

UC Merced

Proceedings of the Annual Meeting of the Cognitive Science Society

Title

Artificial Cognitive Systems for Human-like Situation Awareness Ability

Permalink

<https://escholarship.org/uc/item/8g55w2c5>

Journal

Proceedings of the Annual Meeting of the Cognitive Science Society, 32(32)

ISSN

1069-7977

Author

Lee, Soo-Young

Publication Date

2010

Peer reviewed

Artificial Cognitive Systems for Human-like Situation Awareness Ability

Soo-Young Lee
KAIST

Abstract: The Artificial Cognitive Systems (ACS) will be investigated for human-like functions such as vision, auditory, inference, and behavior. Especially, computational models and artificial HW/SW systems will be devised for Proactive Knowledge Development (PKD) and Self-Identity (SI). The PKD model provides bilateral interactions between robot and unknown environment (people, other robots, cyberspace). For the situation awareness in unknown environment it is required to receive audio-visual signals and to accumulate knowledge. If the knowledge is not enough, the PKD should improve by itself through internet and others. For human-oriented decision making it is also required for the robot to have self-identify and emotion. Finally, the developed models and system will be mounted on a robot for the human-robot co-existing society. Based on the computational models of PKD and SI, we would like to build functional modules for Knowledge Representation, Knowledge Accumulation, Situation Awareness, Decision Making, and Human Behavior.