

Jiro Tanaka

Information Architecture Field, Research on Interactive Programming
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Biographical Information

March 1975 Bachelor of Science, University of Tokyo
March 1977 Master of Science, University of Tokyo
March 1984 Ph.D. in Computer Science, Department of Computer Science,
University of Utah, USA
March 1984 - December 1992
International Institute for Advanced Study of Social Information
Science, Fujitsu Limited
January 1993 - November 1998
Associate Professor, University of Tsukuba
November 1998 - March 2016
Professor, University of Tsukuba
April 2016 -
Professor, Graduate School of Information, Production and Systems,
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Research

X Reality

X Reality (XR or Cross Reality) is defined as: a form of “mixed reality environment that comes from the fusion of ubiquitous sensor/actuator networks and shared online virtual worlds. It encompasses a wide spectrum of hardware and software, including sensory interfaces, applications, and infrastructures, that enable content creation for virtual reality (VR), mixed reality (MR), augmented reality (AR), cinematic reality (CR).

We conduct the research to fuse the virtual world and the real world by mainly using the technology of augmented reality (AR).

We are also interested in gesture input in XR environment.

User interface development for the next-generation E-commerce service

Environment surrounding the E-commerce service is rapidly changing. New user interface is needed, which replaces the traditional Web-based interface. As a user interface of the next generation of E-commerce service we are focusing on Mixed Reality Environment and Gesture Input in XR environment. We develop applications and prototype Web services.

Lifelog system

Recently, it is becoming common, by wearing various sensors and mobile devices, to record the various activities of human beings. Especially, we are interested in the recall of our memory using lifelog, and the sharing of lifelog utilizing SNS information.

Software aspects of human interface.

In the past, human interface meant to understand human cognitive process, to develop new physical devices, or to evaluate the usability of physical devices.

We emphasize software aspects of human interface, i.e., it is important to write programs and make software by yourself.

**X Reality
(VR/AR/MR/360)
Fusion of Real
and Virtual World**

**Next-generation
E-commerce service
Gesture Input**

**Lifelog System
Memory Recall
Sharing of Lifelog**

Recent Publications

[1] Minghao Cai and Jiro Tanaka:

Remote Shoulder-to-shoulder Communication Enhancing Co-located Sensation.

The Twelfth International Conference on Advances in Computer-Human Interactions (ACHI 2019), 80-85, February 2019

[2] Chunmeng Lu and Jiro Tanaka:

A Virtual Shopping System Based on Room-scale Virtual Reality.

The Twelfth International Conference on Advances in Computer-Human Interactions (ACHI 2019), 191-198, February 2019

[3] Xuan Wang and Jiro Tanaka: GesID: 3D Gesture Authentication Based on Depth Camera and One-Class Classification. *Sensors* 2018, 18(10), 3265:1-3265:23, September 2018

[4] Adhi Yudana Svarajati and Jiro Tanaka:

Using Body Movements for Running in Realistic 3D Map.

20th International Conference on Human-Computer Interaction (HCI International 2018), HCI (9) 2018: 215-229, July 2018

[5] Chunmeng Lu, Li Zhou, and Jiro Tanaka:

Realizing Multi-Touch-Like Gestures in 3D Space.

20th International Conference on Human-Computer Interaction (HCI International 2018), HCI (4) 2018: 227-239, July 2018

[6] Jinghao Zhao and Jiro Tanaka:

Hand Gesture Authentication using Depth Camera.

Future of Information and Communication Conference (FICC 2018), IEEE, 683-689, April 2018