Master WAVES

(Waves, Acoustics, Vibrations, Engineering and Sound)

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"Acoustic Frequency Response Modelling of Multi-Bubble Compounds"

Subtitle

Supervised:

Tutor:

Academic supervisor: Emilie Franceschini

Place, month/2024

Abstract

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Dedication

To mum, and dad, and two lovely cats

Declaration

I declare that no cats have suffered during the experiments

Acknowledgements

I want to thank all the people who didn't disturb me during this master thesis writing process

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0.1 Introduction

your introduction with a citation **leblond_acoustic_2014**.

0.2 Chapter Two Title

Section 2 is devoted to the theoretical part of the master dissertation. Following concepts are to be covered:

- beamforming
- cross-correlation, matched filtering
- sonar equation
- bubble backscattering, natural frequency, Thuraisingham and Anderson models
- multiple backscattering
- reconstruction filter
- sound propagation concepts

0.2.1 Beamforming

0.3 Chapter Three Title

This section will include the simulation and programming part of the work, experimental part

0.3.1 Simulation of bubble response

0.3.2 Experiment of measuring bubbles

0.4 Chapter Four Title

This section covers the comparison between simulation and experimental results. Their constraints and drawbacks are highlighted.

Results of extracting the bubble response are described.

The simulation of the response from the experiment is trialed.

0.5 Conclusion