# Conveyor World: Mixed Reality Game on Physically Actuated Game Stage

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CHI'17 Extended Abstracts, May 06-11, 2017, Denver, CO, USA
ACM 978-1-4503-4656-6/17/05.
http://dx.doi.org/10.1145/3027063.3049784

## Abstract
Since the exploration of virtual worlds began, the interaction has steadily improved, gradually blurring the border between the real world and the virtual world. Although most research has emphasized virtual properties, attempts that used actuation have also leveraged physical properties, making real objects responsive and representable as themselves in a mixed reality world. A seamless connection that utilizes physical actuation is expected to provoke compelling immersive experiences, specifically in entertainment gaming. We develop an immersive mixed reality game environment using an actuated surface as a game stage. One game player creates the game environment by arranging tangible objects; those objects linearly flow and interact with a virtual character manipulated by another player. We expect that game enjoyment could be leveraged while being highly immersed into mixed reality game world. We hope our work inspires in configuring physical actuation as game component in the field of mixed reality game.

## Author Keywords
Mixed Reality; Actuation; Tangible User Interfaces; Game Design

## ACM Classification Keywords
H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.