

28th IAA SYMPOSIUM ON SPACE AND SOCIETY (E5)  
Contemporary Arts Practice and Outer Space: A Multi-Disciplinary Approach (3)

Author: Ms. Yuri Tanaka  
Tokyo University of the Arts, Japan

Dr. Michael Doser  
European Organization for Nuclear Research (CERN), Switzerland

Mr. Ryu Sakurai  
Tokai University, Japan

Mr. Hajime Shimoyama  
Jissen Women's University, Japan

Mr. Ryo Takahashi  
Gunma Prefectural Women's University, Japan

FLOWERS BEHIND THE BACK OF THE UNIVERSE: A COSMIC ART PROJECT EXPLORING  
THE INVISIBLE

**Abstract**

What can be seen within this universe? Since humans are not instinctively aware of the limitations of their sensorium, what is being missed is not immediately obvious. In spite of ever deeper exploration - the 'observable universe' extends to 13.8 billion years, back in time to shortly after the Big Bang occurred - approximately 95 percent of the universe still remains unknown. However, if we were able to feel what we do not see, what would it tell us? Aiming to explore with our imagination the invisible elements in the universe, we will create an interactive cosmic art project in collaboration with a physicist, the Gunma Astronomical Observatory, and the Polytechnic Festival in Moscow.

In this paper, we will firstly address the concept in our artwork touching upon the invisible elements in the universe, such as matter and energy, from the physics point of view, and will then discuss the practical methodology for the process of making the artwork. This artwork will be laid out based on a map of constellations from where people may see the antipode of Moscow, an opposite point from the venue where the artwork is installed, in analogy to illustrating what exists, but can not be seen.

Using origami flowers - made in the course of a workshop by the visitors of the festival - as a metaphor of the beauty and transience of life, the installation seeks to deepen the awareness of participants about the numerous invisible structures in the universe. Placing them within reflective structures underlines both our reliance on technology to make the invisible visible, and the influence of the point of view on how we perceive and interpret the resulting representations. In their various forms and colors, these flowers can be seen as metaphorical mirror images of that which lies at the antipodes of our awareness: of colorful gas glowing in radio waves, supernovas in their many x-ray hues, dark matter, neutrinos, gravitational waves, dark energy. Considering both the invisible scenery of the sky and the invisible elements of beauty in the universe as lying behind the 'back' of the universe, hidden to our senses, this project will explore a new way of communication between humans and the ubiquitous invisible in an artistic manner.

Finally, the whole process of this art project, including its phenomena and the outcomes, will be summarized in order to suggest future directions for our transdisciplinary approach.