

# Social Interaction among Humans, Information and Artifacts

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**Keywords** | Human interface and interaction-related (61020)



## Research Topics

- Communication design of human artifacts
- Dementia care support using “weak robots”
- “Natural” information sharing using NUI and AR

## Research Seeds

### Communication design of human artifacts

Artifacts such as robots have recently been introduced to human society. We have explored social requirements for such artifacts to be accepted for use in human society using motion analysis, field work, and a theatrical approach. We especially have developed a speech emotion recognition method and an emotional movement generation method based on communication model with emotion. Subsequently, we applied them to support the care for dementia or elderly people using robots based on the concept of “weak robots.”



### Natural information sharing using NUI and AR

We have developed natural information sharing applications by which people can share information and can work together through operation of virtual objects displayed on a smartphone or indoors or outdoors using natural user interface (NUI) and augmented reality (AR) technology. As a part of this, we realized a picture division method on two or more smart phones. Additionally, we have been developing a historical site information providing systems for learning local area history in a primary school or local community using AR.



## Related Technology

- Motion analysis
- Application using NUI and AR
- Emotional voice analysis
- Instruction of acting and voice training