This special issue completes the set of papers that were first presented at the 8th Annual International Workshop on Presence: PRESENCE 2005 held at University College London (UK), September 21–23, 2005. The first papers from this conference were introduced in Presence: Teleoperators and Virtual Environments, 15(4).

Four of the papers could be viewed together since they stem from a recently completed European Project PRESENCIA in which all the authors participated. The paper by Friedman et al., in the Forum section, describes a large scale experimental study of presence and a multi-level approach to the analysis of the resulting experimental data. They argue that presence-related data may usefully be shared and made available in standardized form, and that this would further the emergence of a scientific study of presence. Specific aspects of that same experiment are also considered in the paper by Slater et al. in this issue (not part of the Special Issue).

The paper by Brotons-Mas et al. discusses the role of place-cell neurons in the integration and processing of spatial information and the generation of spatial presence. Their paper demonstrates the deep insight that can be attained by considering the concept of presence from a neuroscience point of view; in particular it helps to explain some well-known results in navigation in VEs.

The paper by Leeb et al. essentially applies neuroscience to the achievement of a new kind of interface within virtual environments: moving through a VE by thought. Participants can think of moving their feet and automatically move forward within a VE, or think of their hand and stop—through the exploitation of brain-computer interface technology. Although such research still has a long way to go before it becomes practically useable in the everyday sense, this paper describes results that can be achieved today, and the research field has useful applications in the world of disability.

The paper by Hecht et al. examines the issue of multimodality in the context of response times rather than presence directly. They describe an experiment that demonstrates that the greater number of modalities (visual, auditory, and haptic) that are combined in the display of virtual information, the faster the response time of participants within a particular experimental framework. They argue that this could be used as the basis for understanding the cognitive mechanisms behind greater presence being associated with greater multimodality.

The remaining two papers deal in different ways with subjectivity of experience in virtual reality. Parés and Parés argue that there must be a model of subjective experience that designers of virtual environment systems can exploit, and they go on to present such a model. Their argument is an important one—since it is clear that there needs to be a virtual reality equivalent of the famous model-view-controller paradigm that came out of the Smalltalk approach to object oriented programming in the late 1980s.

Finally, Herrera et al. discuss the relationship between the concepts of agency and presence. They take autism as a particular example of a type of participant within a VE who cannot act “as if” the experience were true, but who rather experience agency—as a relationship between themselves and their environment. Each of these last two papers in the Special Issue presents new viewpoints about virtual environments and presence, and we hope that these will stimulate further debate and further research.

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