Graduate School of Engineering, Div. of Electrical, Electronic and Information Engineering

Dept. of Knowledge Science (Prof. Komatani Laboratory)

Spoken Dialogue System: machine interacting with humans using voices

Research Topics

Intelligence of machines such as the ability to talk with humans intelligently is still under development, while computation power and ability of robot locomotion have been drastically improving. To realize human-friendly and helpful robots or computers, the spoken dialogue function, which human beings have in nature, is inevitable. We study basic technologies on dialogue systems using the speech recognition technology. Our target ranges from a speech-only system such as ones on telephone to multiple embodied humanoid robots. We have also been involved in the ontology engineering, which organizes human knowledge and describes it in a machine-readable format, since knowledge is indispensable for such intelligent systems.



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Themes

- 1. Error-robust spoken dialogue system
- 2. Spoken dialogue with humanoid robots
- 3. Adaptive spoken dialogue system
- 4. Knowledge acquisition thorough dialogues
- Fundamentals of ontology engineering
- 6. Ontology development in domains and its building environments