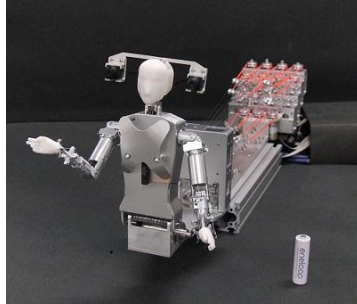


Telerobotics & Virtual Reality

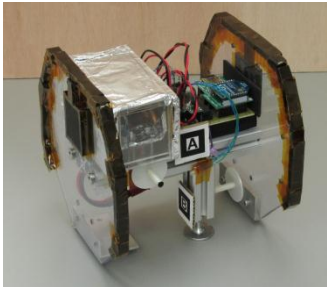
Professor Yuichi Tsumaki



Dual arm teleoperation



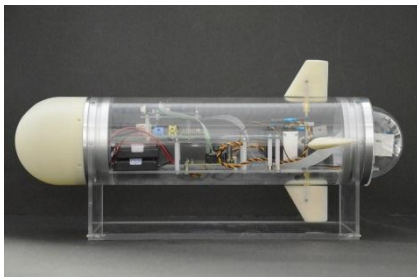
Wearable robot



Asteroid exploration rover



Haptic interface



Aqua telexistance system



Parallel mechanism

Content:

Telerobotics is a field of Engineering to control robots from a distance. It can expand human abilities beyond both space and time. Furthermore, cooperation between human and robot achieves various tasks which cannot be achieved only by either robot or human. So, it focuses on how human and robot cooperate. In other words, telerobotics requires not only robotics but also human science, human interface, system engineering, AI, etc. The technology of virtual reality also plays a very important role in telerobotics. Because telerobotics should provide a real-time sensation of being at remote site to the operator.

In our laboratory, we are studying unique research topics related to telerobotics and virtual reality: a dual arm teleoperation, wearable robot, asteroid exploration rover, haptic interface, aqua telexistance system and parallel mechanism. A combination of novel human interface and original robot mechanisms, along with proper system integration introduces unique future robot systems. We are doing research as only we can.

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