

Development of a vibrotactile stimulation system for cognitive rehabilitation

Master Thesis

In partial fulfillment of the requirements for the degree

"Master of Science in Engineering"

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Mechatronics & Smart Technologies

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Declaration in Lieu of Oath

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Acknowledgement

Text
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Kurzfassung

[illegible]

Schlagwörter: Schlagwort 1, Schlagwort 2, Schlagwort 3, Schlagwort 4, Schlagwort 5

Abstract

[illegible]

Keywords: Keyword 1, Keyword 2, Keyword 3, Keyword 4, Keyword 5

Contents

1	Introduction	1
1.1	Motivation and Problem Statement	1
1.2	Objectives of the Thesis	1
1.3	Structure of the Thesis	1
2	Theoretical Background	2
2.1	Cognitive Rehabilitation: Concepts, Methods, and Target Groups	2
2.2	Vibrotactile Stimulation: Principles and Therapeutic Applications	2
2.3	Actuation Technologies for Haptic Feedbacks	2
2.4	Voice Coil Actuators for Vibrotactile Stimulation	2
2.5	Overview of Existing Vibrotactile Stimulation Systems	2
3	Analysis of the Current VCA-Based System	3
3.1	Hardware Components (Voice Coil Actuators, Control Electronics, Sensors)	3
3.2	Software Architecture and Control Strategies	3
3.3	Limitations and Identified Challenges	3
4	Formeln	4
5	Referenzen und Zitate	5
6	Zusammenfassung und Ausblick	VI
	Bibliography	VIII
	List of Figures	IX
	List of Tables	X

1 Introduction

1.1 Motivation and Problem Statement

[1], [2]

[3]

[4], [5], [6]

1.2 Objectives of the Thesis

Erläutern Sie an dieser Stelle *genau* was ihre Aufgabe ist. Gegebenfalls grenzen Sie auch die Teile aus, welche nicht im Umfang der Arbeit liegen. Dies kann Ihnen gegen Ende ihrer Arbeit bei der Argumentation helfen.

1.3 Structure of the Thesis

Geben Sie in diesem Abschnitt eine grobe Vorausschau auf den Aufbau der Arbeit. Die Arbeit könnte empirisch motiviert sein und mit der Auswertung eines Experimentes beginnen oder theoretisch und somit logischerweise mit einem Theoriekapitel beginnen.

2 Theoretical Background

2.1 Cognitive Rehabilitation: Concepts, Methods, and Target Groups

Multidisziplinäre Ansätze [3]

[7]

2.2 Vibrotactile Stimulation: Principles and Therapeutic Applications

[7]

[8, 9, 10, 11, 12, 13, 14, 15, 16]

2.3 Actuation Technologies for Haptic Feedbacks

2.4 Voice Coil Actuators for Vibrotactile Stimulation

2.5 Overview of Existing Vibrotactile Stimulation Systems

[14]–[22] zeigen Wirksamkeit bei AD

3 Analysis of the Current VCA-Based System

3.1 Hardware Components (Voice Coil Actuators, Control Electronics, Sensors)

3.2 Software Architecture and Control Strategies

3.3 Limitations and Identified Challenges

4 Formeln

5 Referenzen und Zitate

6 Zusammenfassung und Ausblick

Bibliography

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List of Figures

List of Tables