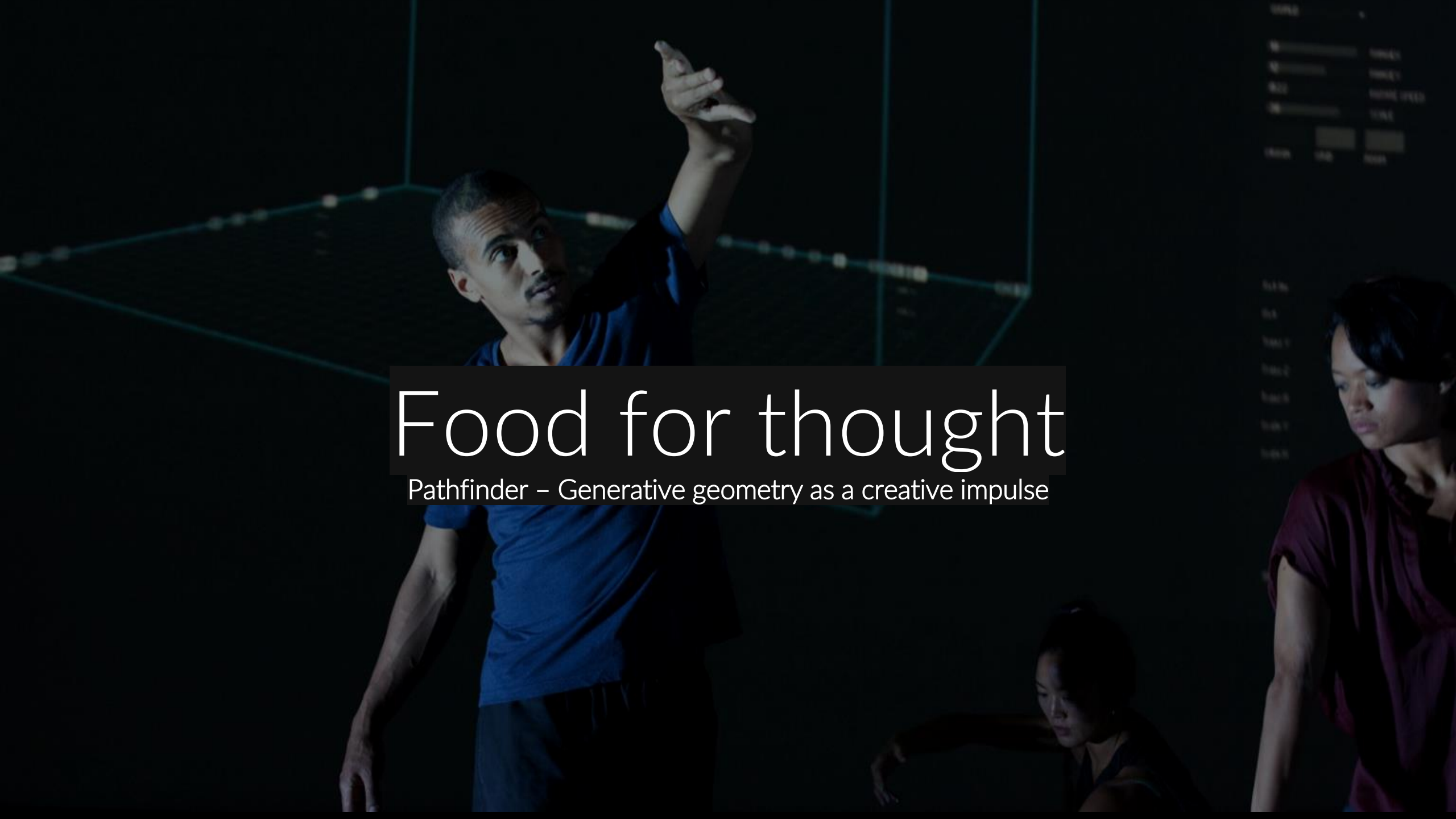
Week 2 - Automatons

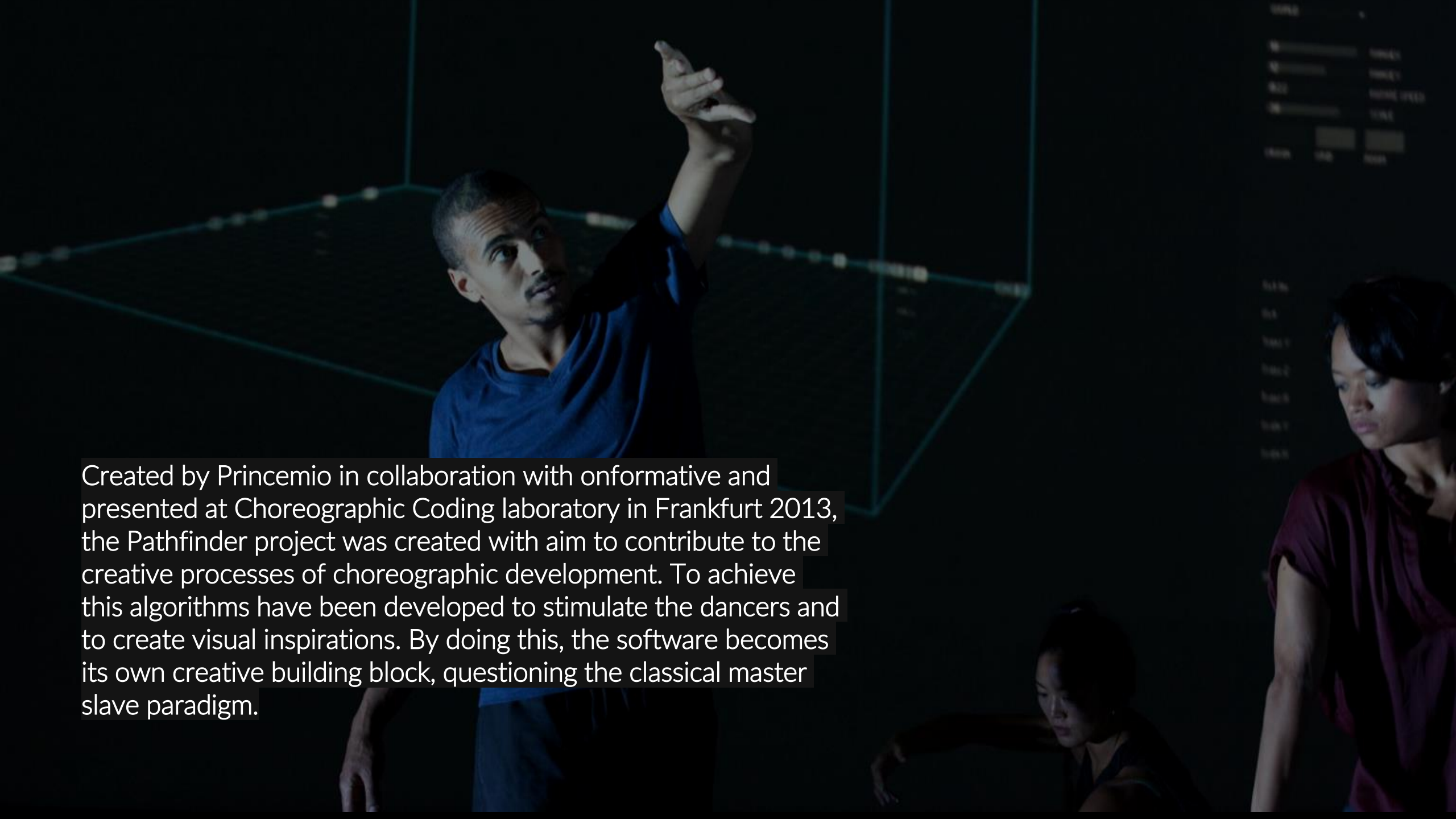
VA345 Creative Coding

Course Instructor : Assoc. Prof. Dr. Selcuk ARTUT

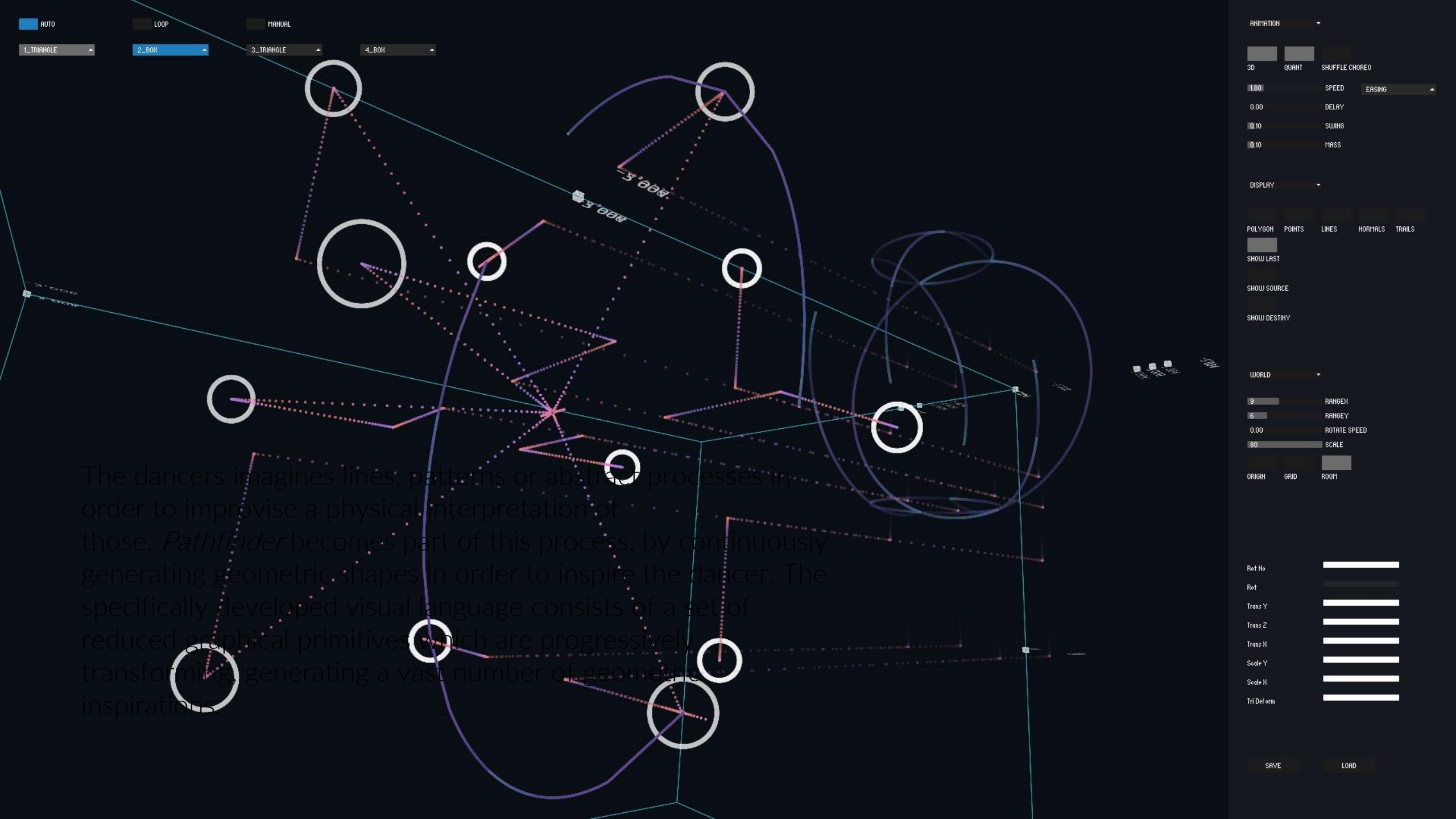


Food for thought

Pathfinder – Generative geometry as a creative impulse



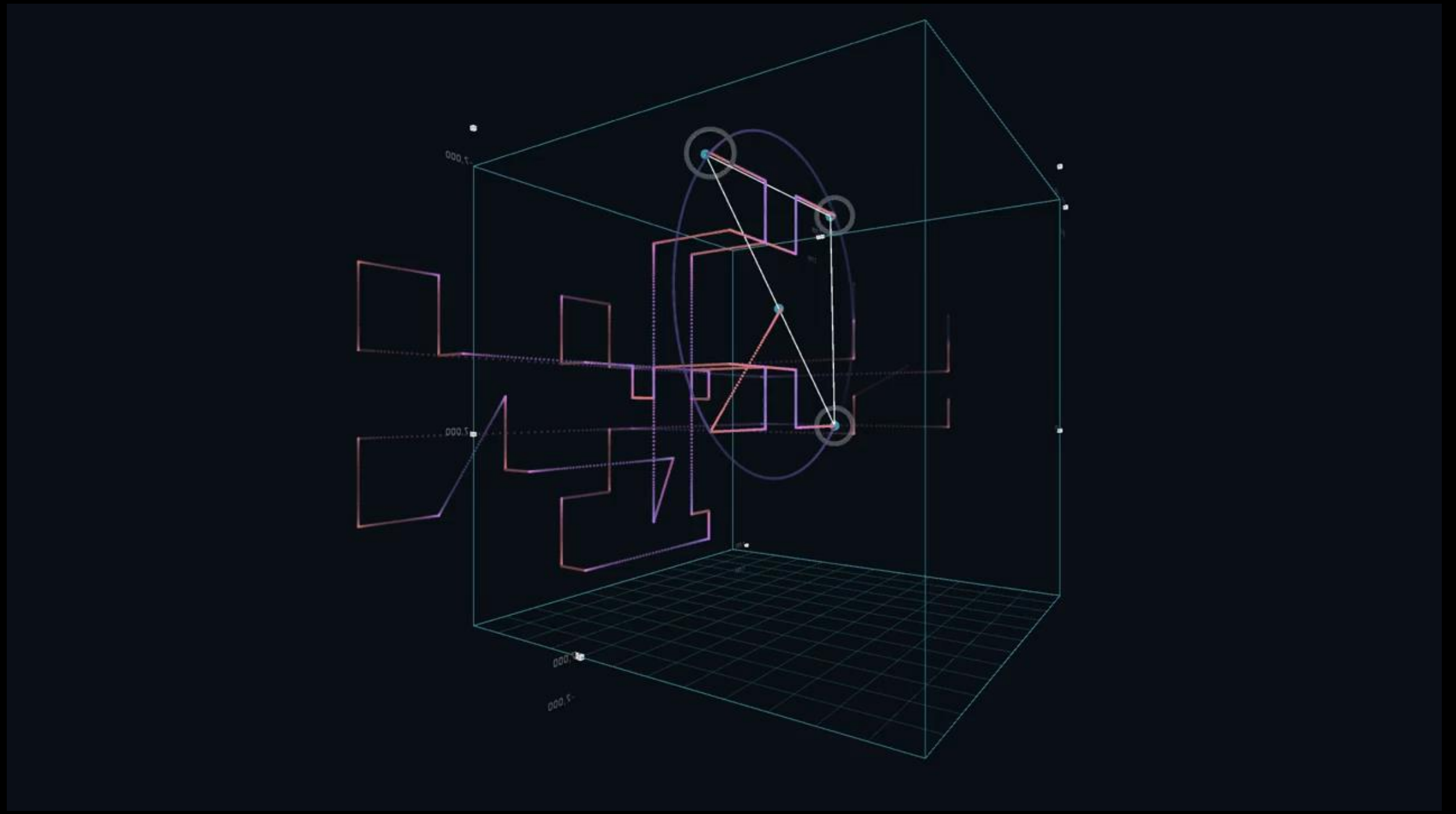
Created by Princemio in collaboration with onformative and presented at Choreographic Coding laboratory in Frankfurt 2013, the Pathfinder project was created with aim to contribute to the creative processes of choreographic development. To achieve this algorithms have been developed to stimulate the dancers and to create visual inspirations. By doing this, the software becomes its own creative building block, questioning the classical master slave paradigm.



The dancers imagines lines, patterns or abstract processes in order to improvise a physical interpretation of those. *Pathfinder* becomes part of this process, by continuously generating geometric shapes in order to inspire the dancer. The specifically developed visual language consists of a set of reduced graphical primitives, which are progressively transforming, generating a vast number of geometries as inspiration.

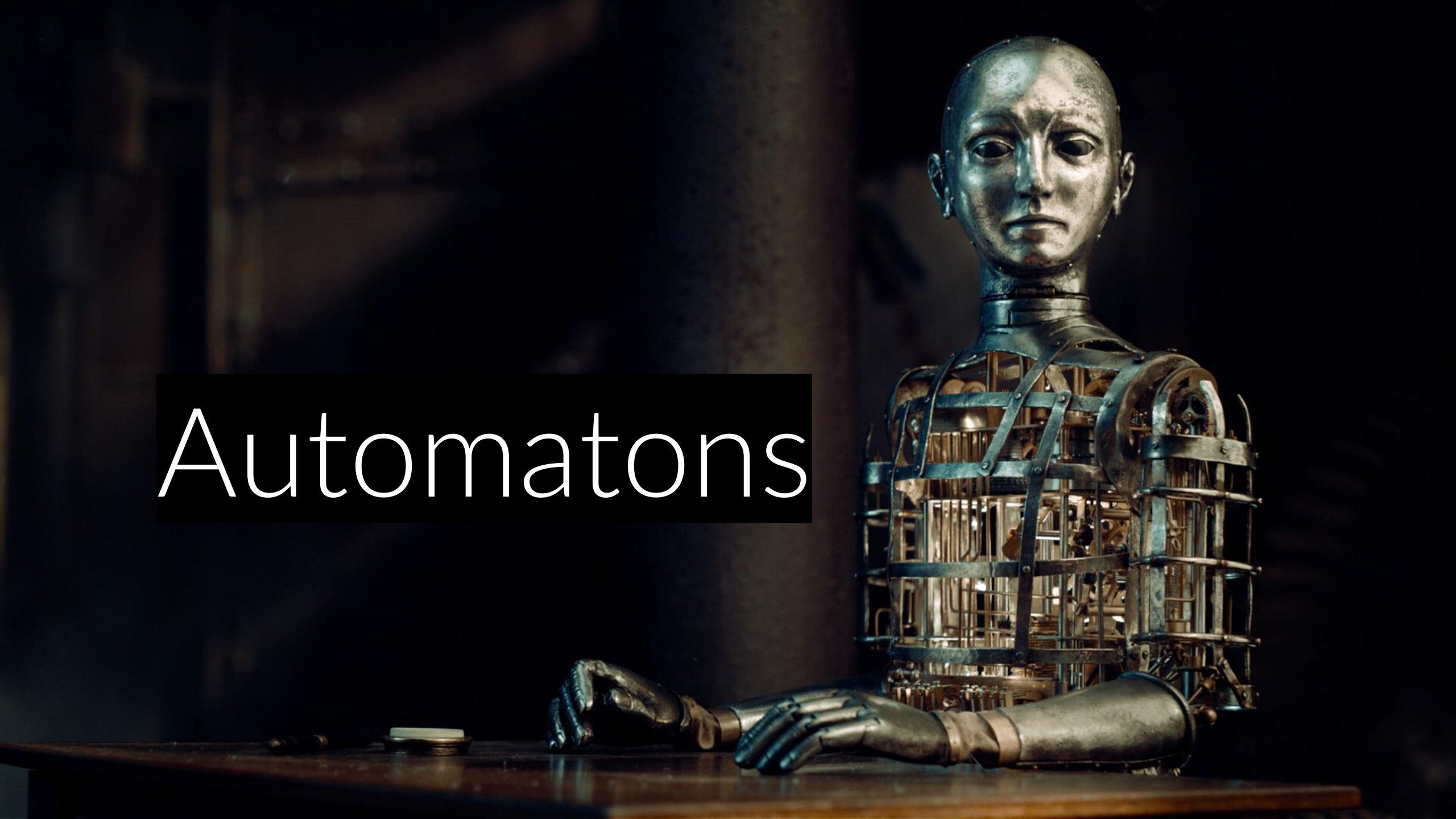
AUTO
LOOP
MANUAL
1_BOX
2_TRIANGLE
3_PLATE
4_TRIANGLE
ANIMATION
3D
QUANT
SHUFFLE CHOREO
1.80
SPEED
EASING
0.00
DELAY
0.10
SWING
0.10
MASS
DISPLAY
POLYGON
POINTS
LINES
NORMALS
TRAILS
SHOW LAST
SHOW SOURCE
SHOW DESTINY
WORLD
9
RANGEX
6
RANGEY
0.00
ROTATE SPEED
60
SCALE
ORIGIN
GRID
ROOM
Rot No
Rot
Trans Y
Trans Z
Trans X
Scale Y
Scale X
Tri Deform
SAVE
LOAD

This system was developed in collaboration with onformative, using primarily Processing incl. toxiclibs, he_mesh library, controlp5 and oscP5. For choreographic consultancy and scientific insight into the field of contemporary dance, the team collaborated with Raphael Hillebrand. The project was finalised and presented at choreographic coding. Together with partners like the NODE Forum for Digital Arts, the project offers unique opportunities of exchange and collaboration – for digital artists who apply choreographic thinking to their own practice.



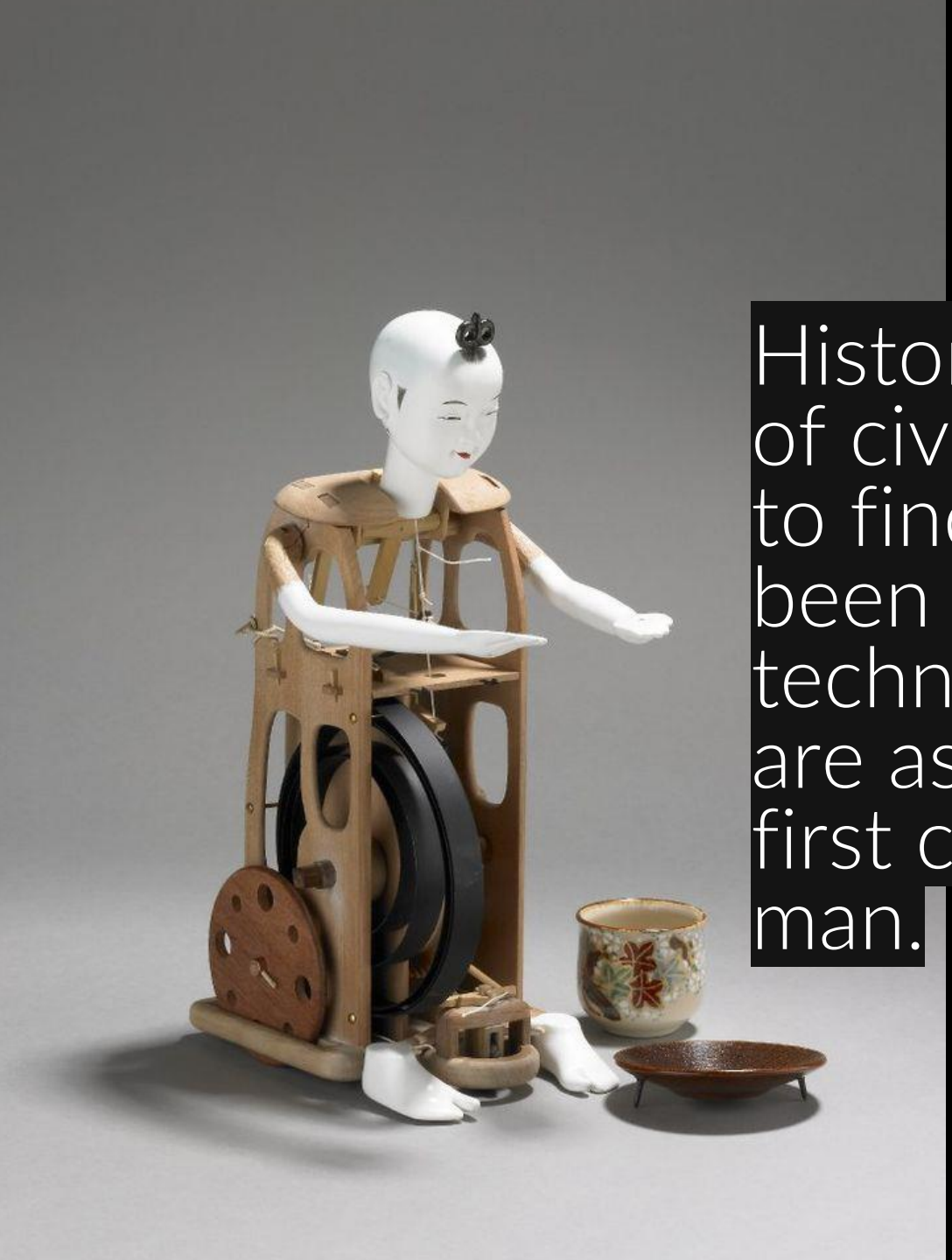
P A T H F I N D E R

a visual language to generate choreography


Automatons

An automaton : automata or automatons) is a self-operating machine, or a machine or control mechanism designed to automatically follow a predetermined sequence of operations, or respond to predetermined instructions.

wikipedia



History is full of correlated works of civilizations. It is very difficult to find the traces of who had been responsible for pioneering a technological life. Automatons are assumed to be one of the first complex machines built by man.

SWITZERLAND

Jaquet-Droz

Pierre Jaquet-Droz (1721–1790) was a Swiss-born watchmaker of the late eighteenth century. He lived in Paris, London, and Geneva, where he designed and built animated dolls, or automata, to help his firm sell watches and mechanical birds.

wikipedia

https://www.youtube.com/watch?v=YNQf9Tzcd

Japan

Baghdad

Al-Jazari's Floating Orchestra

In the 12th and 13th centuries, Arabic polymath Al-Jazari designed and built some of the Islamic Golden Age's most astounding mechanical creations. He invented a mechanized wine-servant, water-powered clocks and even a hand-washing machine that automatically offered soap and towels to its user.

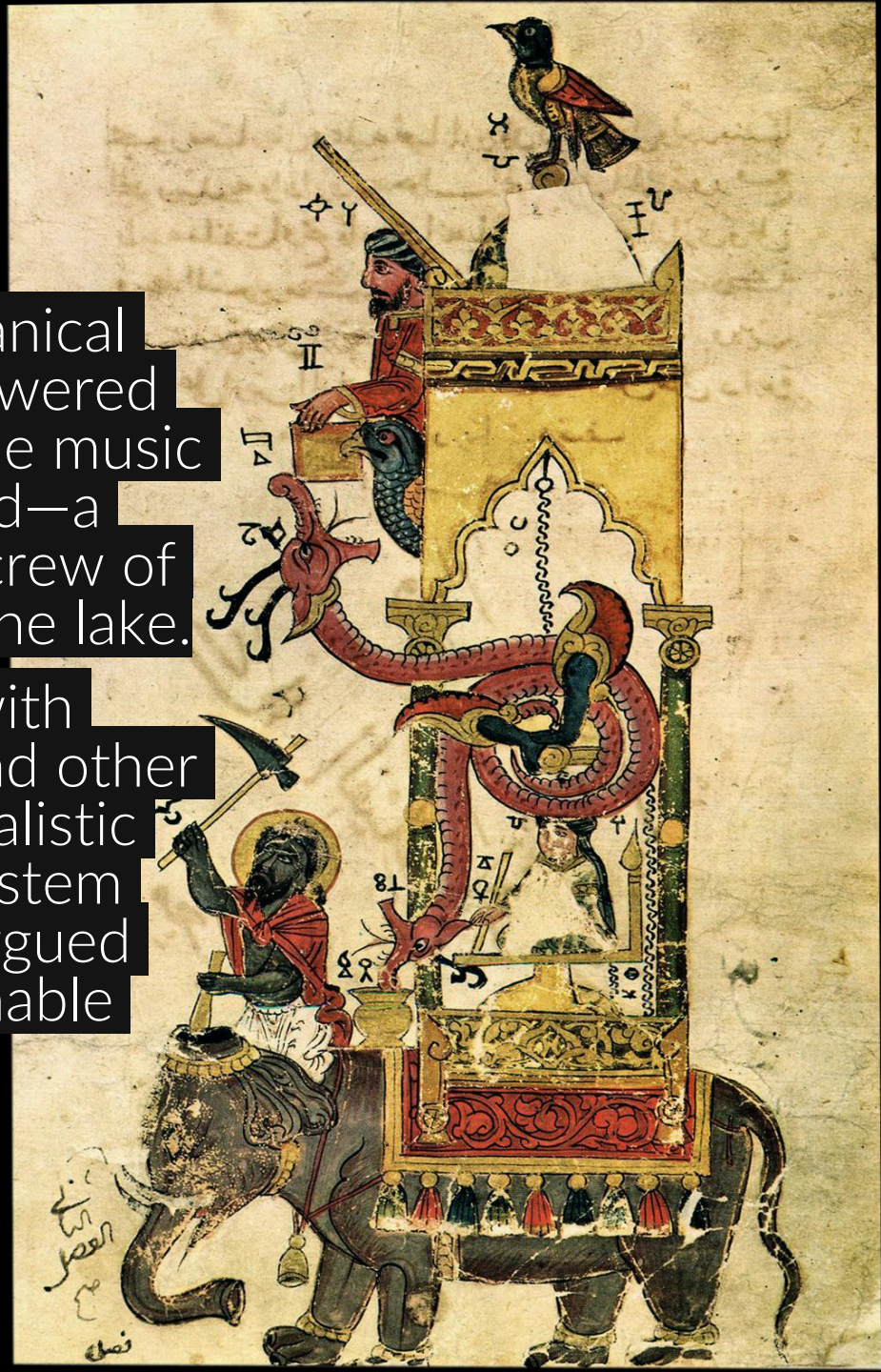
http://www.history.com/news/history-lists/7-early-robots-and-automatons

Al-Jazari

According to his “Book of Knowledge of Ingenious Mechanical Devices,” published in 1206, he also designed a water-powered automaton orchestra that could float on a lake and provide music during parties. The contraption included a four-piece band—a harpist, a flautist and two drummers—accompanied by a crew of mechanical oarsman who “rowed” the musicians around the lake.

The waterborne orchestra operated via a rotating drum with pegs that triggered levers to produce different sounds, and other elements allowed the musicians and crewmen to make realistic body movements. Since the pegs on the rotating drum system could be replaced to create different songs, some have argued Al-Jazari’s robot band was one of history’s first programmable computers.

http://www.history.com/news/history-lists/7-early-robots-and-automatons

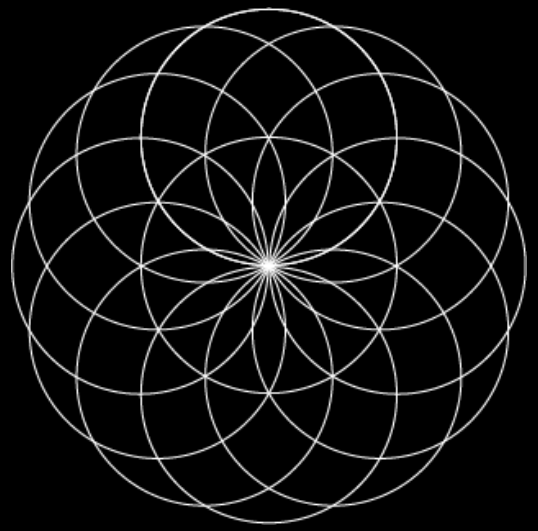


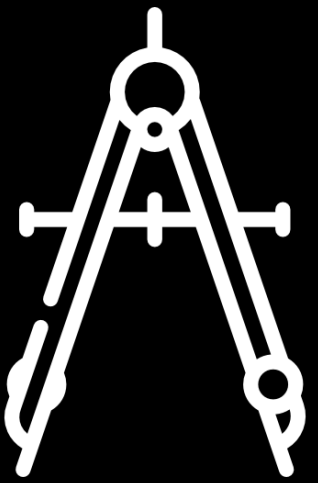
https://www.youtube.com/watch?v=mYzPxwnGs34

Recommended to watch

Museum of Automata, York, 199x
https://www.youtube.com/watch?v=SzOgsaXO7BE

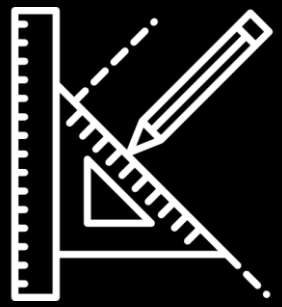
Lost & Found – World's Largest Collection of Rustic Automata
https://www.youtube.com/watch?v=raU6749Cczw





Hands on tutorial

Creating Symmetric Geometric Shapes



Assignment 01

Tesselations