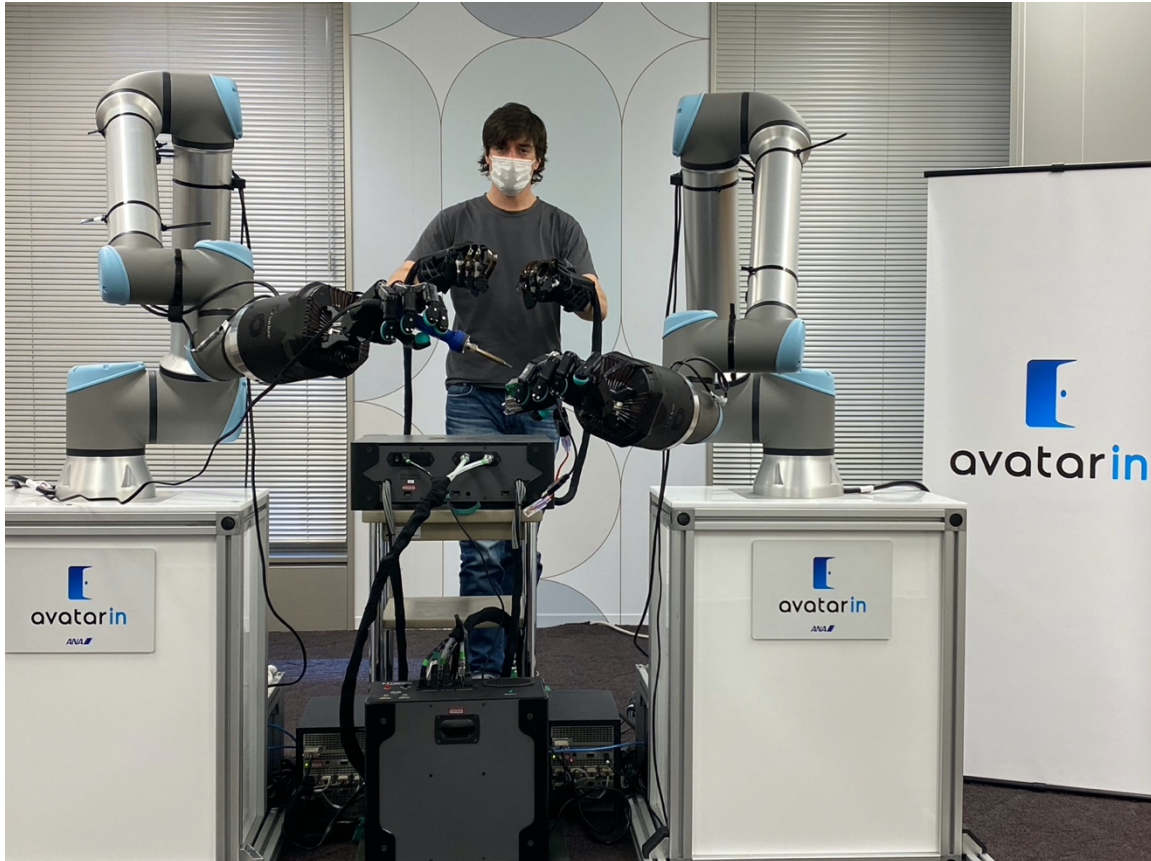


**avatarin Inc. joins  
“The Moonshot Research and Development Program”  
-Cybernetic Avatar Technology and Social System Design for Harmonious Co-  
experience and Collective Ability-**



Imitation learning of human advanced skills using the hand robot system

avatarin Inc. of the ANA Group (hereafter "avatarin") has joined the “Cybernetic Avatar Technology<sup>\*1</sup> and Social System Design for Harmonious Co-experience and Collective Ability” project (Project Manager Kouta Minamizawa: Professor, Graduate School of Media Design, Keio University) under The Moonshot Research and Development Program’s Goal 1 “Realization of a society in which human beings can be free from limitations of body, brain, space, and time by 2050”. avatarin Inc. will conduct research and development of next-generation cloud services for utilizing avatars and perform research and development in the area of human skill acquisition and extension<sup>\*2</sup>.

\*1 Cybernetic Avatar is a concept that includes not only remote avatars and 3D images as proxies but also augmentations of physical/cognitive abilities of humans using ICT and robotics aim to make Cybernetic Avatar in the cyber-physical world of Society 5.0.

[https://www.jst.go.jp/moonshot/en/application/202002/pdf/pd\\_wg1\\_en.pdf](https://www.jst.go.jp/moonshot/en/application/202002/pdf/pd_wg1_en.pdf)

\*2 In the Moonshot Research and Development Program, avatarin will use a state-of-the-art hand robot system (<https://www.youtube.com/watch?v=rWHk4ht-boM>) for learning human skills, transferring these skills to a cybernetic avatar and expanding human abilities.

## **The Moonshot Research and Development Program**

The Moonshot Research and Development Program launched by Japan’s Cabinet Office (CAO) promotes high-risk, high-impact R&D aiming to achieve ambitious Moonshot Goals and solve issues facing future society such as super-aging populations and global warming.

<https://www8.cao.go.jp/cstp/english/moonshot/top.html>  
<https://www.jst.go.jp/moonshot/en/about.html>

## **Moonshot Goal 1 : Realization of a society in which human beings can be free from limitations of body, brain, space, and time by 2050.**

To overcome the challenges of a declining birthrate, aging population and associated labor shortage, the key is to realize a society free from the limitations of body, brain, space, and time and allow people with various backgrounds and values – such as the elderly and those with responsibilities for nursing and childcare – to actively participate in society.

Our R&D will develop core technologies related to cyborgs and avatars, called 'Cybernetic Avatar', allowing expansion of human physical, cognitive and perceptual abilities, and build the 'Cybernetic Avatar Infrastructure' in cloud while accessing social acceptance of our future society.

<https://www.jst.go.jp/moonshot/en/program/goal1/>

## **R&D Project of Cybernetic Avatar Technology and Social System Design for Harmonious Co-experience and Collective Ability**

Project Manager MINAMIZAWA Kouta (Professor, Graduate School of Media Design, Keio University)

This project aims to develop cybernetic avatar technologies that allow people to take full advantage of their abilities and share their variety of skills and experiences with many other people. Taking into account the social and ethical issues involved in the mutual utilization of physical skills and experiences, we will design a system that fits well with humans and society. By 2050 the inter-distribution of skills and experiences will allow people to link together and produce co-creations and help realize a society in which everyone can freely engage in physical activities and challenges through cybernetic avatars.

### **About avatarin Inc.**

avatarin was established as a spin-out of ANA Holdings Inc. on April 1<sup>st</sup>, 2020 with the mission "to expand humanity's potential by offering new abilities through avatars."

avatarin is focused on the following two areas to solve social issues using remote-controlled robotic avatars, which can instantaneously transport a human operator's consciousness, skills and presence to remote locations.

1) avatarin is developing an avatar robot which is easily accessible to everyone. People will be able to naturally connect to remote, real-world locations to communicate and collaborate via these avatars.

2) avatarin will establish and expand a robotic avatar infrastructure which will enable people to connect with each other and overcome the barriers of physical distance and physical constraints to support one another both in daily life and in emergency scenarios.

avatarin and the ANA Group is also accelerating the development of avatar robotic technology as the sponsor of the ongoing "ANA AVATAR XPRIZE" which was launched with the XPRIZE Foundation in 2018.

### **What is an avatar**

A robotic avatar is a system that can be remotely operated to transport the senses, consciousness, and skills of anyone by combining advanced technologies such as robotics, AI, VR, and telecommunications. Operators of these robotic avatars will be able to communicate, explore, and share their skills over great distances without physically needing to travel to those locations.

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