

Robotics as the Hub of Various Research Areas

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Abstract. Application fields of robotics are shifting from industrial robots to everyday robots that provide various services in our daily life. For realizing the everyday robots, we need to study more on human. We, robotisist, have to develop the interactive robots in the open environment, although we do not have sufficient knowledge on human. That is, we develop the robots based on the knowledge on human and use the robots for verifying hypothesis for understanding human. This is a new interdisciplinary framework that connect various research areas, such as cognitive science, brain science, sensor networks, mechanical engineering, and artificial intelligence. Further, it also provide philosophical questions. In this talk, I will introduce a series of robots that I have developed in Osaka University and ATR Hiroshi Ishiguro Laboratory and discuss the related fundamental issues for understanding human.