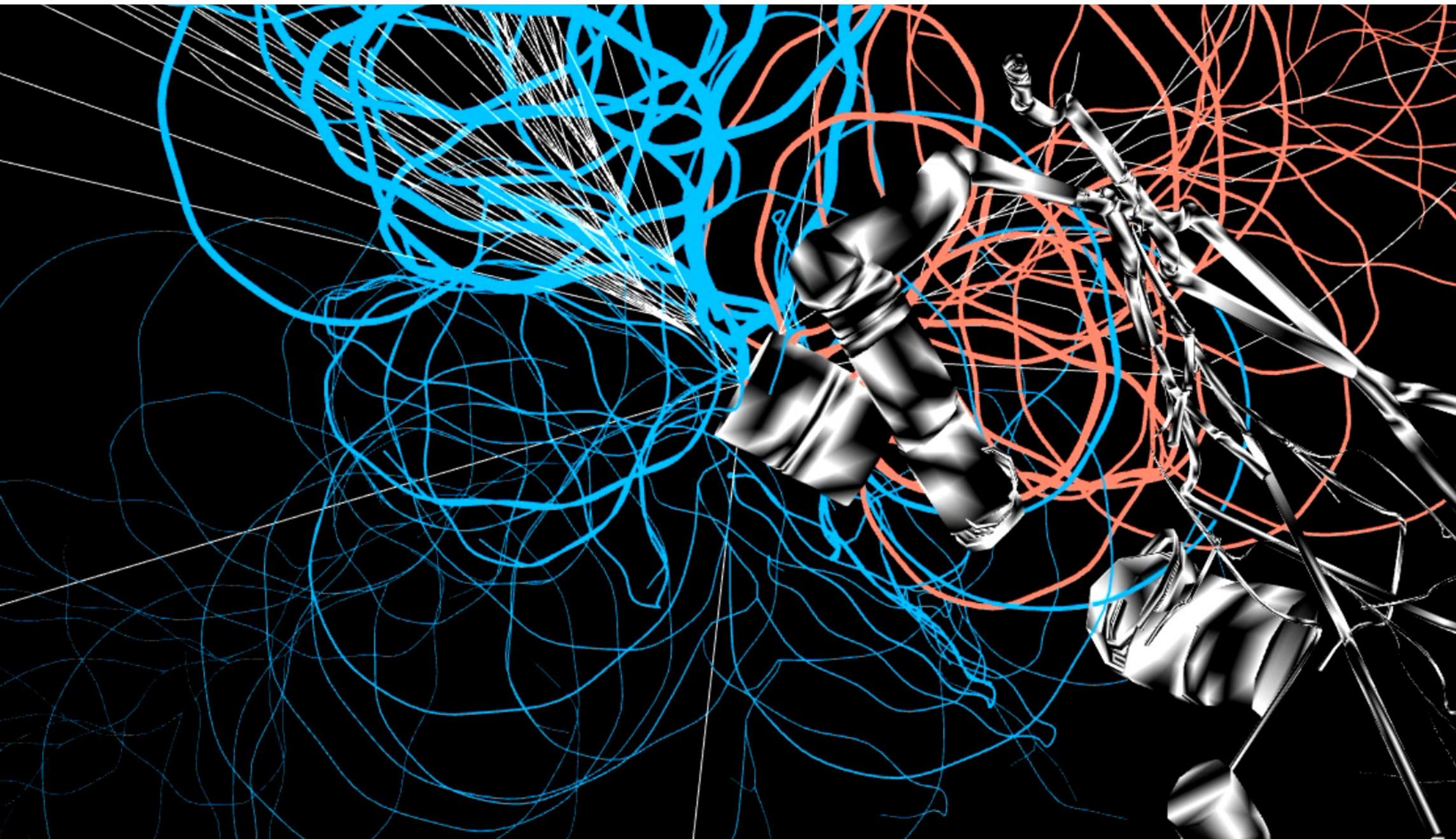
PROCEDURAL MODELLING

Volatile Bodies is an experiential artwork that explores data mapping and sharing. This piece gathers two separate and unique data streams in singular 3-dimensional cartesian space and maps them into different geometric bodies. Multiple streams of different biometric data are readily implemented in interactive sculpture as live variables that influence and drive its behaviour.

These sketches showcase studies and experiments in 3D modelling with L-Systems in TouchDesigner. L-Systems is a codec of rules defining evolutionary traits in any growing and evolving natural or artificial system. My goal was to create a living and breathing sculpture entirely driven by data. I used environmental and biological heart data to shape the behaviour and complexity of this digital piece. The final artwork and [complete documentation](#) is hosted on the SLO Research Lab website.

Artwork: *Volatile Bodies*, 2021.
Artist: Ilze Briede [Kavi]

Inspiration: nature.



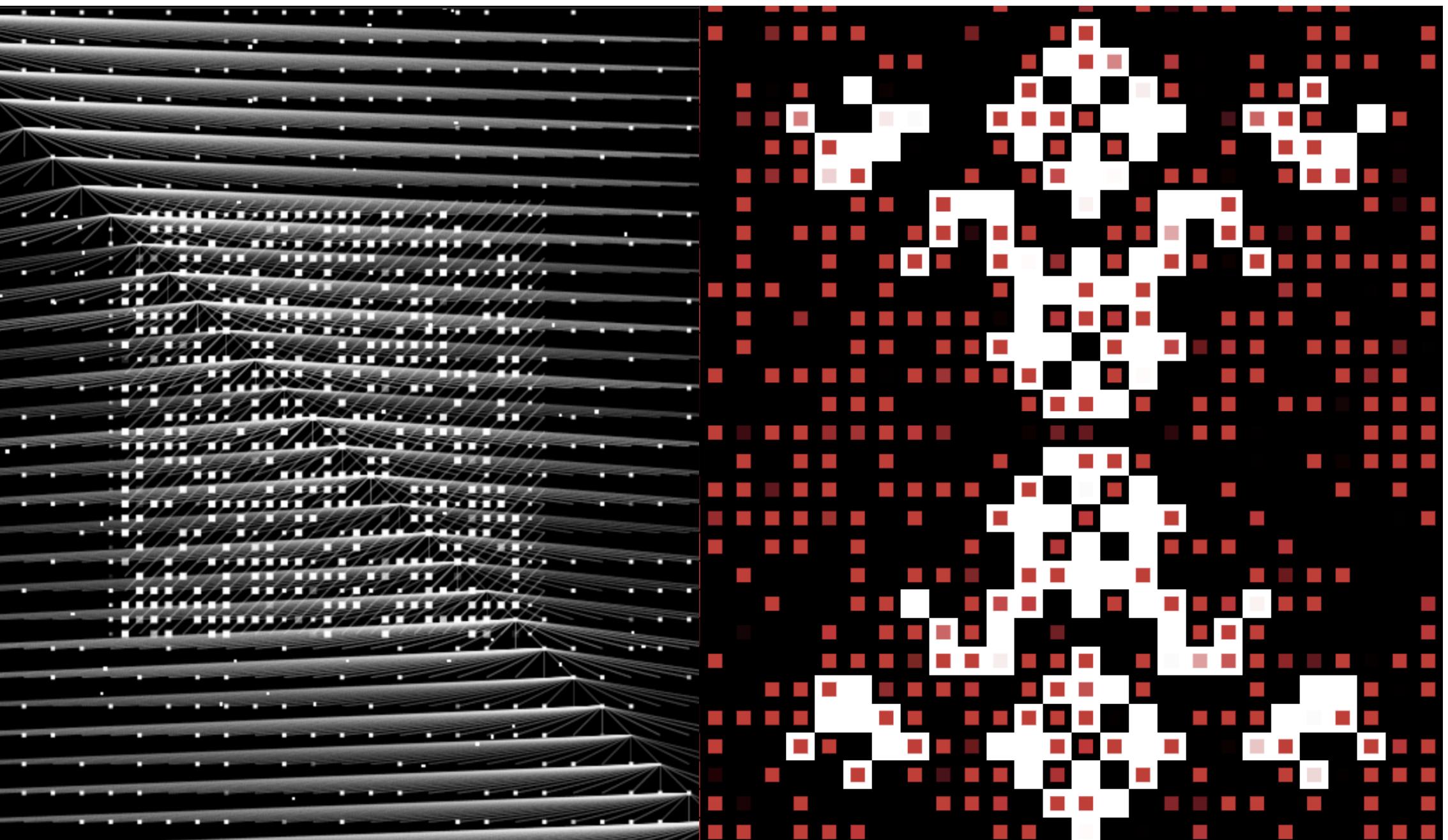
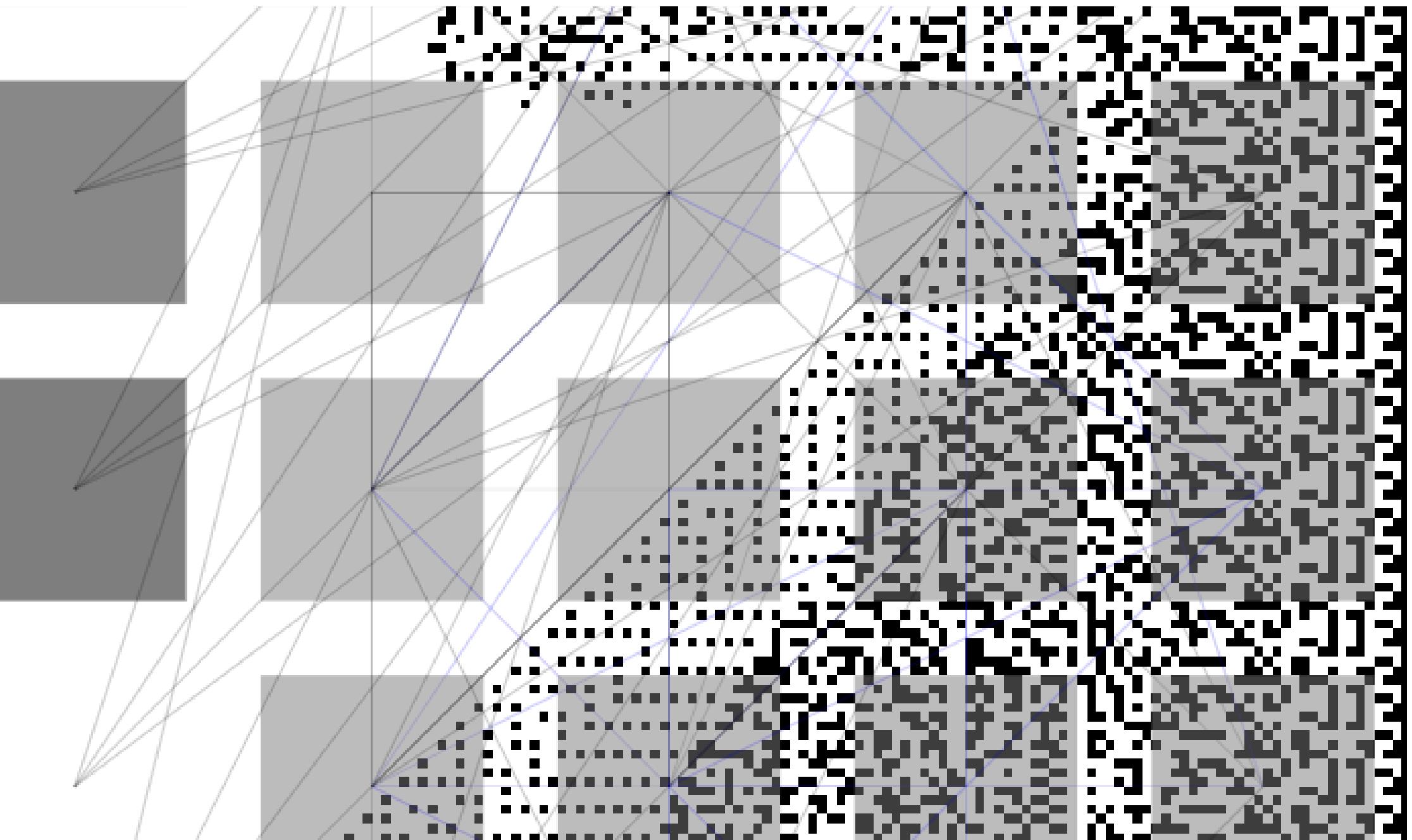
CODING AND ALGORITHMS

I am enthusiastic about programming, and I code for art's sake. Programming to me is like sculpting with language, exceedingly hard but opening doors to unique literacy of visual expressions.

These images are snippets of my JavaScript sketches that I produced when taking the A-Life course taught by prof. Graham Wakefield at York University. Each of these examples house two unique algorithms inside one code structure: neural network and cellular automaton. The straight lines and red pixels represent neural networks visualised and animated, the rest is a netting of living and dying pixels in John Horton Conway's famous algorithm 'Game of Life'. In simple terms, these are artificial lifeforms that dance and share their moments of lifespan in pixelated universes. Each sketch can be visited at:

- <https://codepen.io/Ka-Vi/pen/NWRbNJR>
- <https://codepen.io/Ka-Vi/pen/oNzxOBE>
- <https://codepen.io/Ka-Vi/pen/jOMqaQo>

Inspiration: mathematics.



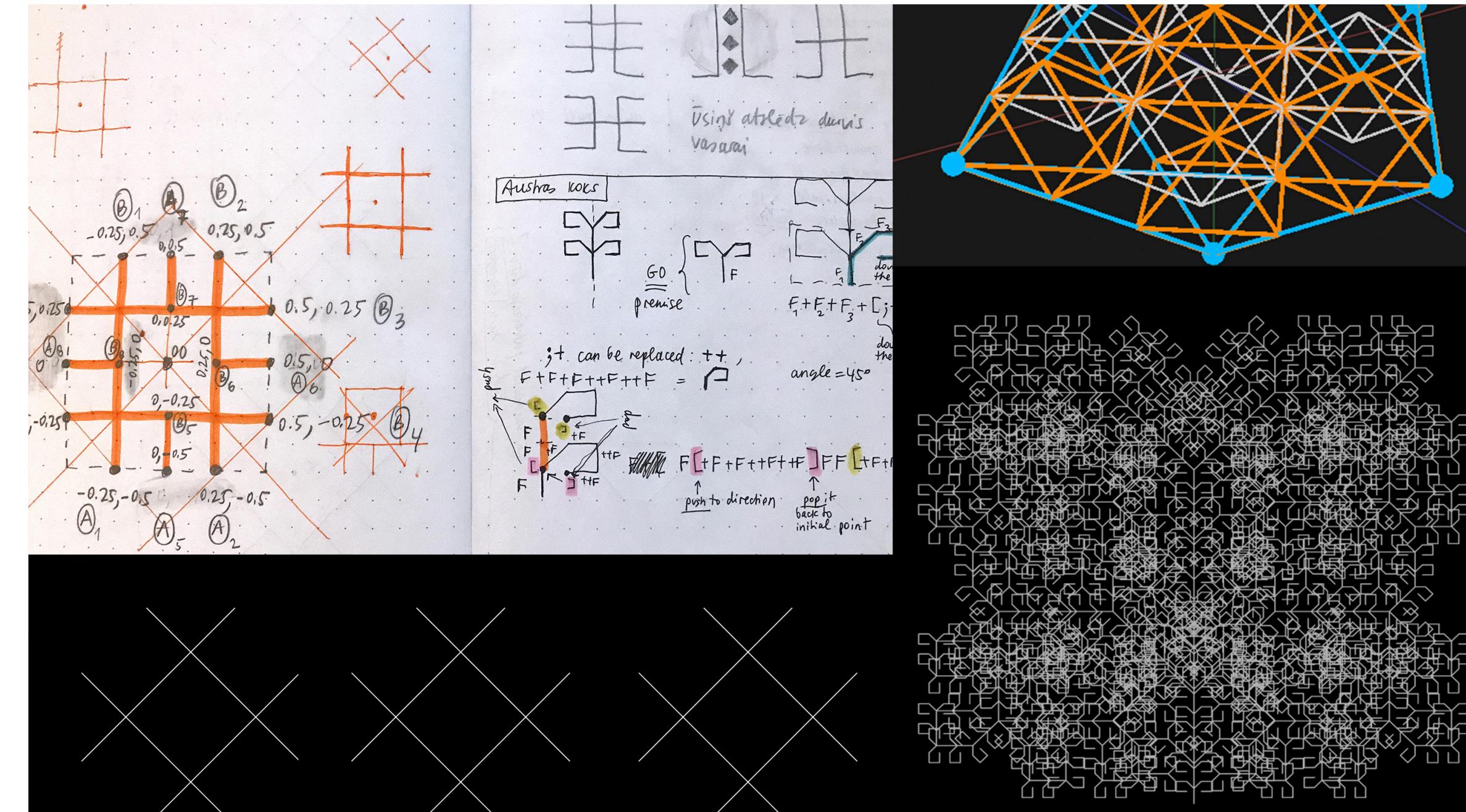
GENERATIVE PATTERNS

Patterns has always fascinated me and the history of their origins. My artistic research spans across traditional folk ornament, patterns found in nature and computer generated forms and algorythms.

These images show the process of calculating mathematical proportions and rules on the paper and then re-creating these dynamic systems with computer.

I am a frequent collaborator with musicians and performers, and my work is frequently a part of the visual design. This capture is a still from audio/visual performance with Toronto duo 'Bad Gateway' (Danny Shaddick & Ryan Hays), curated and presented by ponyHAUS via Twitch. Our set is towards the end in this [video](#) capture.

Inspiration: Latvian folk signs and Berghain (Berlin).



VIDEO PROJECTION MAPPING

Since obtaining my personal computer in 2006, I started immediately learning video editing and became a VJ. I honed my video mixing skills in Resolume software through numerous raves and electronic music gigs in Dublin.

During my academic years in the UK (2009 - 2013), I was introduced to theatre through commissioned work as a video projection artist. Later, I was invited to teach this art form to university set design students, contributing and expanding the traditional curriculum taught in stage design.

I have continued to work with video projection mapping up to this day. These images show some of my previous video mapping and projection works. Top image: projections for a theatre play *The Brothers Grimm Stories*, UK 2014. Bottom image: Collaboration with filmmaker Peter Lynch, *Do Carps Dream?* at City Moments. Video projections on a Raincoat prototype at Sidewalk Toronto labs.

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Inspiration: HC Gilje and Bauhaus theatre.



SCULPTURE AND MATERIALS

I am very passionate about exploring the physicality and properties of different materials. The top left image shows one of my installation pieces, a video projected on a concave mirror plate that becomes a reflected light sculpture on the wall. I exhibited this piece at SPG Gallery, York University, in 2018.

The top right image (photo by Peter Nguyen) is of a VHS dress that I hand crocheted. It was exhibited on the catwalk stage for Mont Pellier and Thread x Thread fashion event, bringing awareness about sustainable fashion and couture made of upcycled materials. This dress was also featured in a fashion photoshoot with model Michaela Zinsmeister and hairstylist Peter Gray.

The bottom image is a wall-mounted light and plaster sculpture that was cast on top of the terra cotta bricks. The hollow brick impressions became housing for lightbulbs illuminating beautiful artefacts of broken plaster and embedded earthy colours and tints.

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Inspiration: Olafur Eliason, Ruth Asawa and Peter Agostini.

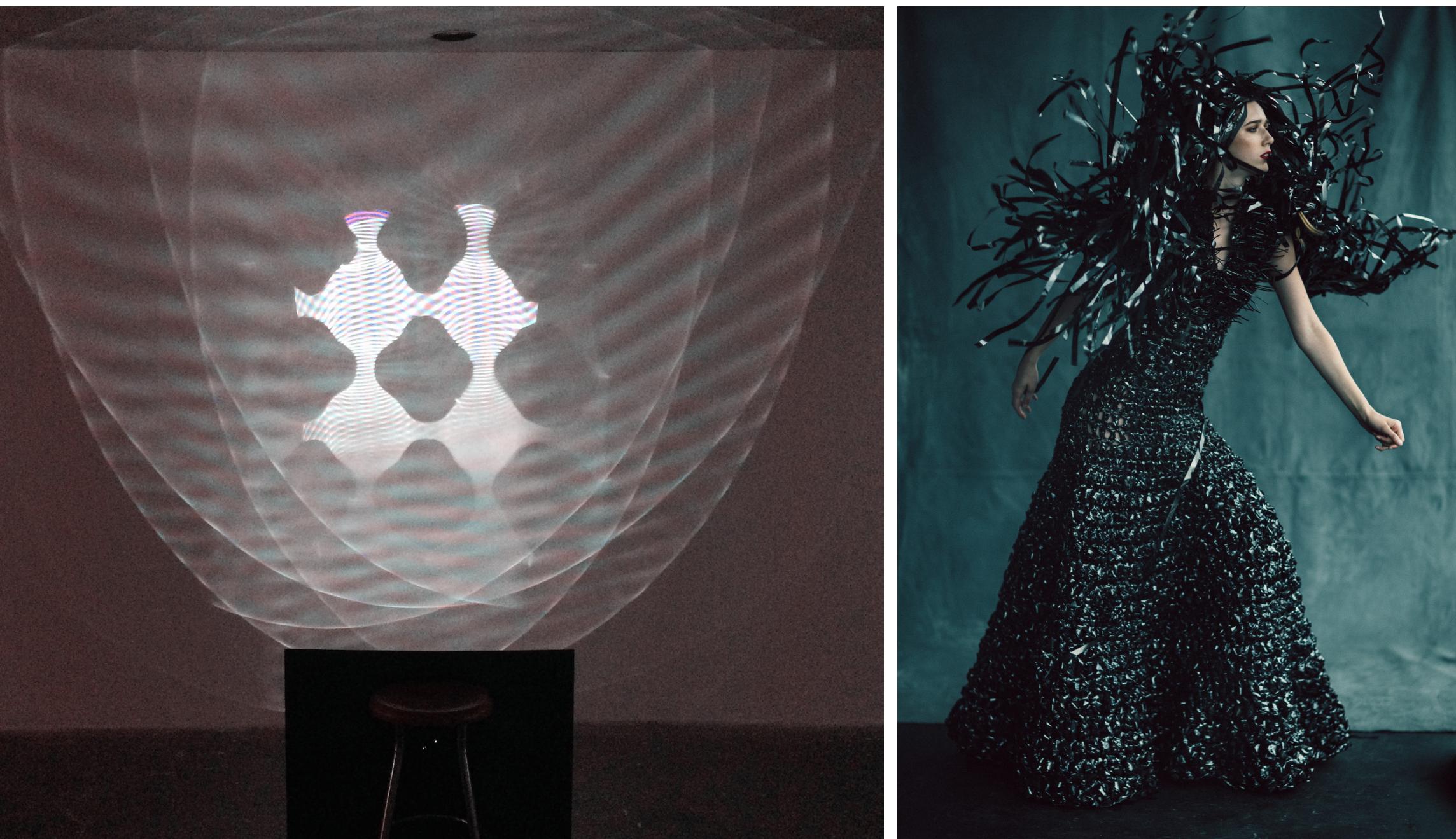
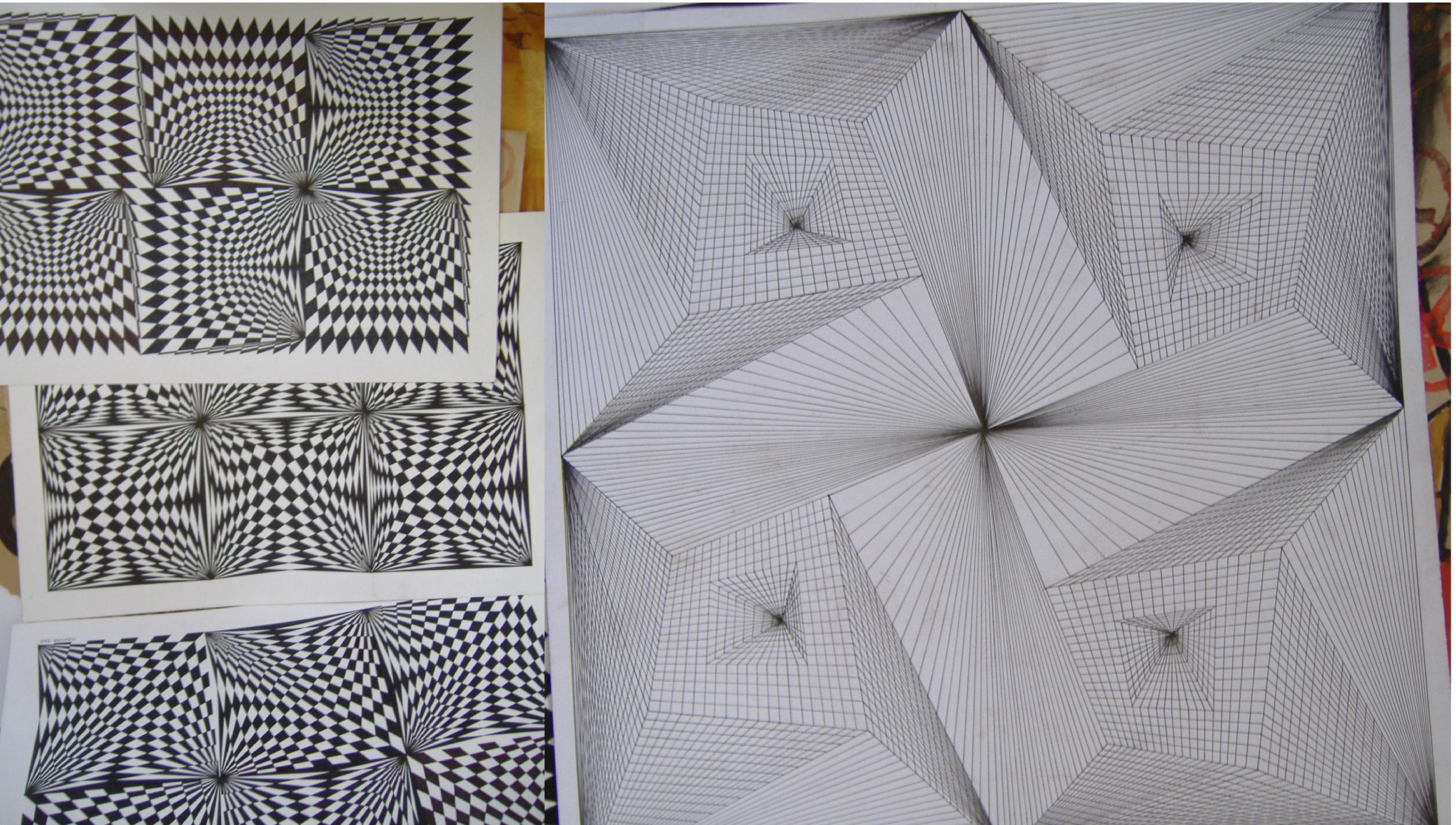


ILLUSTRATION / PAINTING

When I was doing my first undergrad degree in Latvian University modern languages faculty, I went to the dean with a proposal to repaint the walls. At that time, the walls were covered with Soviet inspired imagery that was dark in colour and outdated. I created series of geometric drawings inspired by Vasarely's opart and repetition pattern. To my surprise, my idea was received with support and soon enough I embarked on a six months journey to repaint my faculty's two floor staircases. These images show some of my initial sketches with black ink and finished painted wall.



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Thank you for taking the time to review my work!

