

Hands-on workshop with Stéphane Bouchard, Ph.D.

Mind XR conference | Wednesday morning, 2025 June 25

Practical considerations in the use virtual reality for exposure-based intervention in the treatment of anxiety disorders, OCD, PTSD, addictions and body image dissatisfaction

A bibliometric study by Guan et al. (2025) examined the 100 most-cited papers on mental health and virtual reality. They listed Stéphane Bouchard in both of their two short lists of the most impactful scholars. He was found to be among the 15 scholars who have published two or more of the most-cited papers as the first author, and also as the corresponding author.

The use of virtual reality (VR) is rapidly gaining traction as an innovative tool for emotional regulation and the treatment of anxiety disorders, obsessive-compulsive disorder, post-traumatic stress disorder, addictions and body image dissatisfaction (ranging from anorexia to social physique anxiety in individuals with obesity). Innovations have often been driven by creativity, clinical intuition, or classical approaches to treatment mechanisms (e.g., habituation). However, this presentation argues for a more rigorous grounding in neuroscience, contemporary theories of learning and emotion, and evidence-based practice.

The workshop will be divided into three parts. It will begin with anxiety and related disorders, then move on to addictions, and conclude with the use of VR when working with people with body image dissatisfaction and disturbance. For each section, the presenter will provide a brief overview of key cognitive-behavioral and neuroscientific models relevant to the disorder. The role of exposure will be described with an emphasis on the distinct mechanisms and therapeutic targets which vary significantly between different clinical applications. In addition, the presentation will highlight critical distinctions between effective and counterproductive therapeutic strategies. Clinical examples will be provided to illustrate these concepts in practice. A review of selected studies will also highlight the benefits and limitations of VR as a therapeutic tool. The last 30 minutes of the workshop will focus on the relative role of presence and the management of unwanted negative side effects induced by immersion in VR (cybersickness). This workshop is part of a series of workshops developed in collaboration with the Erasmus Mundus Joint Master in Cyberspace Behavior and E-therapy illustrating evidence-based clinical applications.

After this workshop, participants will be able to:

- 1) Outline the scientific results about exposure in VR for all anxiety and its related disorders, addictions and body image dissatisfaction.
- 2) Identify the key ingredients relevant to use VR and how they differ between each clinical condition.
- 3) Know how to include VR in CBT to approach creatively the use of a variety of software.
- 4) Recognize and deal with cybersickness and take necessary clinical precautions.
- 5) Describe how to increase the sense of presence in order to make VR work more efficiently or to deal with low level of immersion.
- 6) Initiate a discussion about the emergence of new products and start-ups making claims about the role of VR in the treatment mental disorders.