

Studies on Interactive Robots

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KEYNOTE ABSTRACT

We, humans, have innate brain function to recognize humans. Therefore, very humanlike robots, androids, can be ideal information media for human-robot/computer interaction. The speaker, Ishiguro, has developed various types of interactive robots and androids so far. These robots can be used for studying on the technologies and understanding human natures. He has contributed to establish the research area of Human-Robot Interaction with the robots.

Geminoid that is a teleoperated android of an existing person can transmit the presence of the operator to the distant place. The operator recognizes the android body as his/her own body after talking with someone through the geminoid and has virtual feeling to be touched when someone touches to the geminoid.

However, the geminoid is not the ideal medium for everybody. For example, elderly people often hesitate to talk with adult humans and the adult androids. A question is what the ideal medium for everybody is. In order to investigate it, the speaker proposes the minimum design of interactive humanoids. It is called Telenoid. The geminoid is the perfect copy of an existing person and it is the maximum design of interactive humanoids. On the other hand, the minimum design looks like a human but we cannot judge the age and gender. Elderly people like to talk with the Telenoid very much. In this talk, the speaker discusses the design principles for the robots and their effects to conversations with humans.

Further, he, Ishiguro, is developing and studying autonomous conversational robots and androids recently. Especially, he focuses on embodiment, emotion and intention/desire of the robots and androids.

In addition to these robotics studies, he will discuss on our future society where we have symbiotic relationships with them in this talk.

SPEAKER'S BIOGRAPHY



Hiroshi Ishiguro received a D. Eng. in systems engineering from the Osaka University, Japan in 1991. He is currently Professor of Department of Systems Innovation in the Graduate School of Engineering Science at Osaka University (2009-) and Distinguished Professor of Osaka University (2017-). He is also visiting Director (2014-) (group leader: 2002-2013) of Hiroshi Ishiguro Laboratories at the Advanced Telecommunications Research Institute and an ATR fellow. His research interests include sensor networks, interactive robotics, and android science.