

How to Design HX: Applying Interaction Design to Haptic Experiences

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Abstract

Interaction designers follow an established process to create effective systems. Haptic technology, now maturing, can now fit into this process, but presents unique challenges. To create haptic experiences, designers need to know what changes and how to work with this emerging modality.

In this presentation, I will outline the major activities used in interaction design, and describe how each can be adapted to haptics. Drawing from several studies conducted with hapticians, or makers of haptics, I will describe the problems you are likely to encounter with working with haptics, and possible solutions when you try to create haptic experiences. After this presentation, you will be well-equipped to think about interaction design with haptic technology.

Speaker

Oliver Schneider is an Assistant Professor, Human-Computer Interaction (HCI) researcher, and haptician at the University of Waterloo (Faculty of Engineering, Department of Management Sciences). His work combines HCI and haptics, focusing on understanding the challenges facing hapticians (makers of haptics) and developing tools to support them in creating haptic experiences. Oliver completed his PhD in Computer Science under the supervision of Karon MacLean (2016, University of British Columbia) and holds an MSc (2012, University of British Columbia) and BSc Honours (2010, University of Saskatchewan). From 2017-2018, Oliver was a Postdoctoral Scholar with Patrick Baudisch at the Hasso Plattner Institute in Potsdam, Germany, partially supported by a Natural Sciences and Engineering Council of Canada Postdoctoral Fellowship (NSERC PDF). Oliver has also collaborated with Disney Research on novel haptic interactions as an intern and then consultant. Oliver's work has been published in venues including ACM CHI and UIST; IEEE Haptics Symposium, EuroHaptics, and World Haptics; and the International Journal of Human-Computer Studies (IJHCS).