

Special Session (SS3):

Title: Computational Awareness

Organizers:

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Introduction:

Awareness is related to a system's ability to perceive, to feel, or to develop conscious experiences. For cybernetics the study of awareness is fundamental. Compared with other fields in cybernetics community, computational awareness (CA) concentrates on approaches to gain understanding of awareness, and technologies to model, realize, and implement aware systems. The ultimate goal of CA research is to build systems that are aware, that are more autonomous and more human-like. They will use context awareness to filter out irrelevant information to make the intelligent system efficient. This special session provides an opportunity for researchers from both academia and industry to present their latest work, discuss issues and share ideas with other researchers in the CA field.

Topics of interest include, but are not limited to, the following:

Awareness theory:

Awareness mechanism and modeling
Awareness in underwater environment
Awareness in machine learning algorithms
Pattern recognition and image understanding
Awareness in agent computing
Awareness in ontology and semantics
Intention/emotion awareness
Behavior awareness

Awareness practice:

Awareness in data mining and knowledge discovery
Awareness in unmanned robotics
Virtual and augmented reality
Safety/security awareness
Context/background awareness
Awareness in medical application
Power/energy awareness