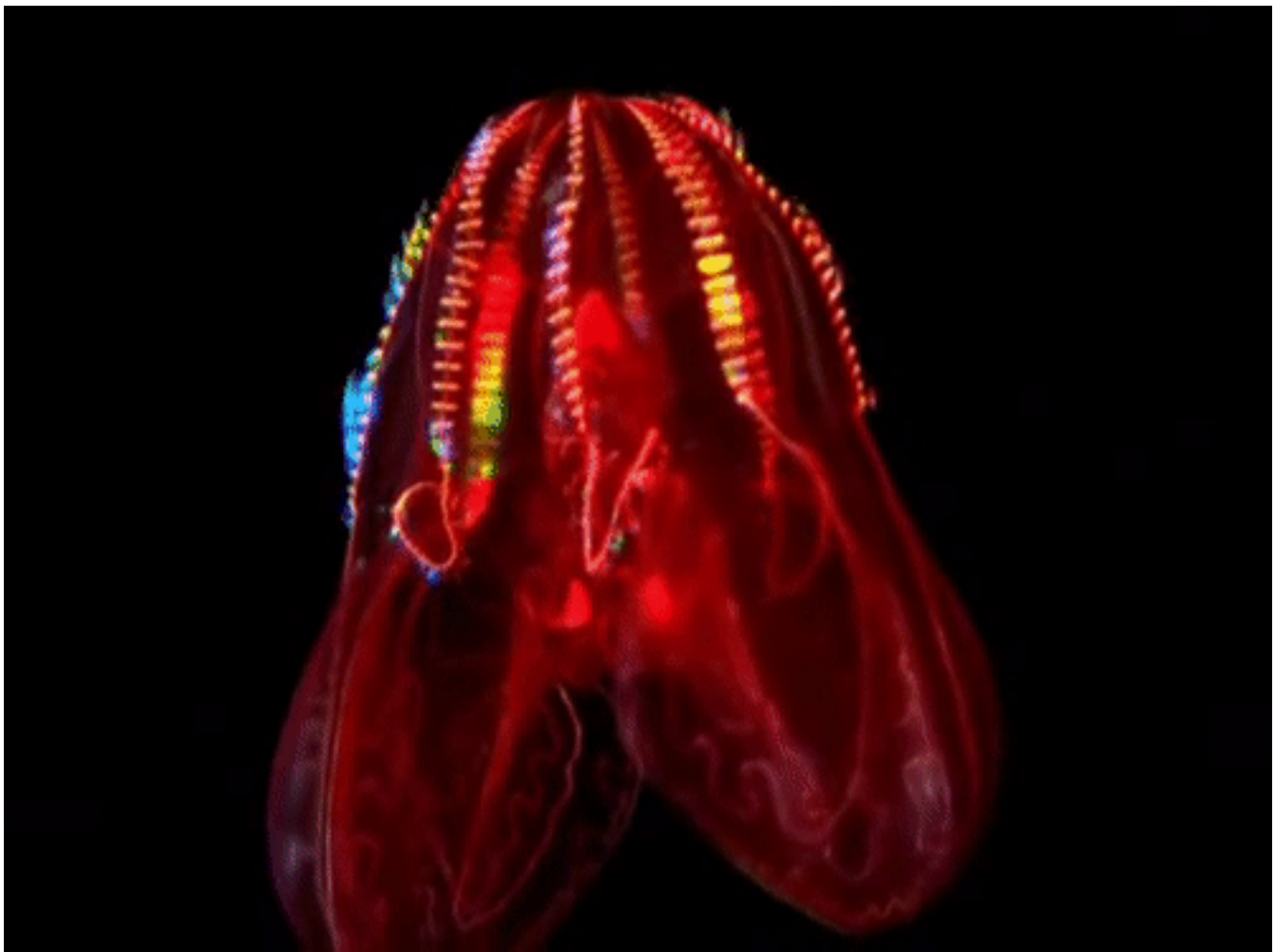


DIGITAL CRAFT

JELLE VAN BOUWHORST
WIKI: TSROHWUOB

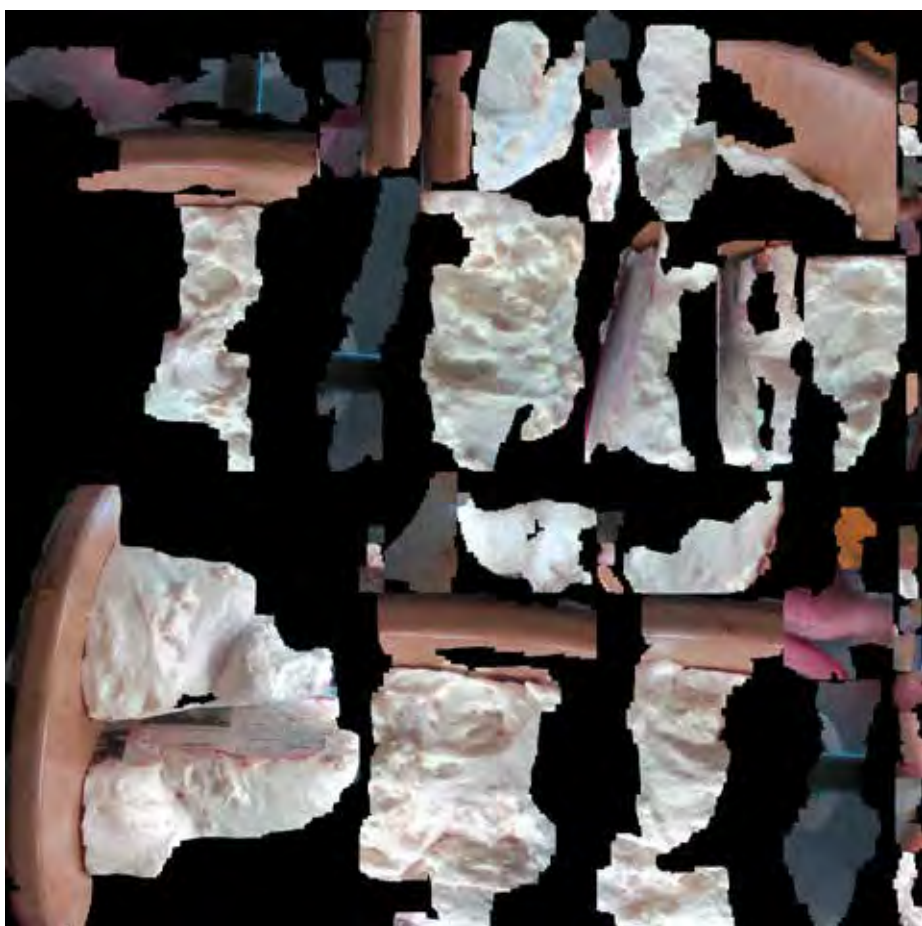
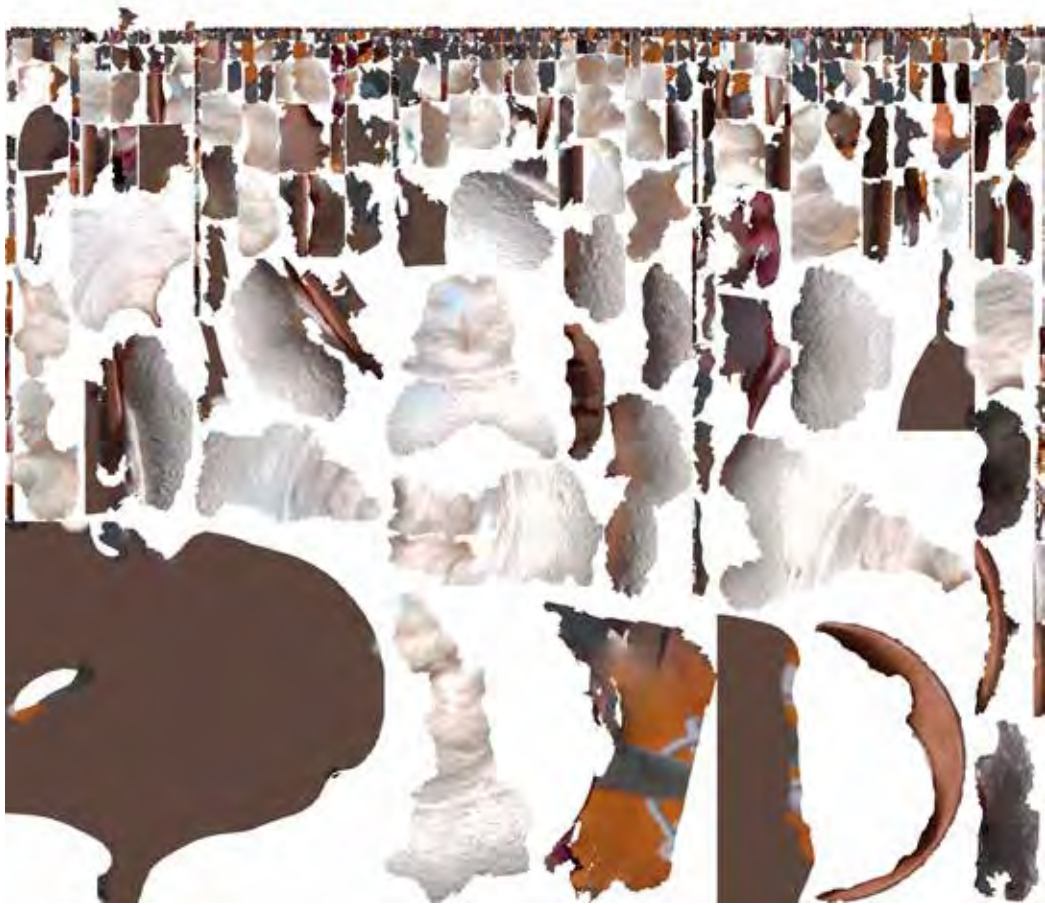
GRAPHIC DESIGN YR 3

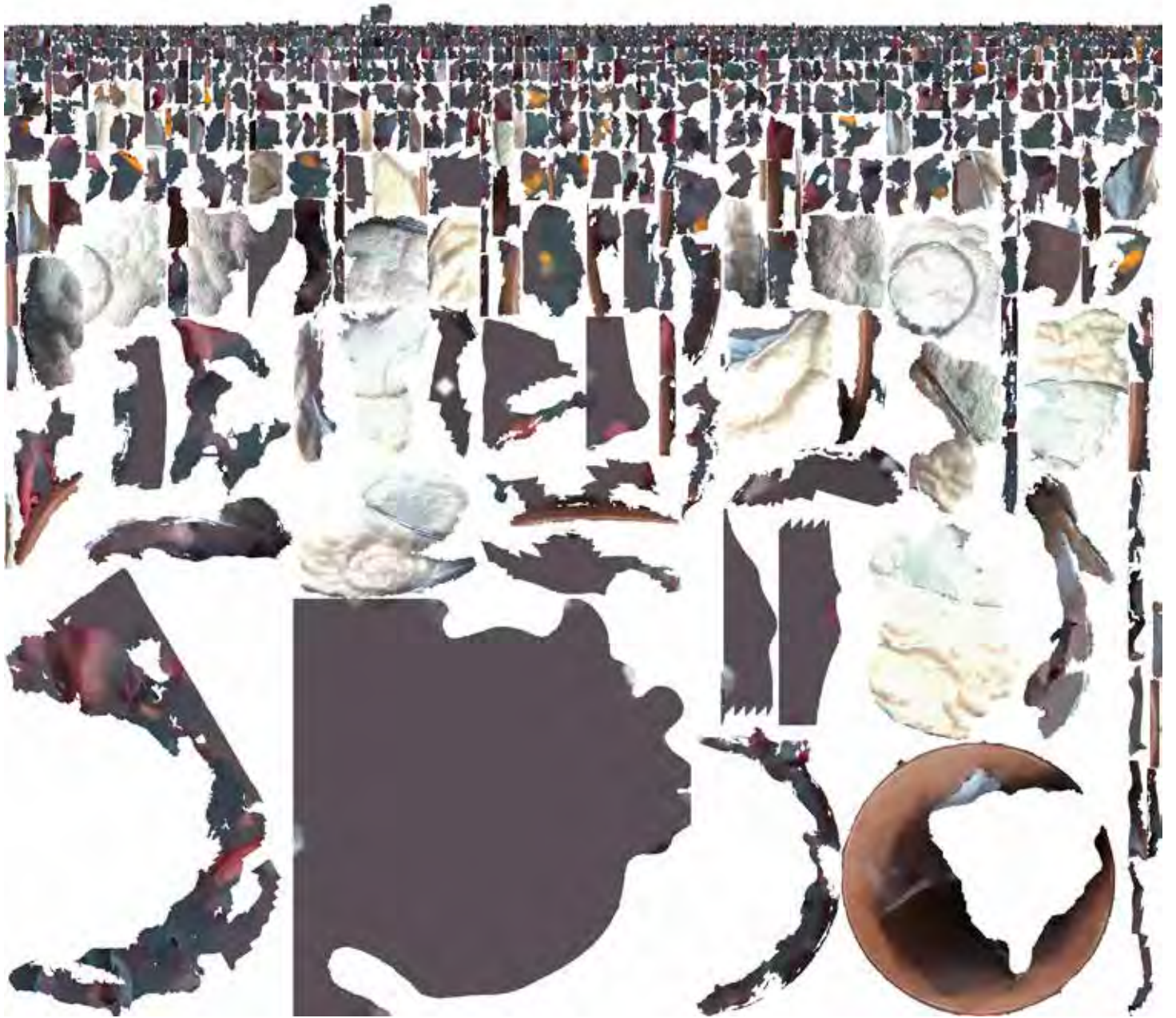


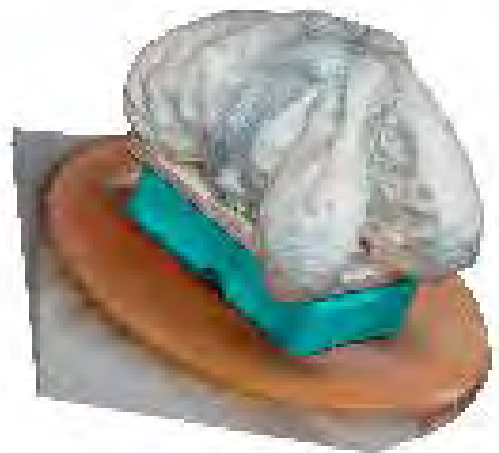
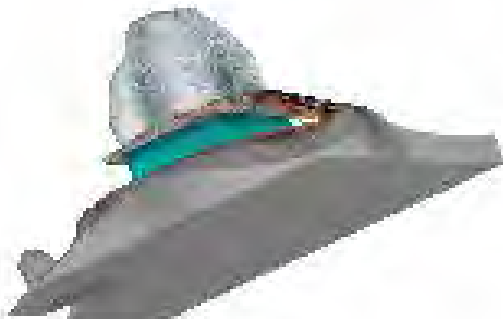








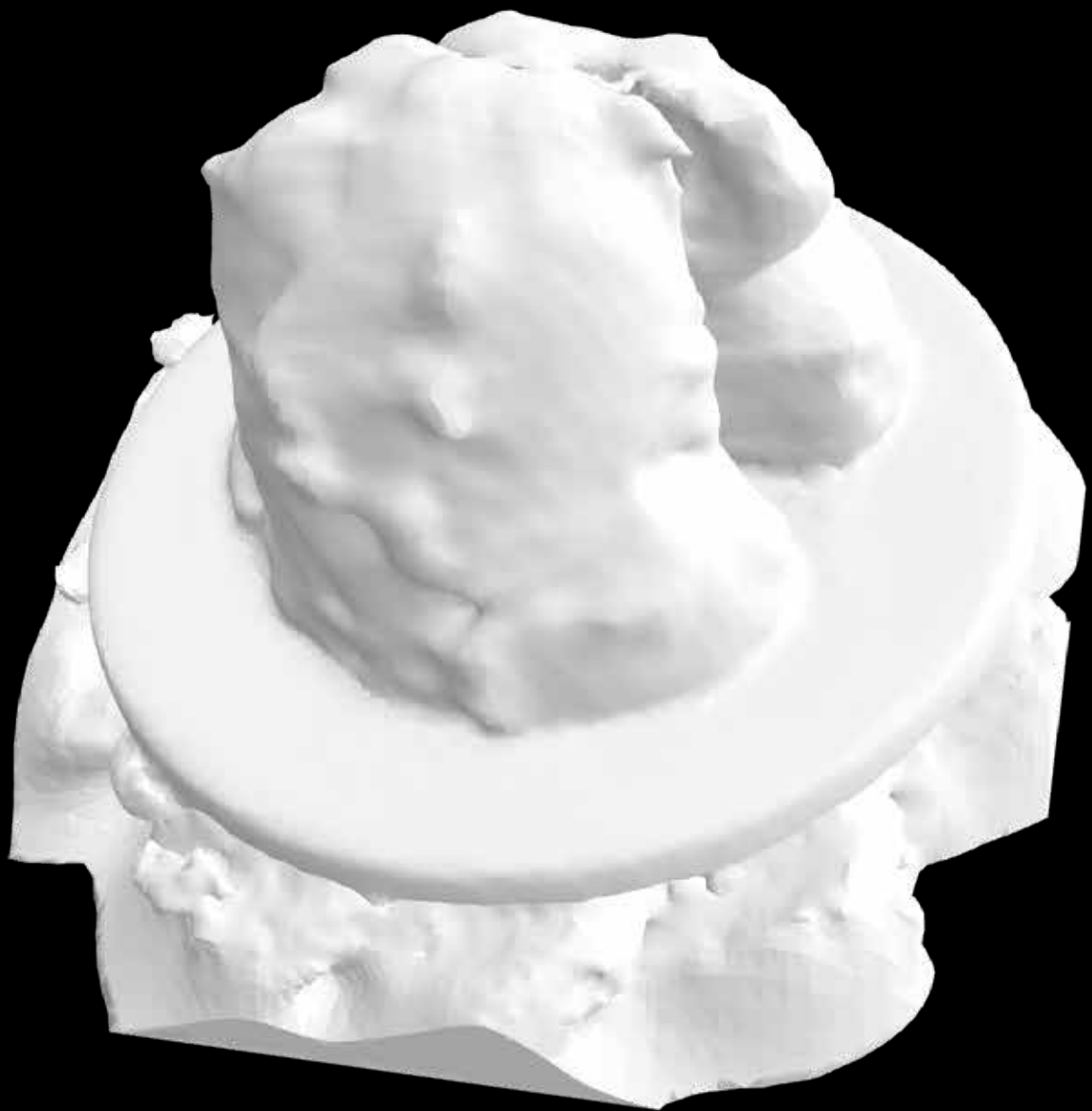




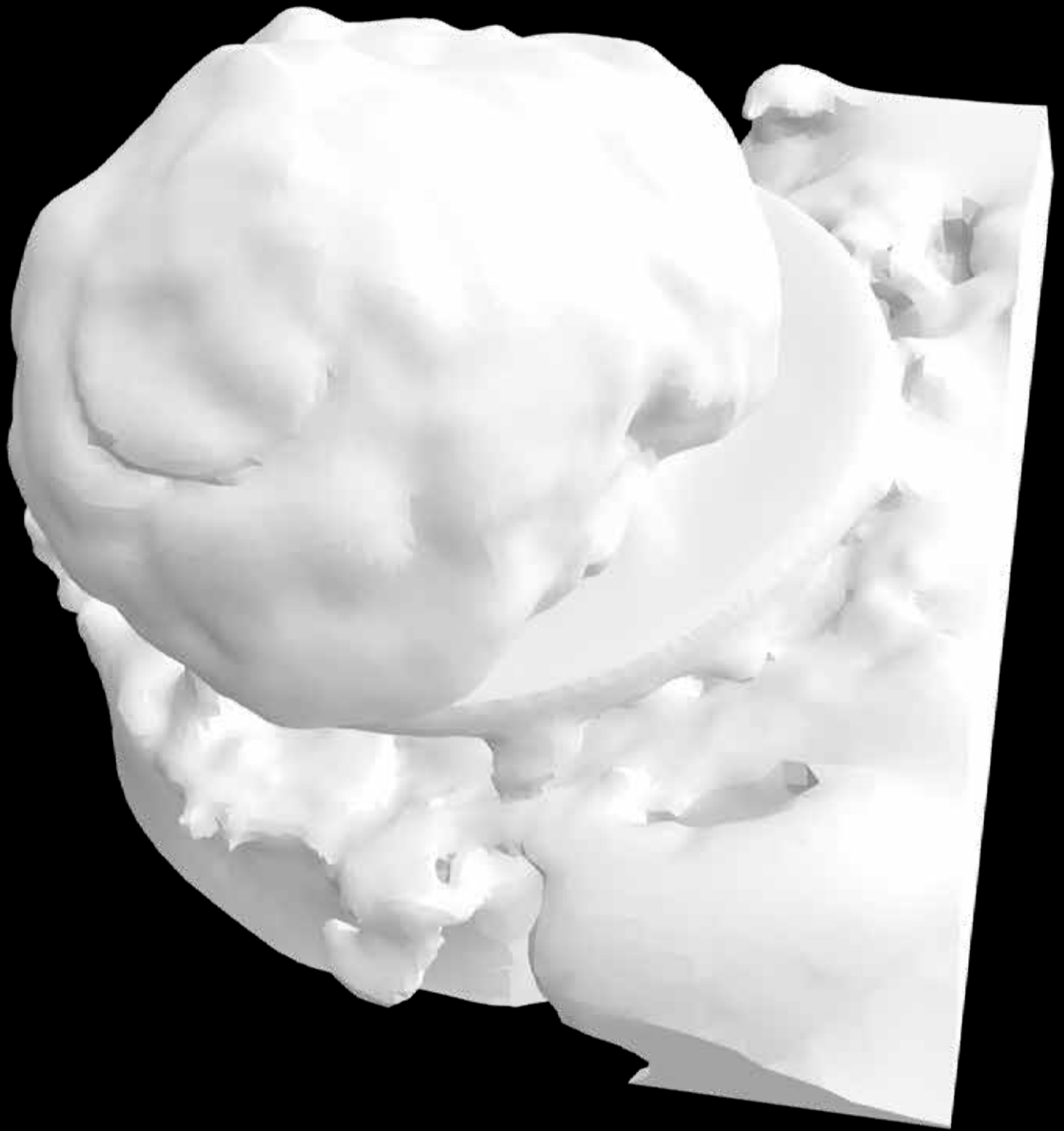






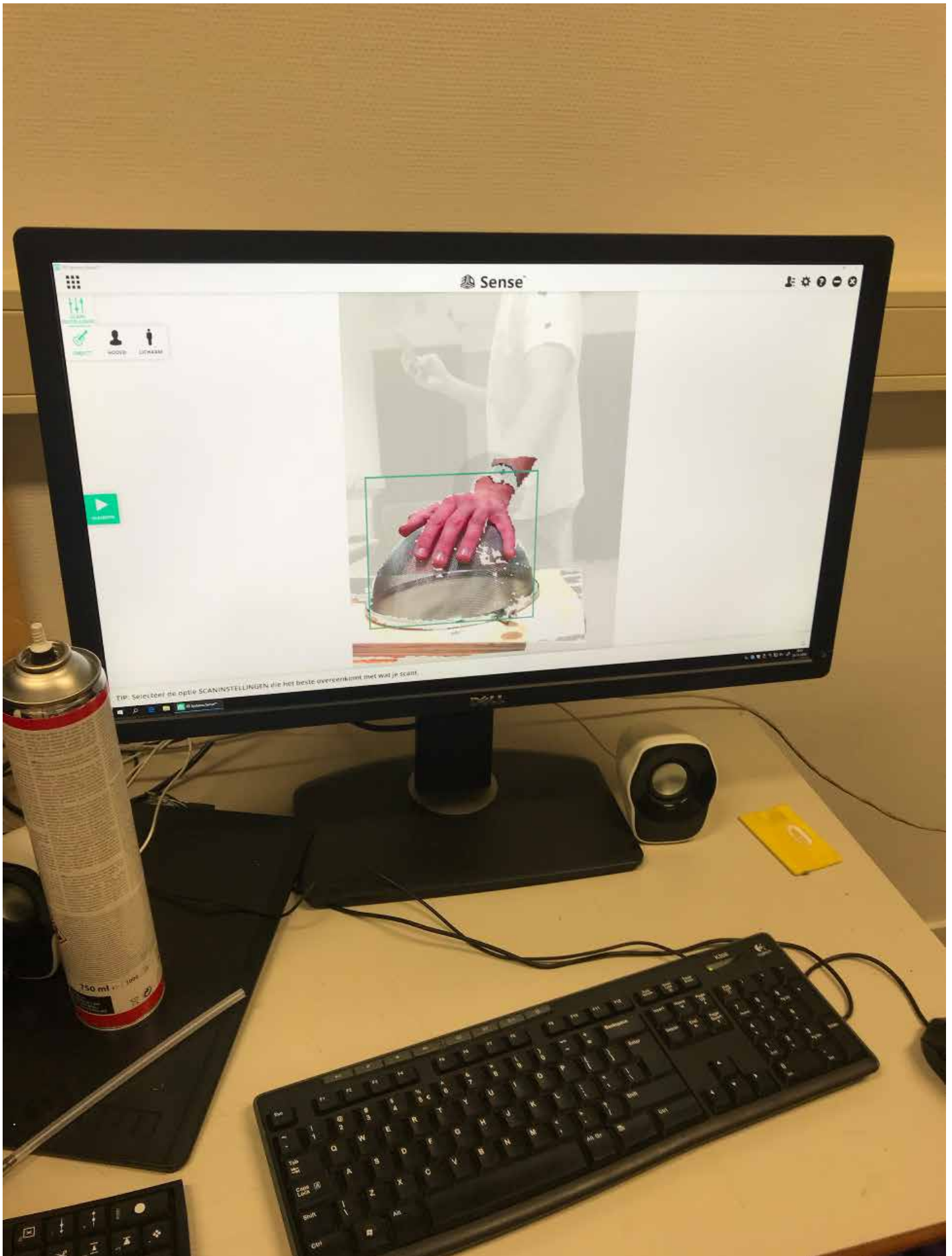






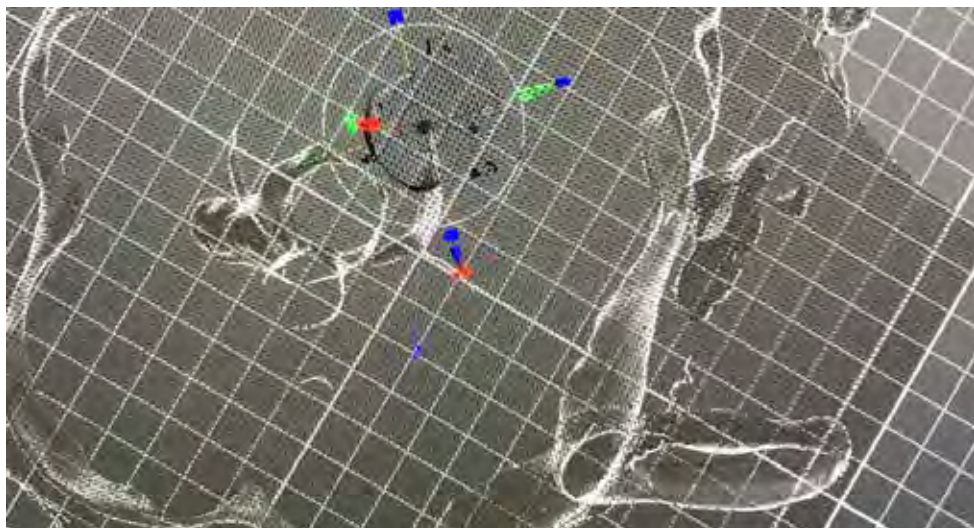




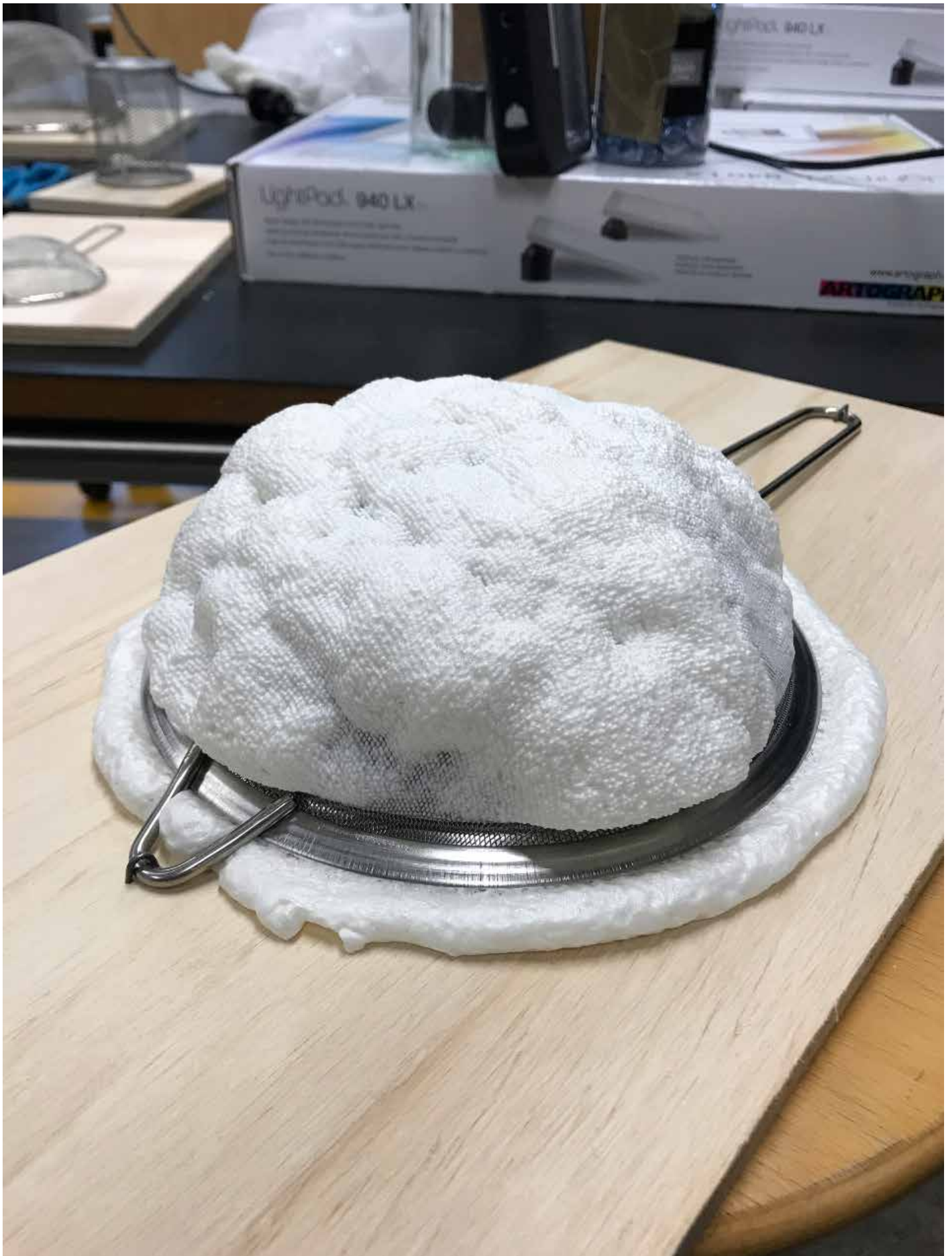












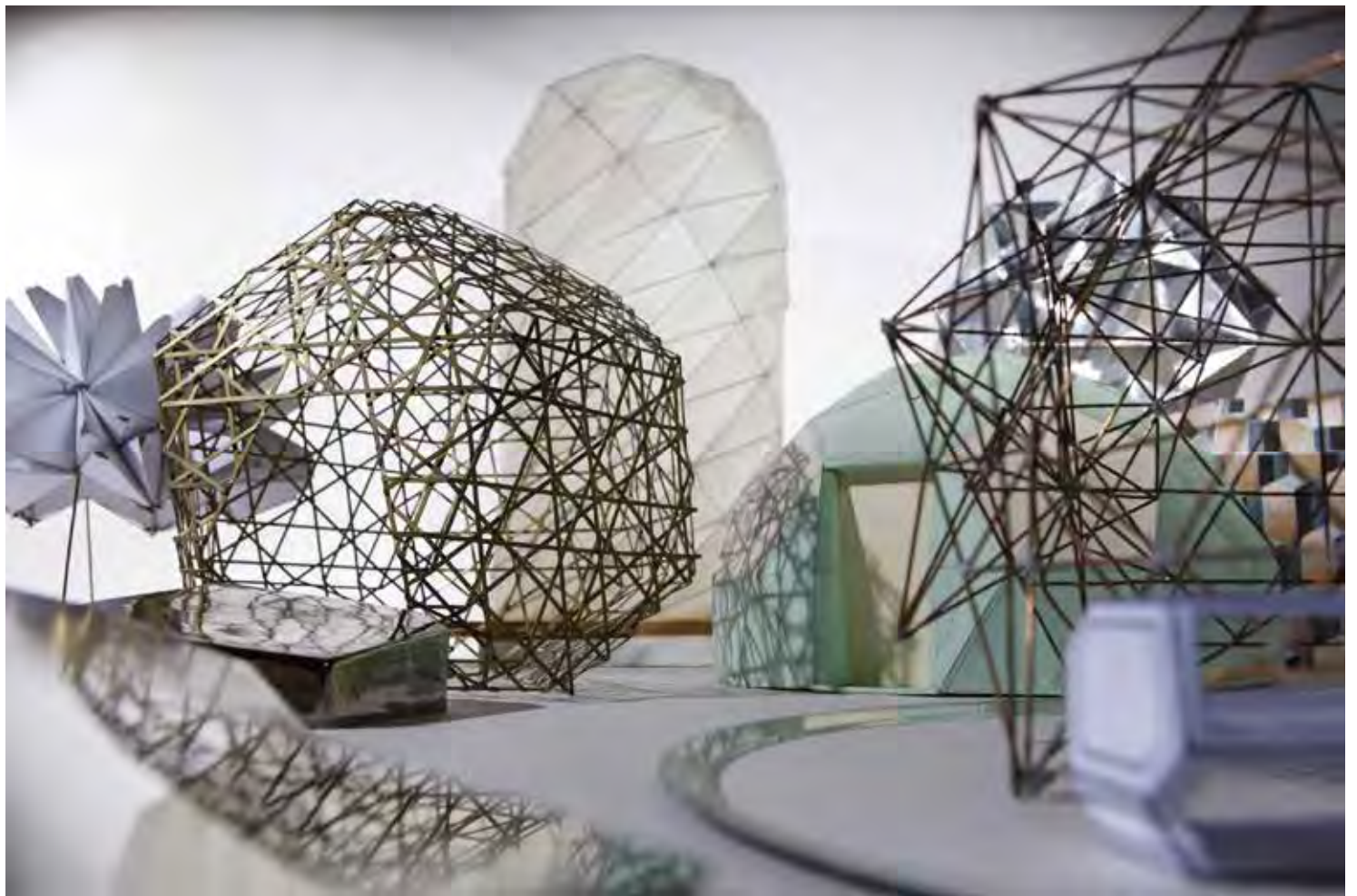




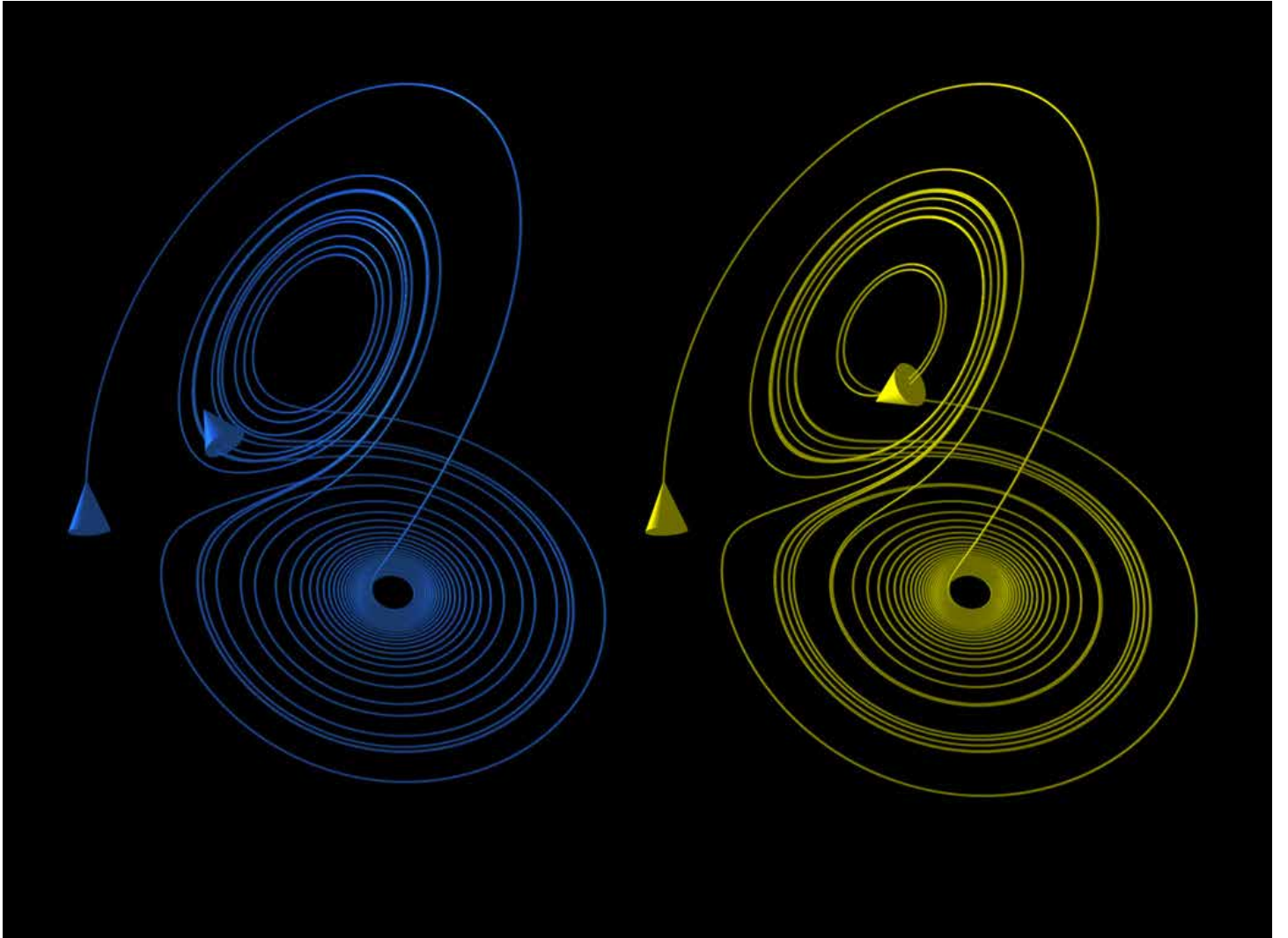
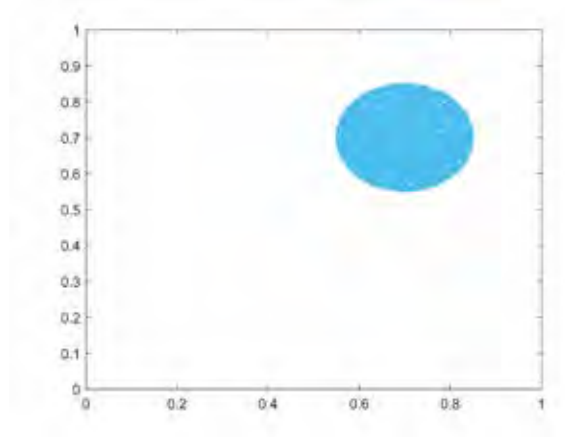








MODEL ROOM OLAFUR ELIASSON

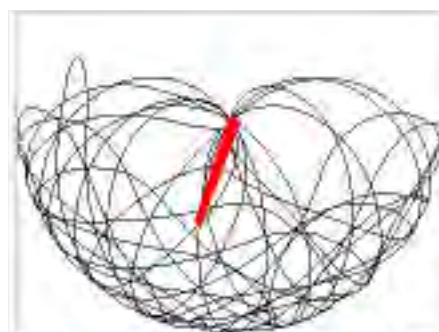


Chaos theory is a branch of mathematics focusing on the behavior of dynamical systems that are highly sensitive to initial conditions. "Chaos" is an interdisciplinary theory stating that within the apparent randomness of chaotic complex systems, there are underlying patterns, constant feedback loops, repetition, self-similarity, fractals, self-organization, and reliance on programming at the initial point known as sensitive dependence on initial conditions. The butterfly effect describes how a small change in one state of a deterministic nonlinear system can result in large differences in a later state, e.g. a butterfly flapping its wings in Brazil can cause a hurricane in Texas.[1]

Small differences in initial conditions, such as those due to rounding errors in numerical computation, yield widely diverging outcomes for such dynamical systems, rendering long-term prediction of their behavior impossible in general.[2][3] This happens even though these systems are deterministic, meaning that their future behavior is fully determined by their initial conditions, with no random elements involved.[4] In other words, the deterministic nature of these systems does not make them predictable.[5][6] This behavior is known as deterministic chaos, or simply chaos. The theory was summarized by Edward Lorenz as:[7]

Chaos: When the present determines the future, but the approximate present does not approximately determine the future.

Chaotic behavior exists in many natural systems, such as weather and climate.[8][9] It also occurs spontaneously in some systems with artificial components, such as road traffic.[10] This behavior can be studied through analysis of a chaotic mathematical model, or through analytical techniques such as recurrence plots and Poincaré maps. Chaos theory has applications in several disciplines, including meteorology, anthropology,[11][12] sociology, physics,[13] environmental science, computer science, engineering, economics, biology, ecology, and philosophy. The theory formed the basis for such fields of study as complex dynamical systems, edge of chaos theory, and self-assembly processes.



A double-rod pendulum animation showing chaotic behavior. Starting the pendulum from a slightly different initial condition would result in a completely different trajectory. The double-rod pendulum is one of the simplest dynamical systems with chaotic solutions.