

Cyprus University Of Technology  
Department of Multimedia and Graphic Arts

# EMMA

Researching the human reaction to fear, agony, empathy and how to provoke them  
using the VR technology as a medium

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This Thesis is submitted to complete the obligations of the degree  
Department of Multimedia and Graphic Arts (Multimedia)

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## DEDICATION

I would like to dedicate this thesis to my family, my wife, Amalia and my two beautiful daughters that has changed my life Galatia and Andria, With out there support I wouldn't be able to come this far, thank you for all your support I know it was hard, Love you.

Special thanks to my Supervising Professor, Prof. Doros Polydorou for his trust, his impactful and valuable guidance, he was always there when i needed any help or i was in a dead end, Thank you for guiding me through this and the outcome is a project i can be proud of.

What can i say about my friends, when i needed them they where there with out hesitation Andrew Theocharides and Chloe Anastasia Antoniadis for lending me there voices, Andreas Panagiotou that has compose those beautiful soundtracks, Fanis Mahmalat for his help about the questioners, words cant describe my gratitude, Thank you.

A big thank you for who ever has helped with the testing of the experience, the data that where gathered was a tremendous help on the final implementation.

# EMMA

Case study about Human reaction to fear and emotions  
and how to provoke them using VR

Constantinos Neokleous 2021

## Thesis Assets Link:

[https://drive.google.com/drive/folders/1\\_0X3lqN8llqPO97MhdmSS4ksojuYyOdx?usp=sharing](https://drive.google.com/drive/folders/1_0X3lqN8llqPO97MhdmSS4ksojuYyOdx?usp=sharing)

**Abstract:** This work aims to investigate immersion of the horror/atmospheric games that utilizes VR setting. A literature review will be undertaken to investigate immersion techniques in both horror movies and atmospheric video games. Following from there, a narrative will be build and a number of scenes will be composed to put in practice the various methodologies identified in the literature. All assets used in the scenes will be original content created for the purpose of this research. A user testing will be conducted, and the collected data will be used to refine the scenes.

**Keywords:** fear, agony, confusion, VR.

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# 1. Introduction

The VR technology is the medium that has the ability to immerse you like no other, there are some VR games of the Horror genre, that has manage to give the filling of fear but most of them are relying on jump scares to accomplish the horror element, the environment, the atmosphere and the sound effects are sometimes overlooked by the developers and as a consequence the experience suffers.

Therefore the main goal of this research is to produce a VR experience that will be able to immerse the user in a word where sadness, desperation and empathy will be the main filling of the user, to accomplished that there was a need to start with gathering the required data, to do that I had study video games and movies literature based on horror and fear, and how they have accomplish there task, after the required data where analysed I have implement that on the VR experience that was build using Unity engine.

## 2. Main aims of the project

- 1) Research on games and film literature that have succeeded to provoke empathy, confusion, agony etc.
- 2) Use this knowledge to make a VR experience-game that will have specific interactions and envirometns designed to envoke targeted emotion like empathy, sadness etc.
3. Conduct a user study
4. Refine the scenes based on the user study results