# Investigating Factors Affecting the Resonant Frequency of Cantilever Beams

To what extent does changing the length of a circular cantilever beam affect its resonant frequency, and how well does the theoretical model predict this relationship?

International Baccalaureate Physics Extended Essay

Word Count: [UPDATE THIS]

# Table Of Contents

# 1 Abstract

Write something here

# 2 Introduction

Cantilever beams are commonly used in a wide range of fields, historically, they were used in construction of buildings, bridges etc., but in the present age, the use of such simple structures has widened.

"A cantilever beam is a beam having one end rigidly fixed and the other end free." (Hool and Johnson 1929)

# 3 Background Information

## 3.1 Fourier Transform

# 4 Methodology

## 4.1 Theory

## 4.2 Materials

# 5 Results And Analysis

## 5.1 Uncertainty Analysis

# 6 Discussion

# 7 Conclusion

# References

Hool, George A. and Nathan C. Johnson (1929). *Handbook of Building Construction*. First. Vol. Vol. 1. McGraw-Hill Book Company, Incorporated, p. 1920.