

Scientific/Educational Workshop

Workshop title

Interactive Computer Play for pediatric motor therapies: emerging technologies in clinical practice

Workshop organizer

Daniela Chan-Viquez (Bloorview Research Institute)

Speakers

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Workshop goals

- 1) Identify the different technologies used in interactive computer play (ICP)-based therapies, and understand current scientific evidence informing their use for pediatric motor rehabilitation
- 2) Identify emerging trends in the design of ICP technologies and interventions, included mixed and augmented reality and social gaming.
- 3) Share their hands-on experience with a range of novel ICP technologies being developed at the Bloorview Research Institute
- 4) Discuss potential advantages and limitations associated with the use of ICP technologies for pediatric rehabilitation

Abstract

Interactive computer play (ICP) has been defined as “any kind of computer game or virtual reality technique where the child can interact and play with virtual objects in a computer-generated environment” (Sandlund et al, 2009; p. 173). ICP technologies are increasingly being used to engage children with developmental disorders in motor therapies. However, there is a gap in our understanding of how to best design ICP technologies for therapy purposes, which calls for greater collaboration between families, clinicians and developers. To some extent, this gap may also account for the limited confidence/knowledge with which clinician’s tend to use these technologies for their client’s individual rehabilitation purposes. ICP involves an array of possibilities that create an enriched training environment and allows custom interventions. The aim of this workshop is to provide a broader knowledge about ICP technologies and its clinical application in pediatric rehabilitation. The workshop will include three short lectures that will: 1) introduce available ICP technologies and the current state of evidence with respect to pediatric motor outcomes, 2) identify current gaps and new directions for ICP research and design, and 3) discuss how we can establish clinical best practices for ICP-based therapies. Following this lecture series, participants will have the opportunity to interact with five novel ICP technologies guided by experts in the field. Finally, a SWOT (strengths, weaknesses, opportunities and threats) analysis will be carried out by the participants with respect to the use of the ICP technologies tried at the workshop, and their potential application in pediatric rehabilitation settings.