

## I. IDENTIFICATION DATA

<b>Thesis title:</b>	Click here to enter text.
<b>Author's name:</b>	Click here to enter text.
<b>Type of thesis :</b>	Choose an item.
<b>Faculty/Institute:</b>	Choose an item.
<b>Department:</b>	Click here to enter text.
<b>Thesis reviewer:</b>	Yi-Wen Liu
<b>Reviewer's department:</b>	Click here to enter text.

## II. EVALUATION OF INDIVIDUAL CRITERIA

<b>Assignment</b>	<b>Choose an item.</b>
<i>How demanding was the assigned project?</i>	
Please insert your comments here.	

<b>Fulfilment of assignment</b>	<b>fulfilled</b>
<i>How well does the thesis fulfil the assigned task? Have the primary goals been achieved? Which assigned tasks have been incompletely covered, and which parts of the thesis are overextended? Justify your answer.</i>	

<b>Methodology</b>	<b>Choose an item.</b>
<i>Comment on the correctness of the approach and/or the solution methods.</i>	
Please insert your comments here.	

<b>Technical level</b>	<b>Choose an item.</b>
<i>Is the thesis technically sound? How well did the student employ expertise in the field of his/her field of study? Does the student explain clearly what he/she has done?</i>	
Please insert your comments here.	

<b>Formal and language level, scope of thesis</b>	<b>Choose an item.</b>
<i>Are formalisms and notations used properly? Is the thesis organized in a logical way? Is the thesis sufficiently extensive? Is the thesis well-presented? Is the language clear and understandable? Is the English satisfactory?</i>	
Please insert your comments here.	

<b>Selection of sources, citation correctness</b>	<b>Choose an item.</b>
<i>Does the thesis make adequate reference to earlier work on the topic? Was the selection of sources adequate? Is the student's original work clearly distinguished from earlier work in the field? Do the bibliographic citations meet the standards?</i>	
Please insert your comments here.	

<b>Additional commentary and evaluation (optional)</b>
<i>Comment on the overall quality of the thesis, its novelty and its impact on the field, its strengths and weaknesses, the utility of the solution that is presented, the theoretical/formal level, the student's skillfulness, etc.</i>
Please insert your comments here.



### III. OVERALL EVALUATION, QUESTIONS FOR THE PRESENTATION AND DEFENSE OF THE THESIS, SUGGESTED GRADE

*Summarize your opinion on the thesis and explain your final grading. Pose questions that should be answered during the presentation and defense of the student's work.*

The grade that I award for the thesis is **B - very good**.

**In this thesis, the student demonstrates comprehensive understanding of otoacoustic emissions (OAEs) in terms of their generation mechanisms and signal processing strategies. In particular, two techniques were implemented for estimating the phase-gradient delay of SFOAE and CEOAE. The thesis contains novel research in that it utilizes a nonlinear cochlear model to explore the delay of various OAE components. This is novel when compared to previous research on the same topic, because different phenomena emerge at different stimulus level. To my eyes, some perplexing findings are obtained, including that (1) the NL component and the CR component are out of phase (Fig. 17), (2) the NL component has a longer delay (p. 27), and (3) deviation of the CR delay from the reference is largest at low frequencies (Fig. 28). As I read the thesis, I was scratching my head to contemplate what's going on, so it would be of great interest if the author can attempt to explain these findings with physical insight. Nevertheless, the signal processing techniques and the simulation of OAEs mostly seem rigorous, which I think are far beyond expectation for a B.S. thesis. Therefore, my overall evaluation is "B-very good".**

Date: 5.6.2023

Signature: Yi-Wen Liu