

**CALL FOR PAPERS**  
**iCAST2015 Special Session**  
**Intuitive Human-System Interaction**  
**CO-CHAIRS**

Masao Yokota (Fukuoka Institute of Technology, Japan, yokota@fit.ac.jp)

Kenji Araki (Hokkaido University, Japan, araki@media.eng.hokudai.ac.jp)

**SCOPE of the special session**

Nowadays, great progress in robotics may well predict that a certain symbiotic world of ordinary people and robots will come true in not so far a future. In such a world, they will interact as naturally as people do alone and therefore robots will be at least required to understand exactly what people do (e.g., see, tell, hear) in their casual situations. This requirement, however, poses very high hurdles before robots at present stage while it would be very much desirable and convenient for people. One of the highest hurdles for robots can be the cognitive divide between the both entities, originated from their sensory systems of quite different properties each other. For example, people would intuitively understand the following expressions (a) and (b) so that they describe the same scene in the external world.

(a) The path sinks to the brook.

(b) The path rises from the brook.

It is, however, extremely difficult for robots to reach such a paradoxical understanding in a systematic way because these expressions are assumed to reflect not much the purely objective geometrical relations but very much human intuitiveness at perception of the objects involved. The word 'intuitive' means 'known or perceived by intuition' according to the Webster's Dictionary, where in turn 'intuition' is defined as 'direct apprehension or cognition; immediate knowledge, as in perception or consciousness, distinguished from mediate knowledge, as in reasoning'. This special session 'Intuitive Human-System Interaction' is aimed at fostering various ideas about modeling human intuition and its transplantation to computers. Given the breadth of the topic, we welcome reports on work from many perspectives, including but not limited to cognitive robotics, cognitive science, artificial intelligence, affective engineering, computational linguistics, semiotics, psycholinguistics, cognitive psychology, etc. Hence, topics of interest include, without being limited to:

- Computational Models of Intuition
- Cognitive and Psychological Models of Intuition
- Intuitive Sensory Data Structuring and Processing

- Intuitive Natural Language Processing
- Intuitive Symbolization and Semantics
- Intuitive Ontologies and Reasoning
- Models of Affective Evaluation as Intuitive Decision Making
- Models of Intuitive Sensor-Actor Coordination for Robotics
- Linguistic Manifestation of Intuitiveness

#### **SESSION ORGANIZING COMMITTEE**

- Araki, Kenji (Hokkaido University, Japan)
- Doi, Akio (Iwate Prefectural University, Japan)
- Fujioka, Hiroyuki (Fukuoka Institute of Technology, Japan)
- Lu, Cunwei (Fukuoka Institute of Technology, Japan)
- Nishino, Hiroaki (Oita University, Japan)
- Sugita, Kaoru (Fukuoka Institute of Technology, Japan)
- Tajima, Takuya (Fukuoka Institute of Technology, Japan)
- Yokota, Masao (Fukuoka Institute of Technology, Japan)
- Zock, Michael (LIF-CNRS, France)