

***ADVANCED ROBOTICS* Call for Papers**

Special Issue on Dynamical System Involving Symbol Processing

Editors: Prof. **Tetsuya Ogata** (Kyoto University, Japan)

Prof. **Tetsuo Sawaragi** (Kyoto University, Japan)

Prof. **Tadahiro Taniguchi** (Ritsumeikan University, Japan)

Publish in Vol. 25, No. 13 (October 2011)

SUBMISSION DEADLINE: November 30, 2010

A coming network society is a quite complex system where humans and artifacts including various automated machines and information technologies are connected and mutually affected by each other. Systems in such society should flexibly recognize the ambiguity of the real world altered by the used context. The real environment where agents such as humans and robots exist is physically continuous in space, and there is no explicit “meaning” for these agents. For generating semantic behaviors, agents have to extract the dynamical structure of the real world by active exploration with the physical bodies. The extracted information for behavior has an aspect of “symbol” in a sense of combinability and reusability. This extracting process is essential and fundamental for “symbol (semiotic) processing.” The symbol process dynamically reflects the relation between the physical world and the agent’s internal representation, and strongly relates to the problem of symbol grounding.

This special issue will present latest studies on Computational Model/Robot systems taking constructivist approach to various problems concerning “symbol process.” Papers including but not limited to the following topics are invited.

- Symbol processing in autonomous robot
- Symbol processing in human robot interaction
- Symbol processing in dynamic motion
- Symbol processing in environment recognition
- Symbol processing in speech dialogue system
- Symbol grounding problem in robot
- Symbol emergence/evolution

Submission: **Pdf format file** of the complete manuscript should be sent by November 30, 2010 to the office of Advanced Robotics, the Robotics Society of Japan through our homepage (www.advanced-robotics.org). Sample form of the manuscript is available at the homepage, too. Additionally, please send the same file to Prof. Tetsuya Ogata (ogata@i.kyoto-u.ac.jp), and Prof. Tadahiro Taniguchi (tadahiro@tanichu.com) for the confirmation.