

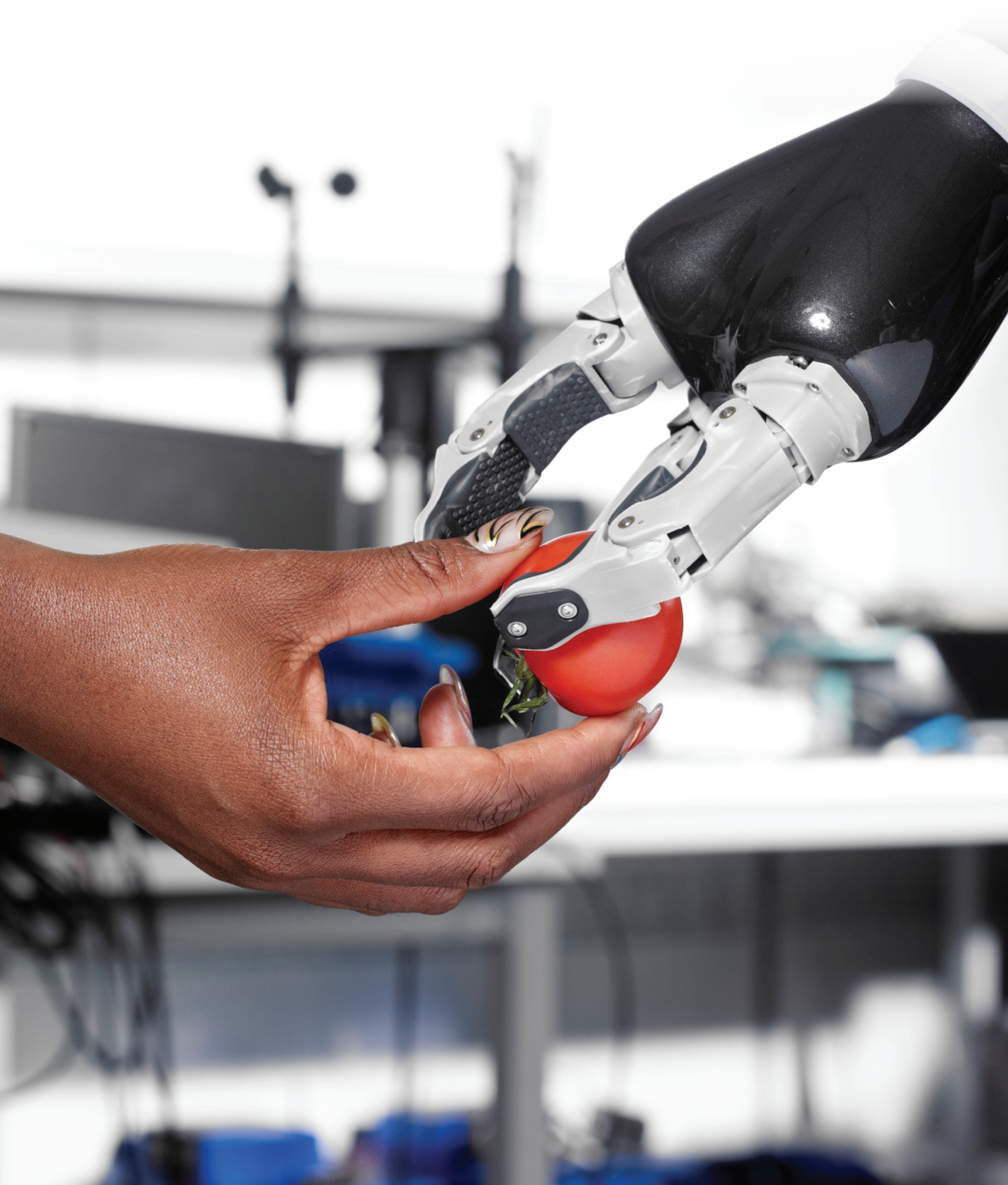
# **Fictional human and real robot: *sharing spaces with robots***

Interactive display  
Scriptwriting  
Filming sessions

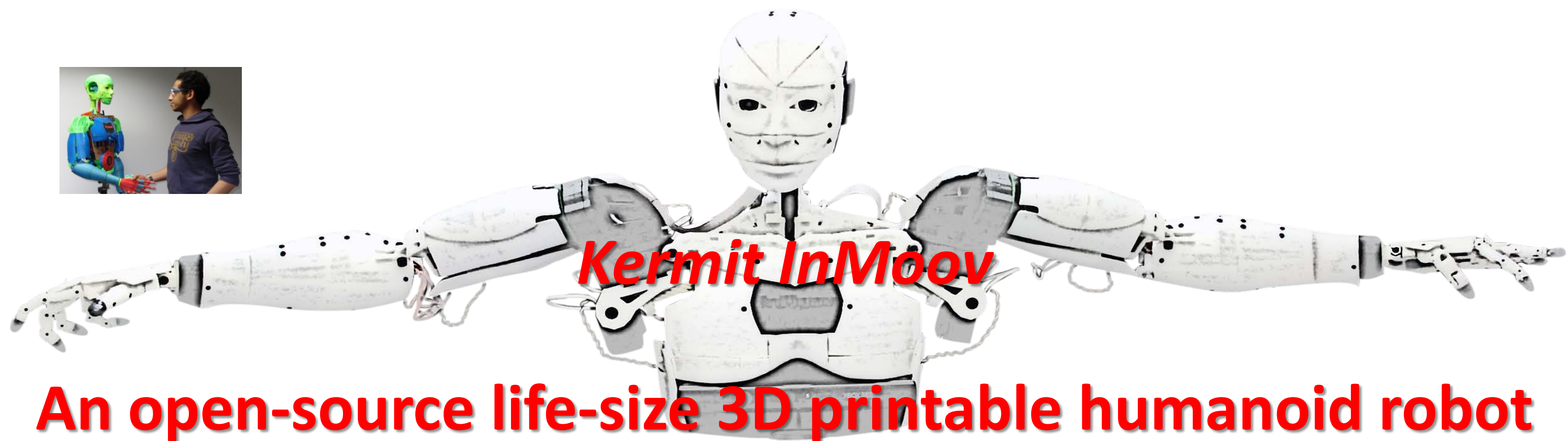
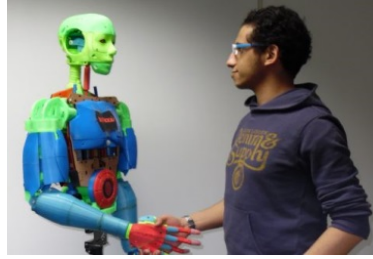
**HEARTSPACE ATRIUM**

Robots impressions exhibition

**BANK STREET ARTS**



In partnership with: Bank Street Arts | Crisis Skylight South Yorkshire | Soslimm Entertainments UK



## An open-source life-size 3D printable humanoid robot

Kermit (also referred to as Green) is based on the InMoov open source 3D printed life-size robot. The InMoov project started in January 2012 by Gael Langevin (<https://inmoov.fr>) as an open source robot hand which can also be used as a prosthetic hand. The project has since grown into a large community and many InMoov robots and variantes were built all over the world. The parts for the robot can be printed on any 3D printer with a build volume of 12x12x12cm or more, the parts are designed to be suitable for low-end consumer and desktop 3D printers.

InMoov “is conceived as a development platform for Universities, Laboratories, Hobbyist, and Makers”. Being open-source and free (CC BY-NC-SA 2.5 licence), the robot can be built and modified to perform virtually any task. The majority of the current “InMoov builders” are Hobbyists and Makers using the robot to perform simple tasks object identification and manipulation. Some robots have been equipped with speech recognition and ChatBots making it capable to making conversations with humans and even learn from them. InMoov is also the main platform used by the Robots for Good project (<http://www.robotsforgood.com/>) which aims to enable hospitalized children to “visit the outside world” from their rooms using virtual reality headsets and teleoperated InMoov robots.

# MAKE ME A ROBOT:

## The uncanny valley theory

A step by step introduction into the underlying factors behind these reactions by focusing on the psychology of the uncanny valley and discussing what psychological principles might underlie its existence. With this in place we can look at falling into the uncanny valley not from the usual perspective of ever more realistic artefacts, but instead from the viewpoint of how normal human activity (Frank E Pollick, 2009) (being factors that tailor our ways of existence culture, age and religion) might be modulated to fall into the same uncanny valley.

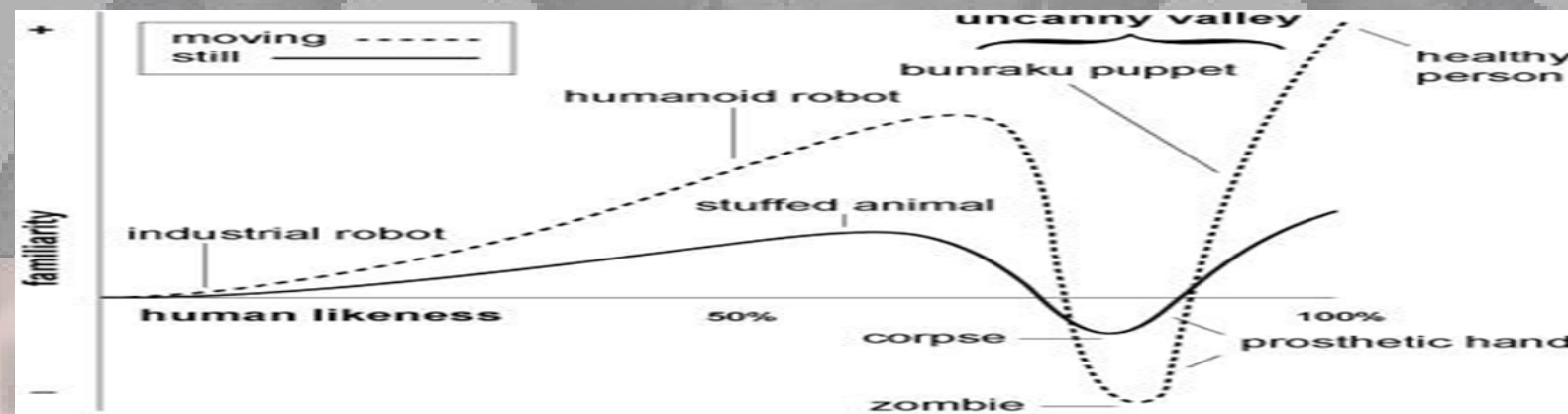
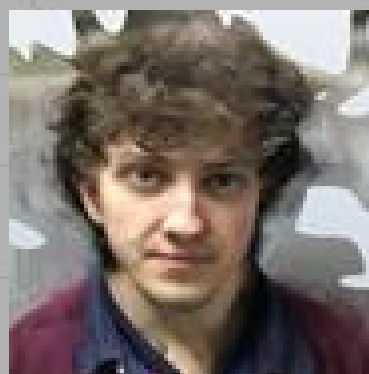


Fig. 1 Professor Masahiro Mori's original graph of the Uncanny Valley

Masahiro Mori (1970) theorized that once a robot becomes too close in appearance to being human, the consumer perception changes from 'familiar' to 'unnerving' or 'creepy' and that motion plays a central role in this process. Echoing Freud's assertion that the uncanny effect made us aware of the fear of death, Mori's diagram uses 'corpse' as the lowest depths of the valley.

With this knowledge would you like to participate in creating a 3 Dimensional robot version of yourself?



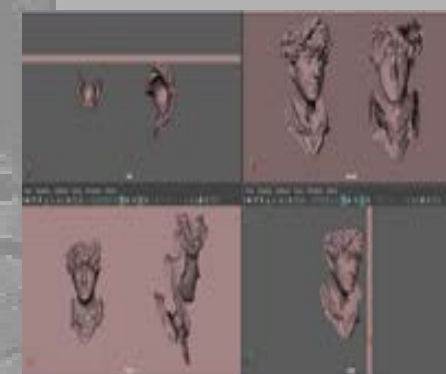
Participant recruitment



Collection of sequence of images



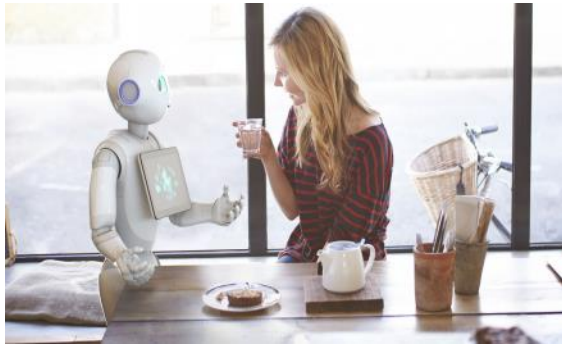
Hollow rotating face experiment



3-Dimensional meshes of participants



Participants as 3 Dimensional robots



# Pepper

## a personal robot



A *personal robot* is socially intelligent robot partners that interact with humans to promote social and intellectual benefits, work alongside with humans as peers, learn from people as apprentices, and foster more engaging interaction between people.

Pepper is a human-shaped robot, it has be designed to be a genuine day-to-day companion. Pleasant and likeable, Pepper is much more than a robot, he is a genuine humanoid companion created to communicate with you in the most natural and intuitive way, through his body movements and his voice.

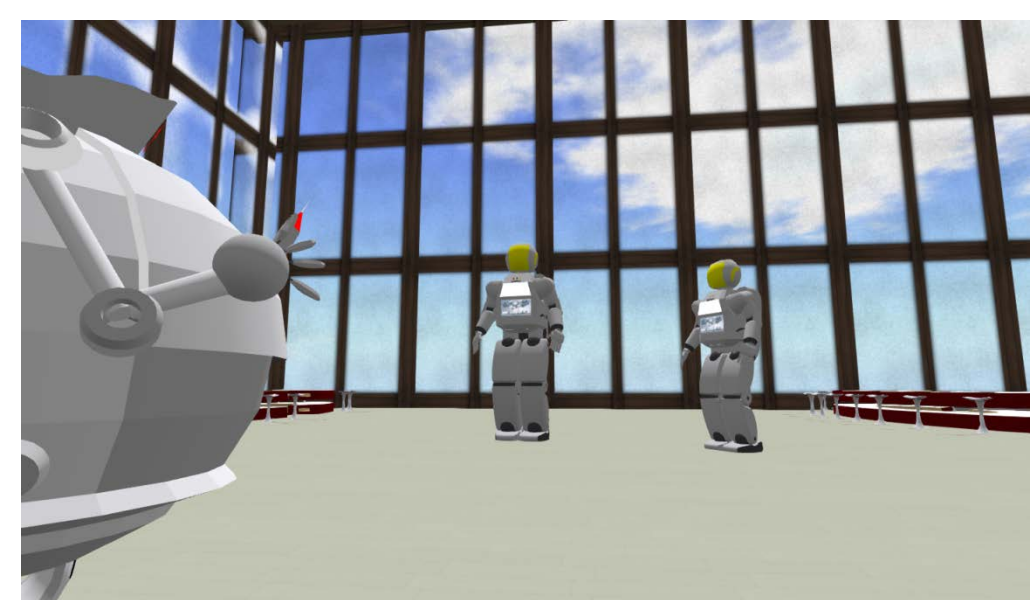
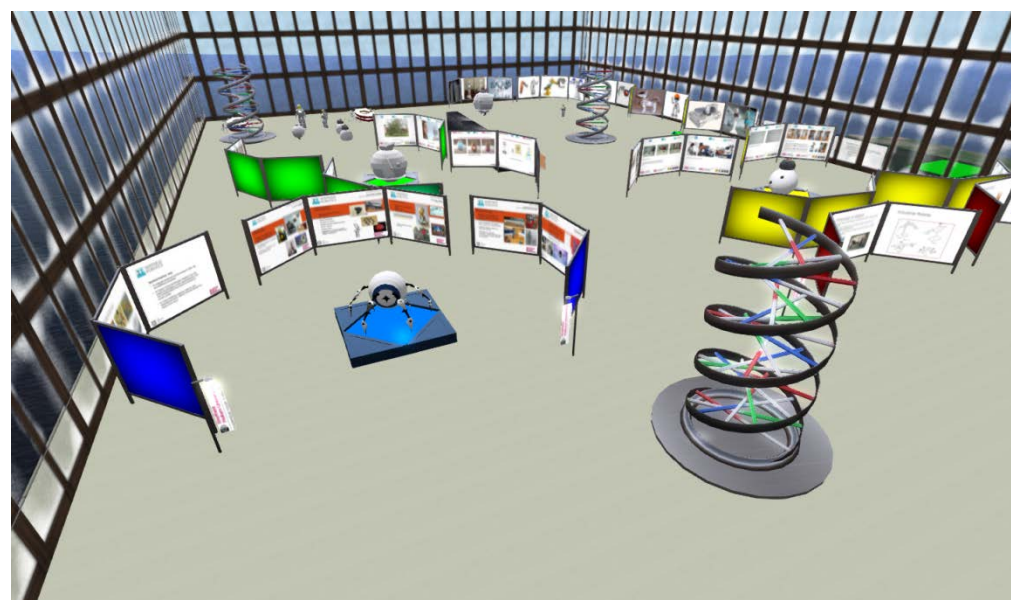
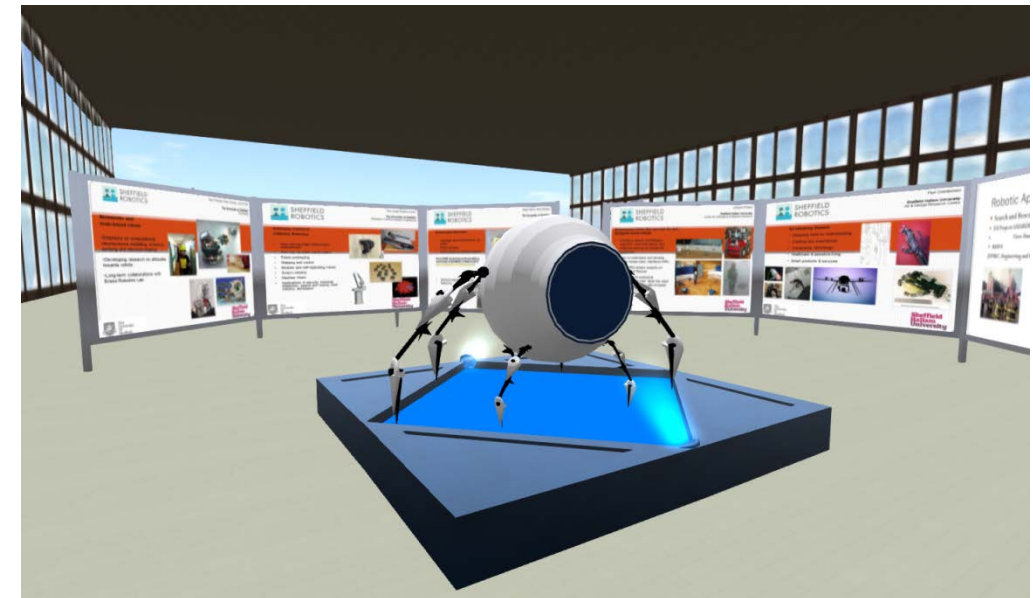
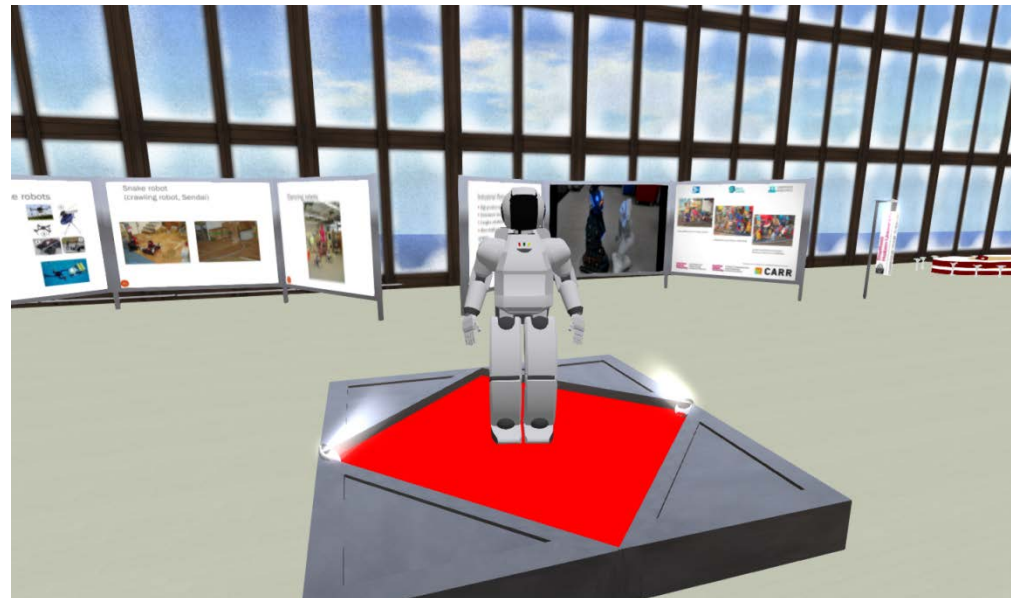
Pepper can recognise your face, speak, hear you and move around autonomously. You can also personalise your robot by downloading the software applications that take your fancy, based on your mood or the occasion. Dance, play, learn or even chat in another language, Pepper adapts himself to you!

To date, more than 140 SoftBank Mobile stores in Japan are using Pepper as a new way of welcoming, informing and amusing their customers. Pepper also recently became the first humanoid robot to be adopted in Japanese homes!



# Virtual Reality Robotic Museum

Welcome to our Virtual Museum of Robotic History and Future.  
Put the Headset on and walk through this unique museum.



The environment is VirtualSHU, developed by Dr Louis Nisiotis