

CMSC 498W

Lecture 22

2016-04-26

Case Study:  
VR for Sports Training

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**Tele-immersive environments for rehabilitation  
activities: an empirical study on proprioception**

Kenton McHenry · Peter Bajcsy · Mike Frogley ·  
Rob Kooper

Multidim Syst Sign Process (2013) 24:317–330

# Rehabilitation

- Paraplegics lose
  - Touch
  - Pain
  - Kinesthetic sense (Proprioception)
- Prone to collisions, injuries
- Replace lost proprioception with training

# Rehabilitation



McHenry et al.

## Training

- Low risk of injury, low wear
- Explore what-ifs
- Perform repetitions
- Replays / Analysis

## Training

### Sports Training and Virtual Reality: Challenges in Making the Physical, Virtual

<http://on-demand.gputechconf.com/gtc/2016/video/S6752.html>

# Light-field VR

## Computational Displays for Virtual and Augmented Reality

<http://on-demand.gputechconf.com/gtc/2016/video/S6738.html>