Workshop IEEEVR 2018 Germany

Body Consciousness in Natural and Artificial Environments: B.C.N.AE

Organisers: Irini Giannopulu[1] and Haruo Mizutani[1,2]
[1]iCAM, Faculty of Society and Design, Bond University, Gold Coast Australia
[2]Dwango Co., Ltd, Tokyo, Japan

Body consciousness is a particular knowledge which allows us to be informed of the existence of our body parts, our volume/shapes, our postures and movements as well as our limits in the 3D space. Dynamic per se, it is gradually developing via multi-sensory information, i.e., visual, vestibular, somatosensory, proprioceptive, at least from the beginning of life. Transcending the multitude of information which is the basis of its own structuration, body consciousness becomes relatively independent of the processes that allowed its elaboration. Enabling conscious but also unconscious body representation, this unitary body perception is an "egocentric reference" allowing us to act in the natural 3D space. It is thought of as a system that ensures our spatial orientation. Its richness depends on the diversity of spatial experiences. Body consciousness is constantly involved in postural adjustment and the relation to objects, including the intention that we attribute to them. It depends on the integrity of anterior and posterior brain areas. Namely, both structuration and maintenance of body consciousness are thought to involve bilateral activity of the inferior parietal cortex, temporo-parietal as well as pre motor cortex. The consolidation of body parts additionally implicates occipito-parietal, occipito-temporal and prefrontal brain areas. Disorders of body consciousness, especially asomatognosia/hemiasomatognosia, pain asymbolia, neglect, hemiplegia, tetraplegia appearing at the neurologists, psychologists but also at the engineers and roboticians interests. The aim of the workshop is to bring together neuroscientists, psychologists, engineers, computer scientists, artists and roboticians, to explore body consciousness in natural environments via fundamental studies and in artificial environments via virtual/ augmented/mixed reality and/or robots. We expect between 15 to 20 participants.

The workshop will be held in a half-day and it will consist on in a series of short presentations and a panel of discussion.

We invite submissions of papers or preliminary research results in the form of papers following ieeevr 2018 formatting guidelines (http://junctionpublishing.org/vgtc/Tasks/camera_tvcg.html). Research papers should not exceed 4 pages and they should give the state-of-the-art based on human factors, VR interaction including hardware, and algorithms. Topics include but are not limited to typical and/or atypical children, adults and elderly (i) body/postural development, (ii) spatial navigation, (iii) visuo-vestibular and proprioceptive interactions, self-motion perception.

Submissions should be directed to igiannop@bond.edu.au by January 30 2018. Notifications of acceptance will be given by March 11 2018, Camera-ready March 03 2018

All papers will be reviewed by the scientific committee members.