Research Aim:

To explore and create novel sound design strategies that significantly improve player immersion in video games, with a special emphasis on dynamic audio environments that respond to player actions and emotional states.

Research Hypothesis:

Adaptive and context-sensitive sound design that responds dynamically to player activity and game status will considerably boost observed immersion levels when compared to typical static audio implementations in video games.

Research Questions:

1. How do various audio design parameters (spatial location, frequency range, and loudness variation) affect players' sense of presence and emotional engagement in gaming environments?
2. What sound design strategies are most effective for achieving psychological immersion in various gaming genres (horror, adventure, simulation, etc.)?
3. To what extent may real-time audio adaptation based on player behavior measurements improve perceived immersion over pre-determined sound environments?

Inspirational Sources:

- Collins, K. (2008). Game Sound: An Introduction to the History, Theory, and Practice of Video Game Music and Sound Design. MIT Press.
- Grimshaw, M., & Garner, T. (2015). "Sonic Virtuality: Sound as Emergent Perception." Oxford Handbook of Virtuality, Oxford University Press, 213-230.
- Jørgensen, K. (2011). "Time for new terminology? Diegetic and non-diegetic sounds in computer games revisited." Game Sound Technology and Player Interaction: Concepts and Developments, 78-97.
- Nacke, L., & Grimshaw, M. (2011). "Player-game interaction through affective sound." Game Sound Technology and Player Interaction: Concepts and Developments, 264-285.
- Ekman, I. (2013). "On the desire to not kill your players: Rethinking sound in pervasive and mixed reality games." FDG '13: Proceedings of the 8th International Conference on the Foundations of Digital Games, 142-149.