



## Immersive VR Guardians – Improving VR Gameplay through user-centered safety system design

### Open Bachelor/Master Thesis

Have you ever played a VR game? Whenever you reach the boundary of your real-world play area (which quickly happens in average households), a grid will appear in front of you and will probably ruin your illusion of being in that fantastic VR world within seconds. Safety mechanisms are essential for secure game play in VR, but do they really need to have a standardized appearance that probably does not match with the VR world that you are visiting?

#### Research Goal

The goal of this project will be to enhance built-in guardian systems for VR. In order to achieve this, you will focus on certain aspects of such systems and conduct a structured analysis to find out how these aspects could be improved to increase user experience. Possible aspects that you may focus on are the sensory representation of collision warnings, collision prevention systems or innovative customization mechanisms to match such systems with various VR worlds. Your goal will be to optimize guardian systems in terms of presence, usability, and safety in order to provide better VR experiences.

**Skill requirements:** Unity and/ or C# (at least beginner)

**Never tried VR?** Just contact me for a trial at the institute.

Annalisa Degenhard  
Institut für Medieninformatik  
O27 / 3305

[annalisa.degenhard@uni-ulm.de](mailto:annalisa.degenhard@uni-ulm.de)

