"Painting Folding 2.0" [2022]

MURAYAMA Goro

Organically spiral-shaped belts of fabric interwoven with hemp strings, form a three-dimensionally branched structure that is suspended from the exhibition space's ceiling. The surface of this structure is coated with primer, onto which abstract patterns are painted with certain regularity. MURAYAMA calls this "woven painting." While at once producing the fabric that serves as support medium, the artist lets his paintings come together in an autopoietic fashion from the structure itself, and the images drawn on it.

The creation of this work started from the discovery of similarities regarding the structural development of the "woven paintings" and the "protein folding" process by which protein chains are voluntarily folded into sustainable three-dimensional structures. In 2018, the AlphaFold software was unveiled, which can be used for precisely predicting the shapes of proteins from amino acid sequences based on AI machine learning developed by Google/DeepMind. Having been visualizing the processes and patterns of self-organization through paintings and drawings, MURAYAMA further developed the "Painting Folding" series that he had unveiled in 2020. For "Painting Folding 2.0," he calculated Amino acid sequences from 3-D data of his own woven paintings, which he then fed into the AlphaFold software for predictive calculations, to ultimately design new protein structures that may exist naturally on a microscopic scale, based on paintings made by human hands. This exhibition showcases the process of metamorphosing artificially produced structures into protein structures that can theoretically exist in nature through AI, and then outputting the results with a 3-D printer.

(Outline: NTT Inter Communication Center)