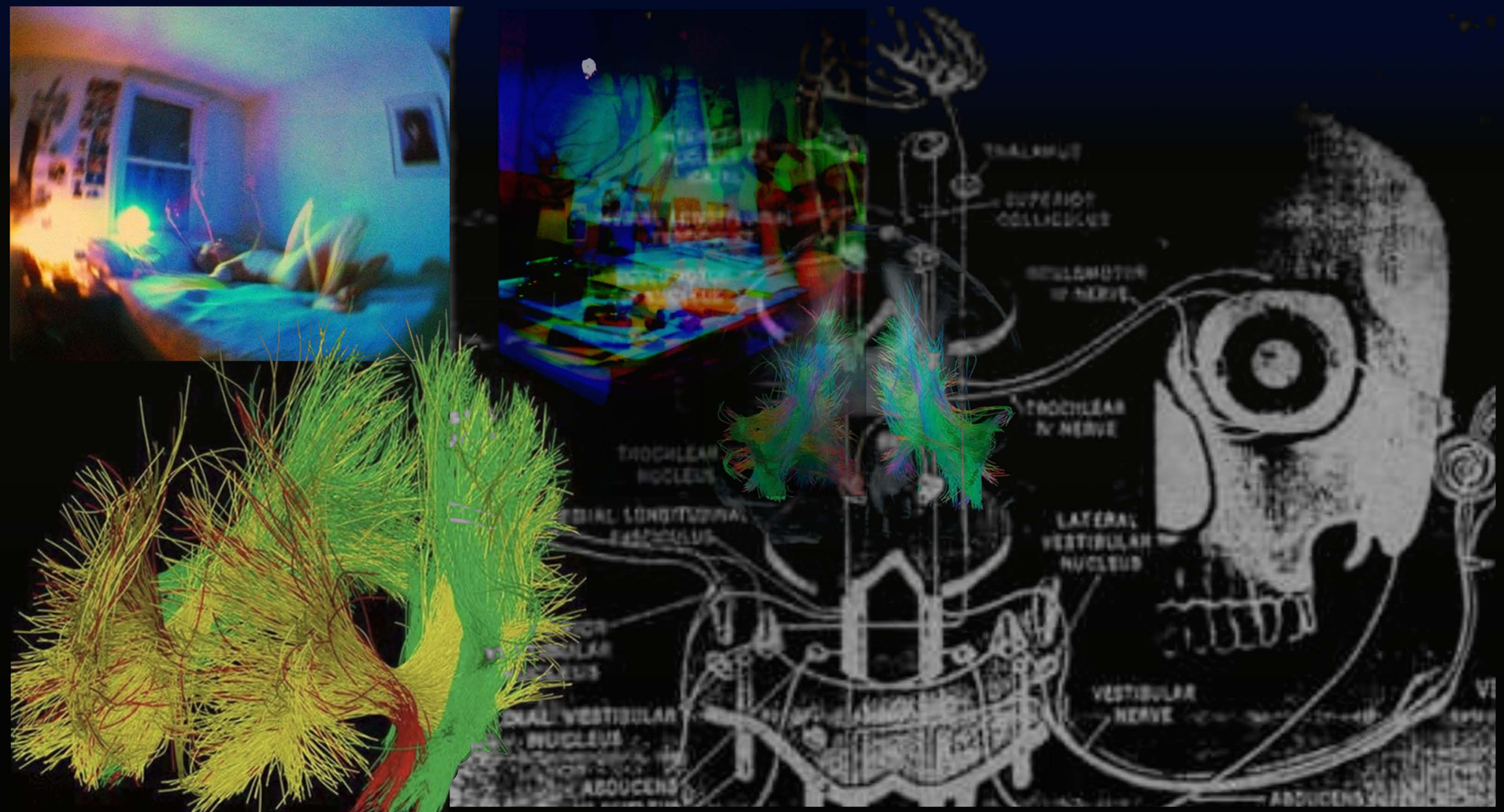
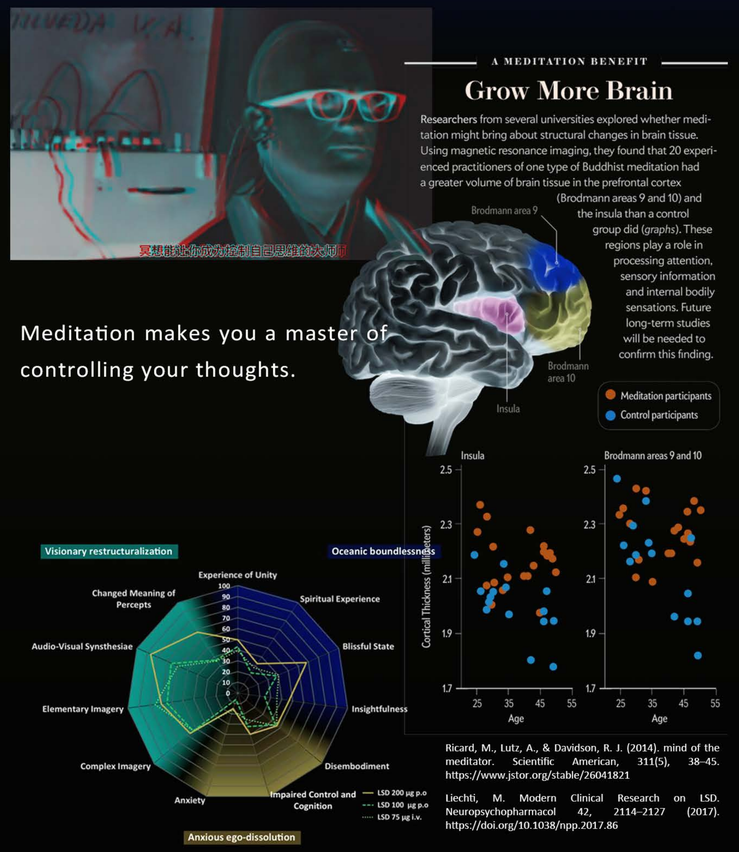


RESEARCH ABOUT BRAIN ACTIVITY



Meditation makes you a master of controlling your thoughts.

Ricard, M., Lutz, A., & Davidson, R. J. (2014). mind of the meditator. Scientific American, 311(5), 38–45. https://www.jstor.org/stable/26041821

Liechti, M. Modern Clinical Research on LSD. Neuropsychopharmacol 42, 2114–2127 (2017). https://doi.org/10.1038/npp.2017.86

RAPID MIND EVOLUTION: Wearable Concept Based on Psychedelics and Meditation

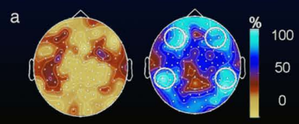
As desires increase, technology can bring healing, evolution, and sometimes loss of control. Buddhism promotes reducing desires for balance. Psychedelics can lead to both healing and loss of control. Buddhist meditation trains the brain and, like psychedelics, changes brain activity to offer new experiences. While meditation is a slow, long-term practice, psychedelics act quickly. This project proposes using wearable devices that apply the principles of both meditation and psychedelics to rapidly and controllably alter brain activity, enhancing self-control and happiness.

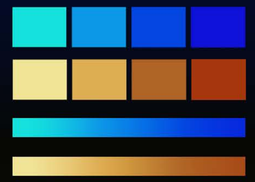
Research has found that LSD significantly enhances feelings of expansiveness and visual changes. Higher doses (200 µg) result in greater feelings of bliss and insight compared to lower doses (75 µg and 100 µg).

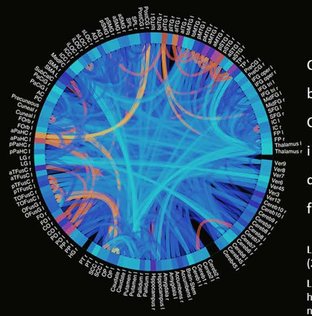
RESEARCH

During monk meditation and psychedelic drug use, brain activity becomes similar: connections between different regions increase, breaking conventional patterns and creating hallucinations. These hallucinations lead to unusual connections, reminiscent of the multiple arms and faces in Buddhist culture.

COLOR BOARD







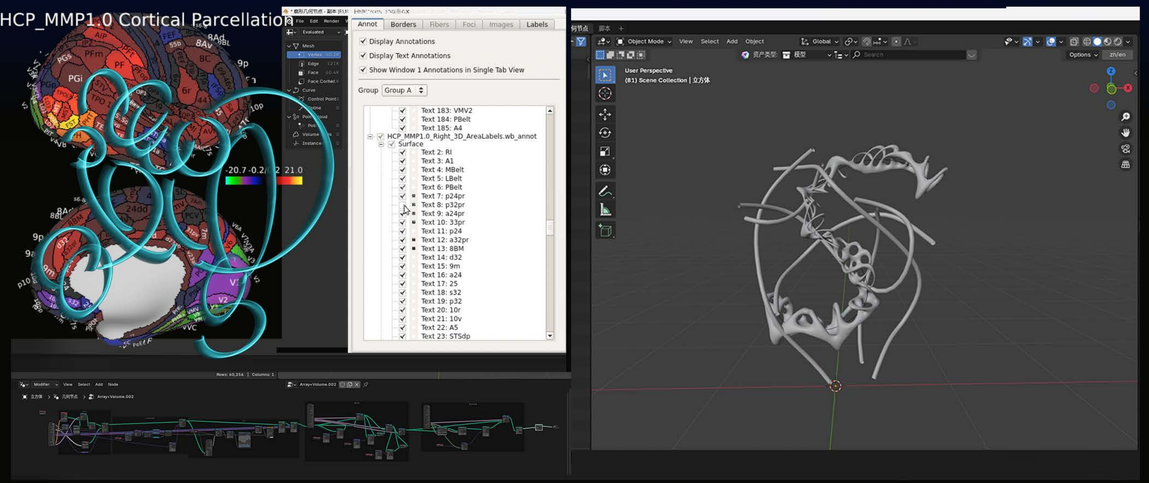
Connectome ring showing functional connectivity between 132 regions covering the whole brain. Contrast LSD vs placebo, P<0.05,FDR.Blue indicates increased functional connectivity,Yellow-red indicates decreased connectivity. Figure provided by F Mueller from the Basel fMRI study (Mueller et al, 2017b).

Liechti, M. Modern Clinical Research on LSD. Neuropsychopharmacol 42, 2114–2127 (2017). https://doi.org/10.1038/npp.2017.86

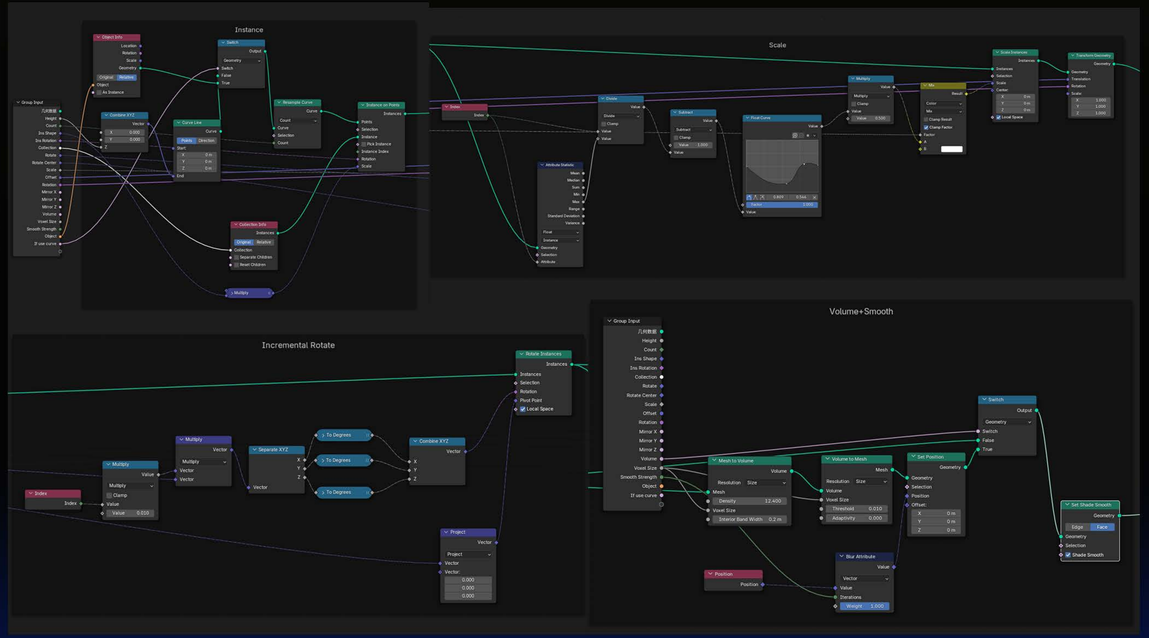
Lutz A, Greischar L L, Rawlings N B, et al. Long-term meditators self-induce high-amplitude gamma synchrony during mental practice[J]. Proceedings of the national Academy of Sciences, 2004, 101(46): 16369-16373.

GEOMETRY NODES DEVELOPMENT

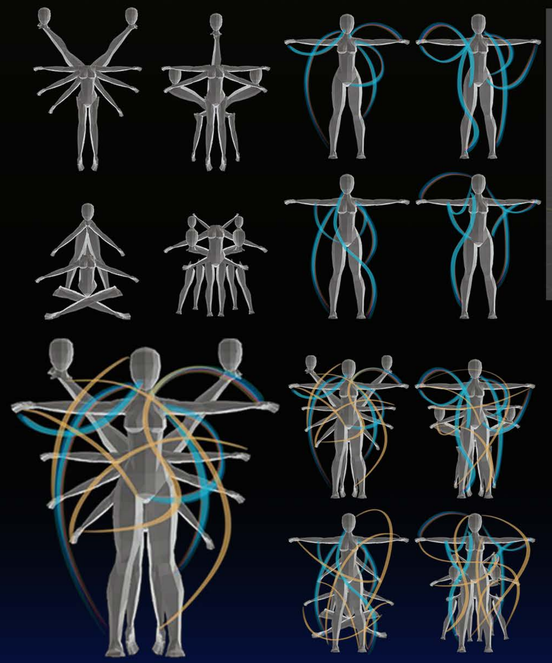
HCP_MMP1.0 Cortical Parcellation

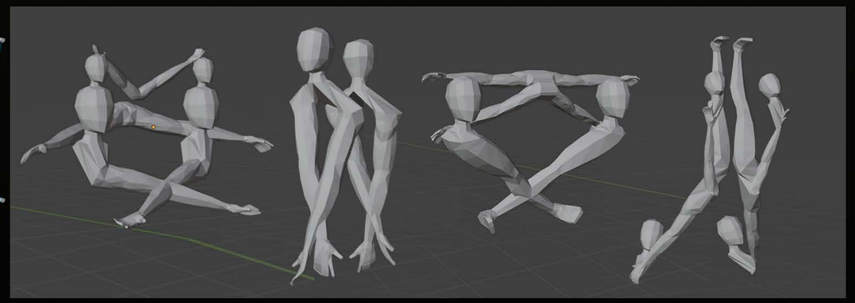


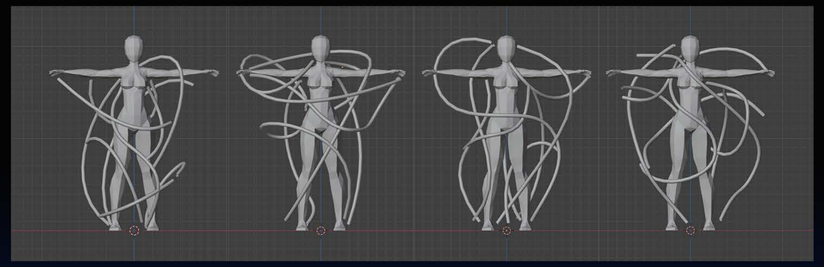
Inspired by the increased connectivity activity of brain regions under the influence of psychedelics, develop the geometry nodes of surface textures in the model and the model itself.



DEVELOPMENT



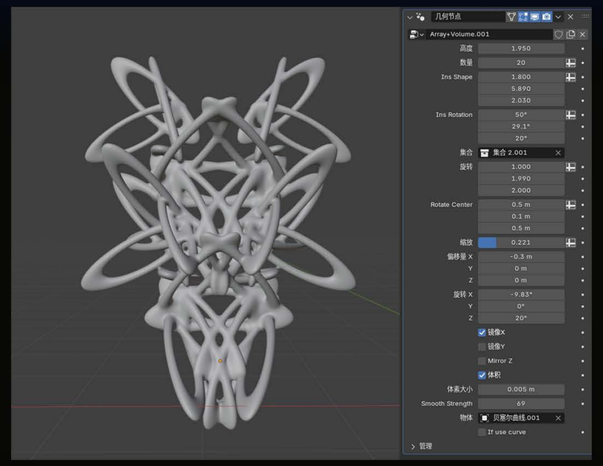




I use this method to perform abnormal reconfiguration of the human body and represent these unusual connections with lines.

GEOMETRY NODES TO WEARABLE DEVICES

Apply different parameters and curves generated by anomalous connections to geometry nodes to visualize active brain activity.



Use different curves aforesaid

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1.58
Rotate: 1.03
0.01
0.36
R Center: -0.27
0
25.2
Scale: 0.296

Height: 0.93
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1.58
Rotate: 1.03
0.01
0.36
R Center: -0.27
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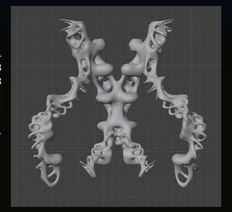
25.2
Scale: 0.296



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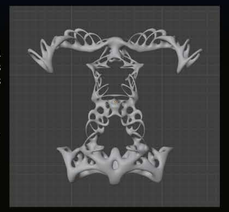

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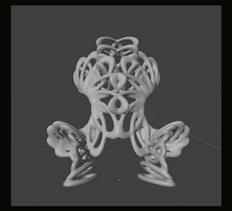
Scale: 0.21

Use no curve



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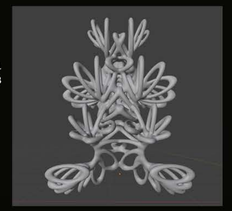

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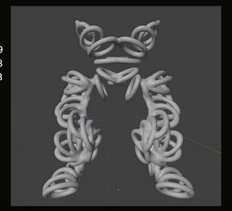

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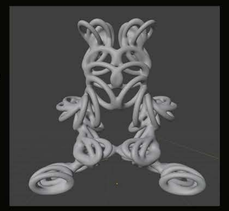

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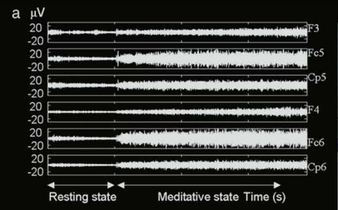
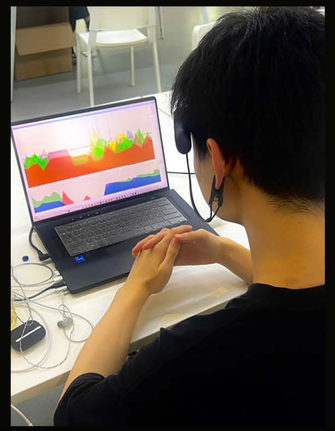
R Center: 0.14
0.6
0.6
Scale: 0.212

BRAINWAVE SENSOR INTERACTION

High-amplitude gamma activity during mental training. (a) Raw electroencephalographic signals. At t =45 s, practitioner S4 started generating a state of nonreferential compassion, block

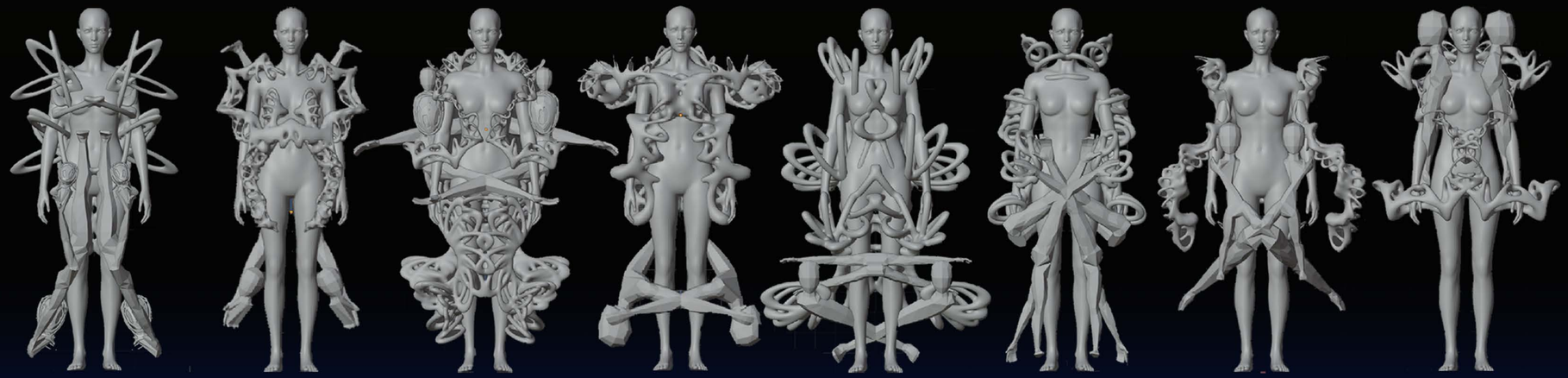
Lutz A, Greischar L L, Rawlings N B, et al. Long-term meditators self-induce high-amplitude gamma synchrony during mental practice[J]. Proceedings of the national Academy of Sciences, 2004, 101(46): 16369-16373.

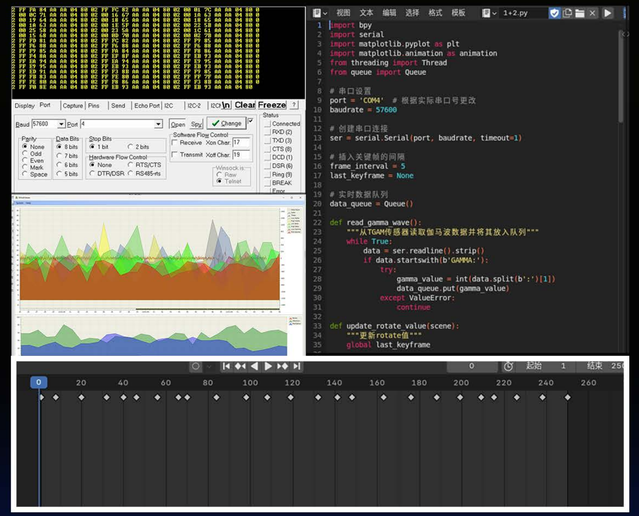




Use Blender's Python API to receive gamma wave fluctuations from a brainwave sensor, control geometry node parameter changes, and automatically keyframe to create dynamic effects.

FIT TEST





FASHION REFERENCE

Referencing Tibetan Buddhist monk robes, combine them with geometry node models to create sketches.

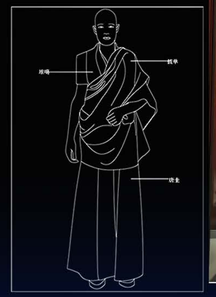
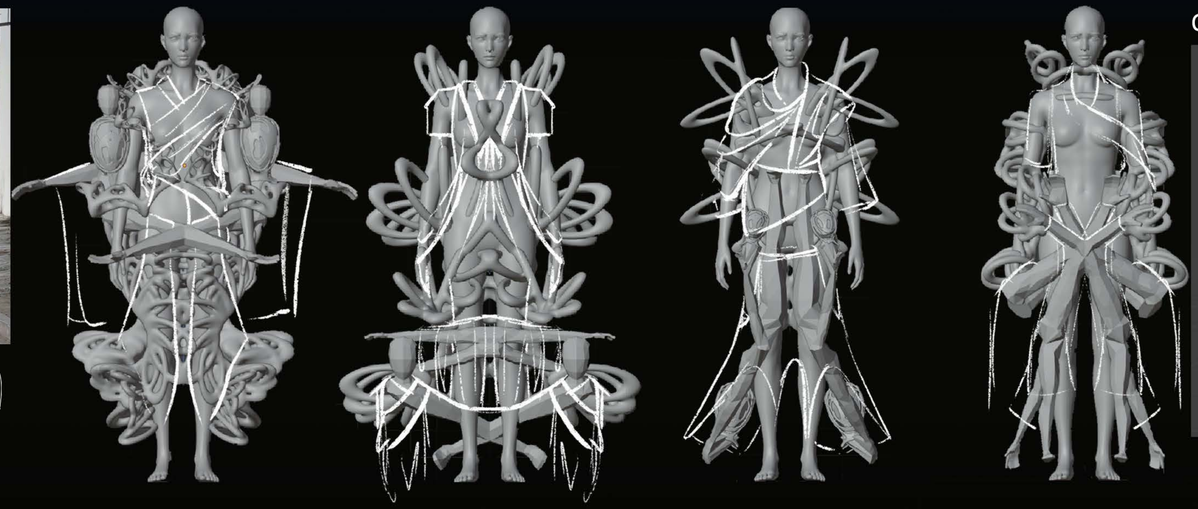


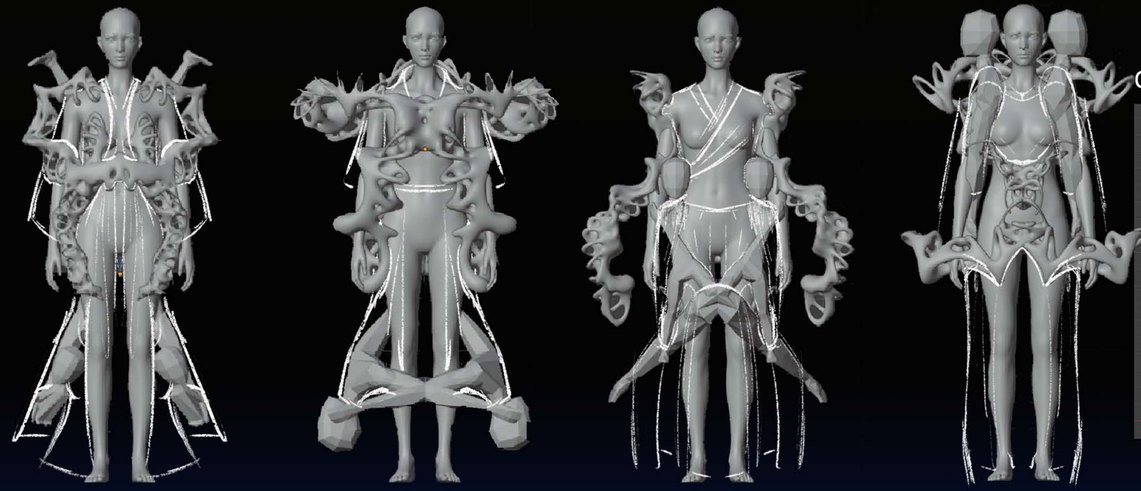
图 3-10 从个人走访寺庙时记录的图 (个人穿着与僧人穿着参考时记录的草图绘制)

Fig.3-10 Line Drawing of Tibetan Buddhist Monks in Mount Wutai (Drawn with Reference to Monks' Dressing in Lanhou Temple)

SKETCHES

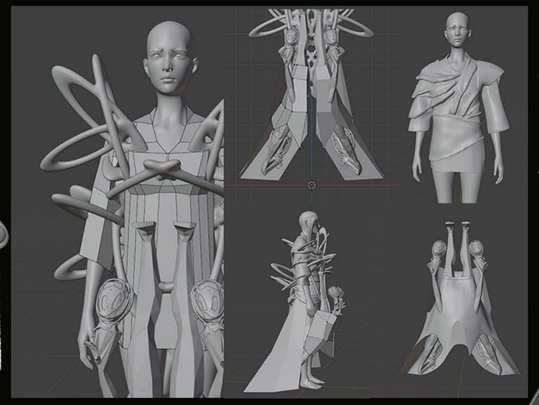
Simultaneously integrate the components of abnormal human restructuring as part of the body, considering how it would wear clothing.



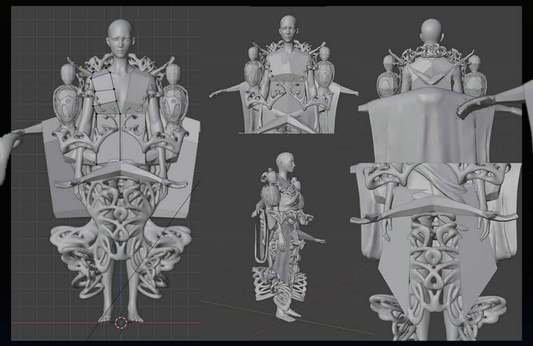


GARMENT PARTIAL MODELING

OUTFIT1



OUTFIT2



SHADER AND TEXTURE

Design shaders and textures inspired by conductive and bio-compatible hydrogels.

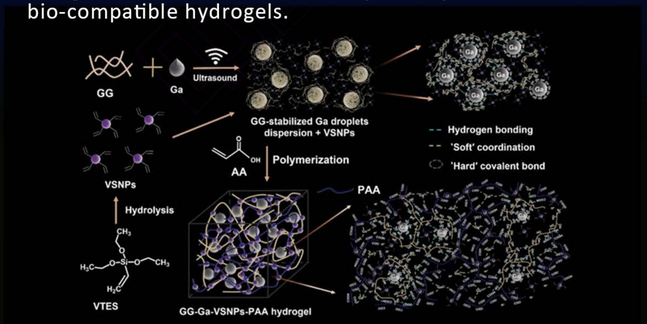
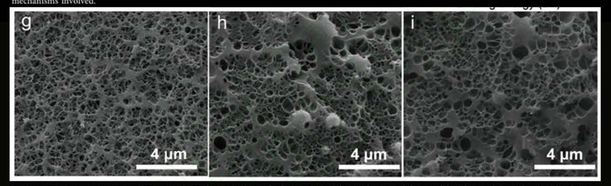
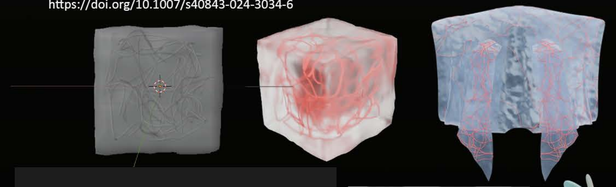
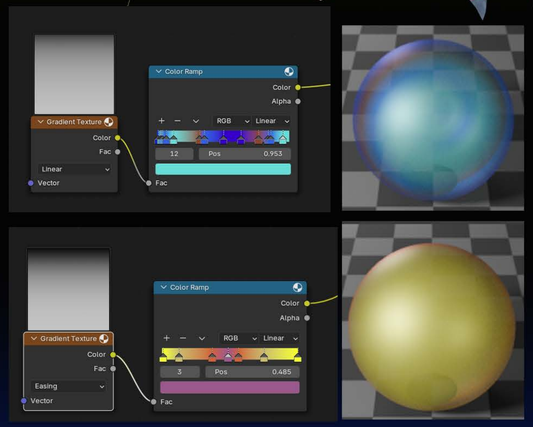


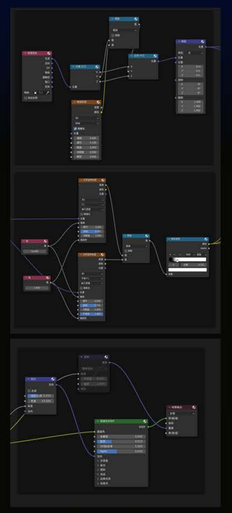
Figure 1 Schematic illustration of the preparation process for the GG-Ga-VSNPs-PAA hydrogel, detailing the step-by-step synthesis and crosslinking mechanisms involved.

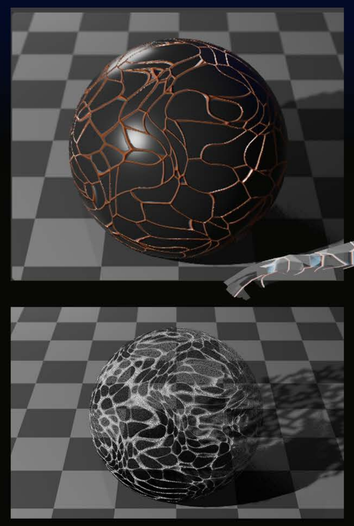


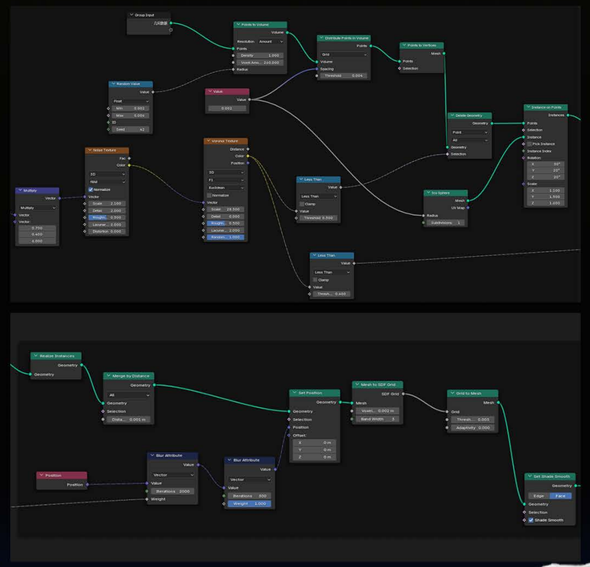
Wang, B., Liu, W., Song, Z. et al. Enhanced multifunctional liquid metal-based hydrogels with vinyl silica nanoparticles for advanced strain sensing applications. Sci. China Mater. (2024). https://doi.org/10.1007/s40843-024-3034-6

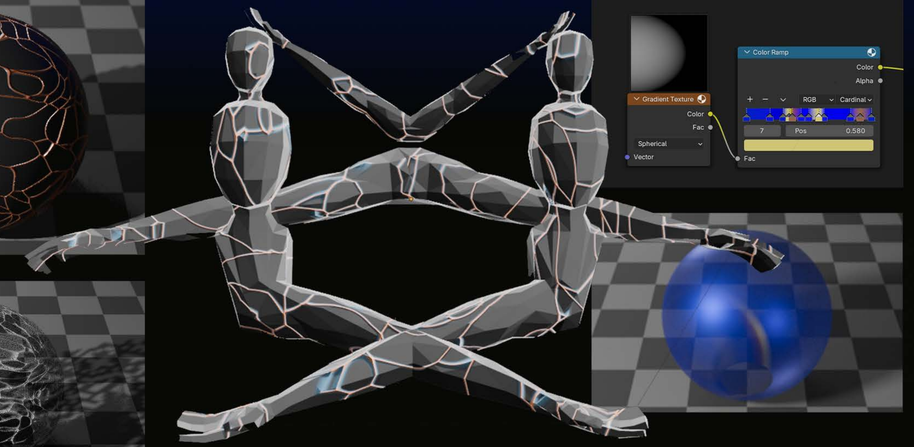


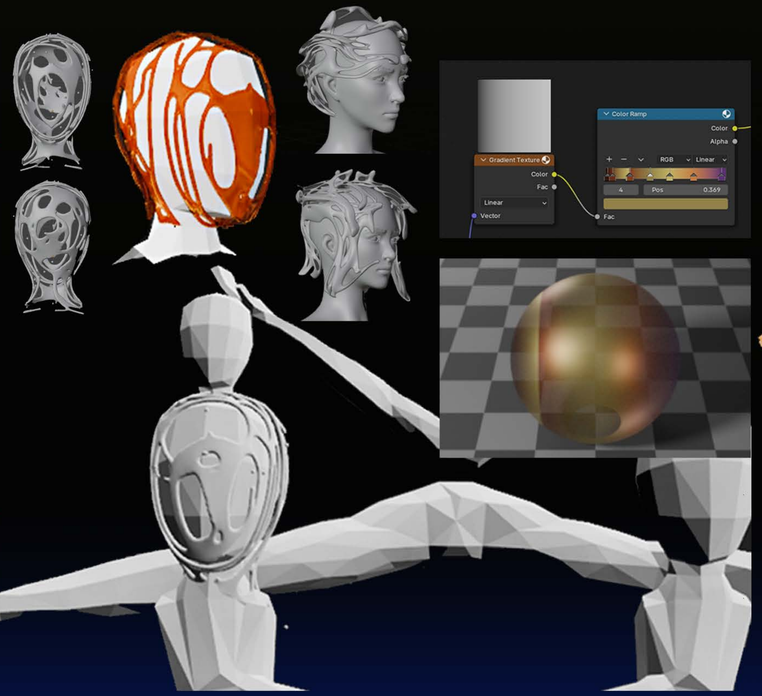


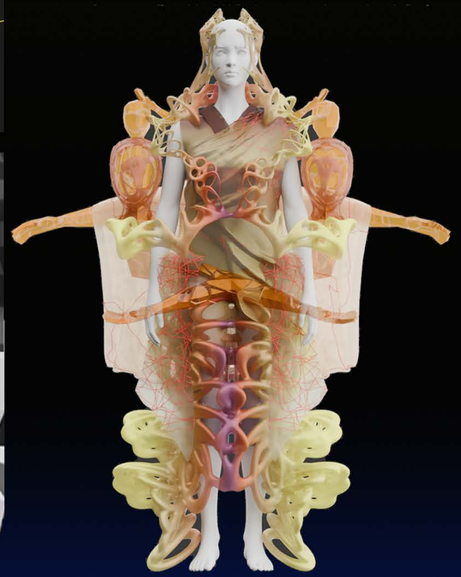












SCENE MODELING AND SHADER

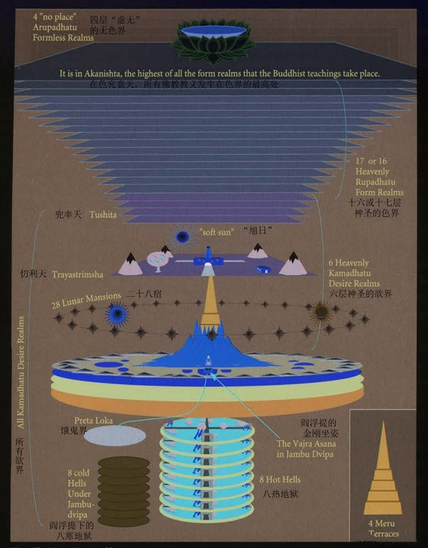


Fig. 3. The Mount Meru world system.

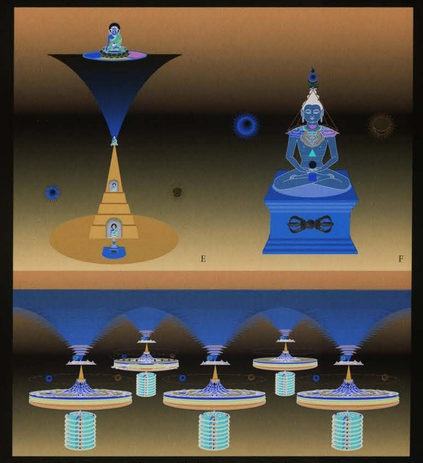
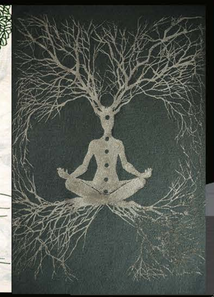
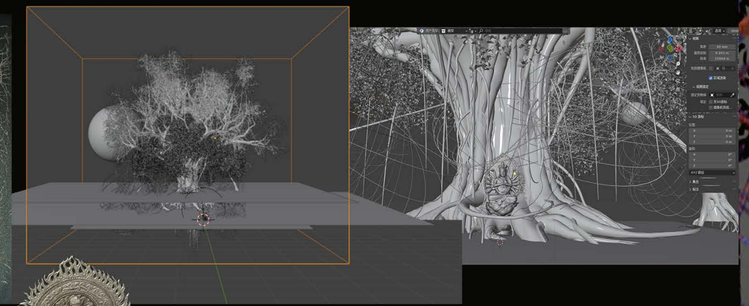
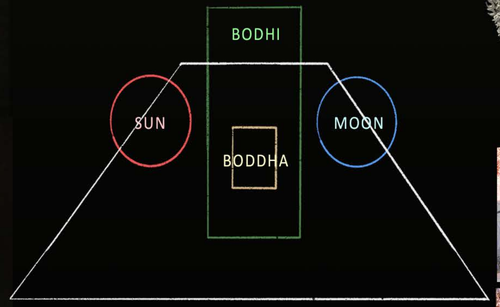


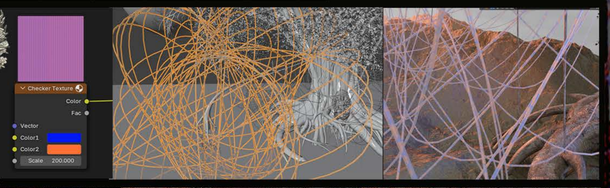
Fig. 2e–f. e) The places in which the Buddha(s) may appear in various texts and works of art: in caves at the base; above the heaven of the Four Great Kings, in Trayastrimsha; or in the highest heaven of the form realm, Akanishta Paradise. In some meditations, the Yogin initially assumes an external Mount Meru that is defined by body parts. In this case, the four lobes of the cloth collar are the four continents and the Mountain appears as his head and hair. There are several variations on this theme. f) Although Mount Meru is often called the "Universe," it is not; it is actually an individual world system for every sentient being in the universe, and in nus higher realms they are often depicted as blending together.

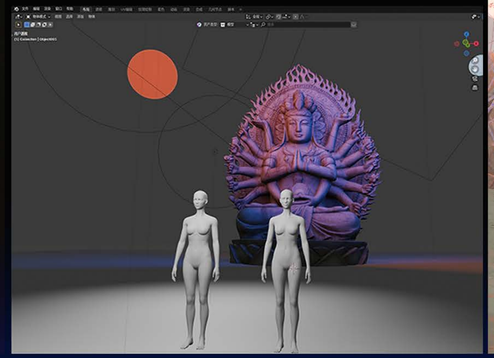
Design the scene based on the Buddhist cosmological environment of Mount Meru, where one meditates to attain Buddhahood (from "The Circle of Bliss: Buddhist Meditational Art"), and the historical moment of Shakyamuni's enlightenment under the Bodhi tree.



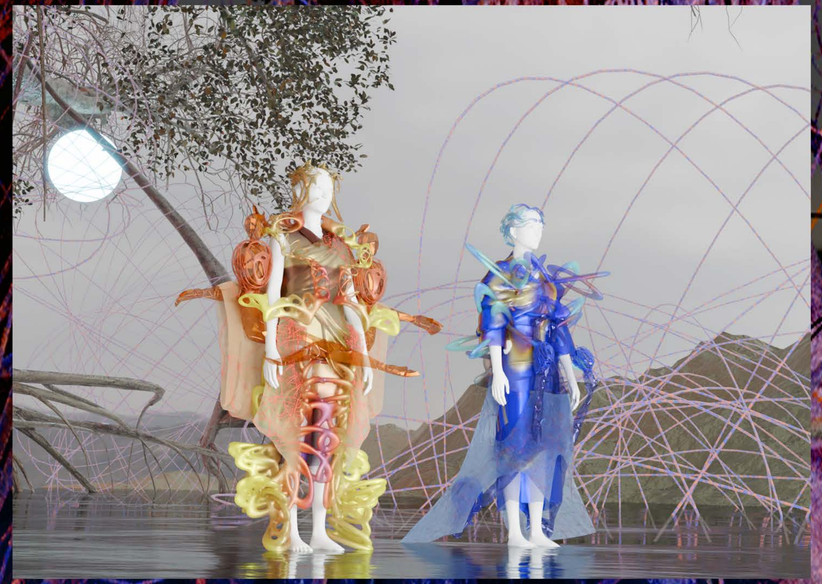


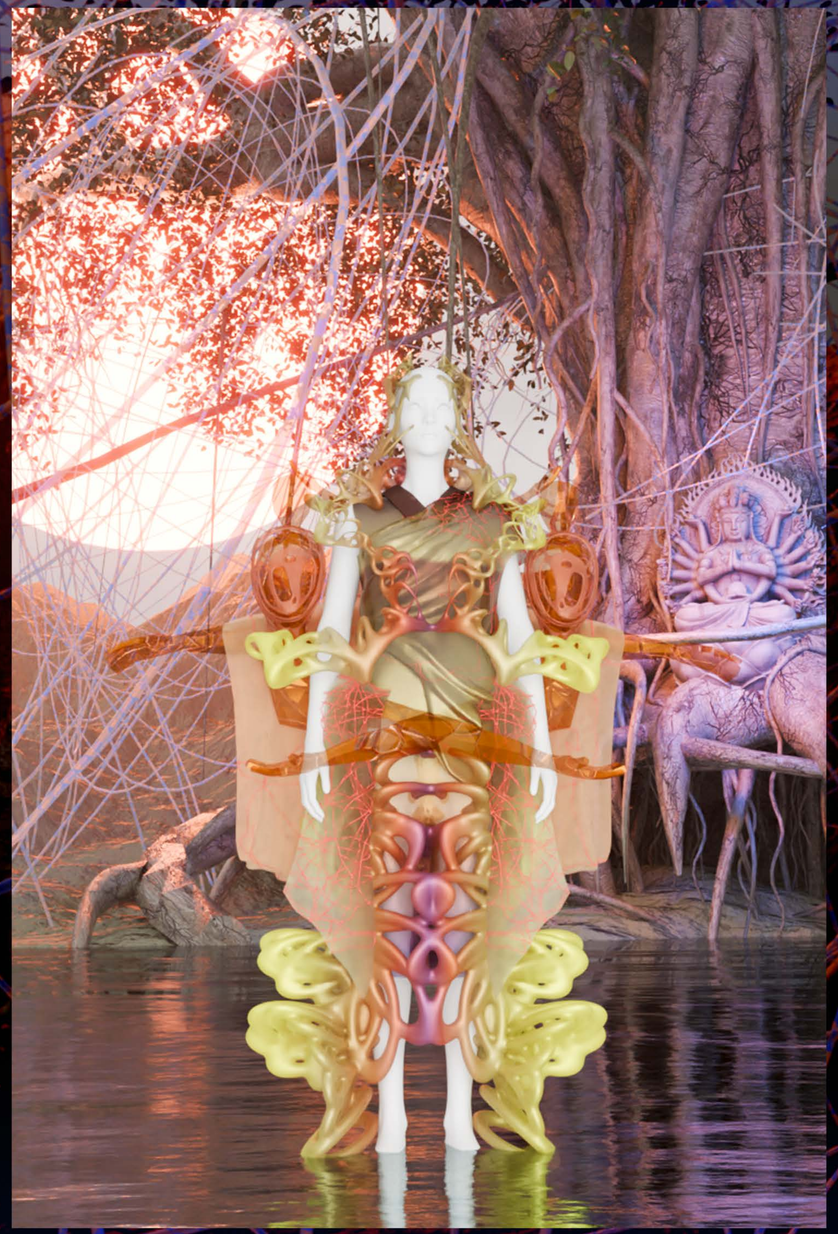


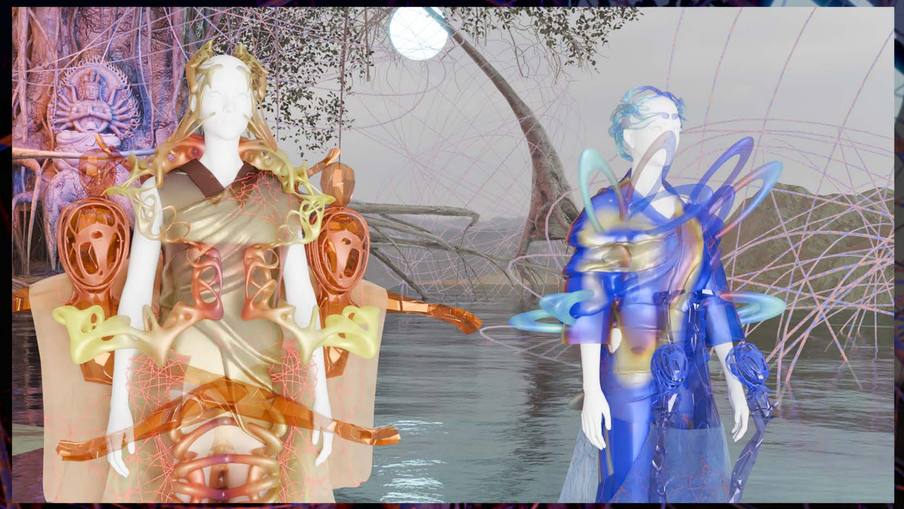




FINAL







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Modeling: *Dominic Duan*
Rendering: *Dominic Duan*