**MARMARA UNIVERSITY**

**FACULTY OF ENGINEERING**



**DESIGN AND PROGRAM A HEALTH NEWS RSS AGGREGATOR**

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**GRADUATION PROJECT REPORT**

Department of Electrical and Electronics Engineering

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**MARMARA UNIVERSITY**

**FACULTY OF ENGINEERING**

**DESIGN AND PROGRAM A HEALTH NEWS RSS AGGREGATOR**

**by**

**Atilla Gündoğan**

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**SUMBITTED TO THE DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING IN**

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**OF**

**BACHELOR OF SCIENCE**

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Shape

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**Atilla Gündoğan**

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# ABSTRACT

RSS Readers was a kind of a social media in the 90s before Facebook and its competitors came along. Today it finds its place in avid readers

Truss optimization has been an attractive area for researchers in recent years. Researchers are interested in this issue to find out how they can reduce the weight and cost while the structure satisfied with the physical constraints. To accomplish these requirements, trial and error method cannot be used because lots of trials will be required. Therefore, optimization methods should be used to find an optimum structure.

# LIST OF SYMBOLS

**Cd:** coefficient of derivative control

# ABBREVIATIONS

**ADC:** Analog Digital Converter

**ANN:** Artificial Neural Network

**DAC:** Digital Analog Converter

**HVAC:** Heating, Ventilating and Air Conditioning

**NG:** Negative

**PID:** Proportional Integral Derivative

# LIST OF FIGURES

[Figure 1.1 A sample figure. 1](#_Toc534727322)

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# INTRODUCTION

Introduction should include the general information about the physics/math/or whatever behind your problem. Statement of the problem and need for the study (What is your motivation for this thesis? Define the problem clearly and give the importance of the problem?). Sub problems (Mention about your secondary motivations)

A sample equation:

|  |  |
| --- | --- |
|  | (1.1) |



Figure 1.1 A sample figure.

Table 1.1 A sample table

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Expression | Values | Description |
| vR | 5268[m/s] | 5268 m/s | Rayleigh wave velocity |
| f0 | 100[MHz] | 1.0000E8 Hz | Target frequency |
| lambda0 | vR/f0 | 5.2680E-5 m | Target wavelength |
| w0 | lambda0/4 | 1.3170E-5 m | Electrode width |
| h0 | 5\*lambda0 | 2.6340E-4 m | Electrode length |
| gap\_port | 10\*lambda0 | 5.2680E-4 m | Horizontal gap between ports |
| gap\_term | lambda0 | 5.2680E-5 m | Vertical gap between terminals |
| N0 | 3 | 3 | Number of electrodes |
| pitch | 4\*w0 | 5.2680E-5 m | Pitch of electrodes |
| gap\_vert | (3+2)\*lambda0 | 2.6340E-4 m | Distance of electrode from substrate wall along vertical direction |
| gap\_horiz | (3+2)\*lambda0 | 2.6340E-4 m | Distance of electrode from substrate wall along horizontal direction |
| t0 | 2\*lambda0 | 1.0536E-4 m | Substrate thickness |
| N\_cyc | 20 | 20 | Number of cycles to simulate |
| h\_max | lambda0/5 | 1.0536E-5 m | Maximum mesh size |
| CFL | 0.2 | 0.2 | CFL number |
| tstep | CFL\*h\_max/vR | 4.0000E-10 s | Maximum solver time step |
| V0 | 10[V] | 10 V | Input voltage magnitude |
| eta0 | 0.001 | 0.001 | Mechanical loss factor |
| pz\_thick | 1 [um] | 1.0000E-6 m | Piezoelectric material thickness |
| gap\_depth | 5 [um] | 5.0000E-6 m | Depth of rectangular gap |

## Thesis Content

The content should include the following sections.

# RESEARCH OBJECTIVE

Introduction (The general information about the physics/math/or whatever behind your problem). Statement of the Problem and Need for the Study (What is your motivation for this thesis? Define the sub-problem clearly and give the importance of the problem?). Sub-problems (Mention about your secondary motivations)

# RELATED LITERATURE

The studies about your thesis, who did try to solve similar problems? What are their results? Which parts of these results are unsatisfactory? The contribution of your study? (May be your study is just a replica of some previous works. Please refer the previous work and just inform the reader about this).

# DESIGN

## Realistic constraints and conditions

In this subsection, you must include factors such as environmental issues, sustainability, manufacturability, ethics, health, safety, and social and political issues, in accordance with the nature of the design.

## Cost of the design

In this subsection, you must include the cost of your design in detail in accordance with the concept of the design. You can provide price of each components that you used in your project.

## Engineering Standards

In this subsection, you must provide and discuss the engineering standards used in your design.

You may find some of sample standards in the following links:

Bluetooth standards: <http://www.informit.com/articles/article.aspx?p=23760&seqNum=3>

Wireless standards:

<https://ieeexplore.ieee.org/browse/standards/get-program/page/series?id=68>

Microprocessor standards: <http://grouper.ieee.org/groups/msc/>

For software standards: <https://webstore.ansi.org/industry/software>

## Details of the design

In this subsection, you must provide a detailed explanation of your design.

# METHODS

Design (implementation/simulation studies), The experimental setups/the algorithms/the HW designs must be mentioned in detail. The logic behind the study must be explained.

# RESULTS AND DISCUSSION

Present the results of your study. Comment about the results: Are they satisfactory enough to solve your problem mentioned in chapter 1? Use these results to comment about your study: Which part of your study is not good enough and why? Discuss the satisfactory/unsatisfactory parts.

# CONCLUSION

Summary of your work: The important points of the study (from each chapter) should be mentioned, your contribution should be emphasized. The important points of the discussion section should be written and related results should be referred.

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# APPENDICES

## Appendix 1

**Matlab Code for Numerical Solution of Rayleigh-Lamb Frequency Equations**

clc,clear all

VpMatrix=[0];

i=1;

d = 0.1e-6 % Thickness of the thin AlN plate

h = d/2;

f = 1e8; % Target frequency of SAW device

Vl = 10287.28; % Longitudinal wave velocity

Vs = 5867; % Shear wave or tangential wave velocity

w=2\*pi\*f; % Angular frequency

SignChange=2;

for d = 0.1e-6:1e-6:52.36e-6

h = d/2;

SignChange=2;

for Vp = 1:1:6000; % Phase velocity

k = w/Vp;

p = sqrt((w/Vl)^2-k^2);

q = sqrt((w/Vs)^2-k^2);

% Lamb's equation for antisymmetric modes

lambAsym = real(q\*tan(q\*h) + ((q^2-k^2)^2\*tan(p\*h))/(4\*k^2\*p));

if SignChange~=sign(lambAsym) && sign(lambAsym)~=0 &&...

SignChange ~=2;

SignChange=sign(lambAsym);

disp('kök');

break

end

Vp

if SignChange == 2

SignChange=sign(lambAsym);

end

end

VpMatrix(i)=Vp;

i=i+1;

end

dMatrix = 0.1e-6:1e-6:52.36e-6;

plot(dMatrix,VpMatrix)

1. ### TABLE SCHEMA
3. id
4. title
5. link = guid = atom:link
6. media = enclosure = media:content = image
7. meta\_description = description
8. content = news = content:encoded
9. pubDate

12. ### QUERY FORMAT
14. $query = "INSERT INTO $tableName
15. (title, link, media, meta\_description, content, pubDate) VALUES
16. ($title, $link, $media, $meta\_description, $content, $pubDate);";

19. ### SAMPLE QUERY
21. ```sql
22. INSERT INTO Entries
23. (title, link, media, meta\_description, content, pubDate) VALUES
24. ('Açık havada oynamak kas iskelet sistemi için çok yararlı', 'https://www.sektorel.com.tr/haber/acik-havada-oynamak-kas-iskelet-sistemi-icin-cok-yararli-33481', 'https://www.sektorel.com.tr/images/haberler/2022/06/acik-havada-oynamak-kas-iskelet-sistemi-icin-cok-yararli-1654067466.jpg', 'Yazın gelmesiyle beraber çocukların açık havada daha fazla zaman geçirmesi gerektiğini belirten Fizik Tedavi ve Rehabilitasyon Uzmanı Doç. Dr. Nihal Özaras, fiziksel olarak hareketli olmanın bedensel ve ruhsal açıdan yararlı olduğunu söyledi. Dünya Sağlık Örgütü’nün çocuk ve ergenlerin günde en az bir saat fiziksel olarak aktif olmalarını önerdiğine dikkat çeken Özaras, “Koşma, zıplama, yürüme, uzanma, tırmanma gibi hareketler içeren sporlar veya ev dışında oynanan oyunların, kas iskelet sistemi, denge ve koordinasyon, kalp damar sistemi açısından sayısız faydaları bulunuyor.” dedi.', '<p style=\"text-align:center\"><strong><span style=\"font-size:16px\">Yazın gelmesiyle beraber çocukların açık havada daha fazla zaman geçirmesi gerektiğini belirten Fizik Tedavi ve Rehabilitasyon Uzmanı Doç. Dr. Nihal Özaras, fiziksel olarak hareketli olmanın bedensel ve ruhsal açıdan yararlı olduğunu söyledi. Dünya Sağlık Örgütü’nün çocuk ve ergenlerin günde en az bir saat fiziksel olarak aktif olmalarını önerdiğine dikkat çeken Özaras, “Koşma, zıplama, yürüme, uzanma, tırmanma gibi hareketler içeren sporlar veya ev dışında oynanan oyunların, kas iskelet sistemi, denge ve koordinasyon, kalp damar sistemi açısından sayısız faydaları bulunuyor.” dedi.</span></strong></p> <p style=\"text-align:justify\"><span style=\"font-size:12px\"> </span></p><p style=\"text-align:justify\"><span style=\"font-size:16px\">Üsküdar Üniversitesi NPİSTANBUL Beyin Hastanesi Fizik Tedavi ve Rehabilitasyon Uzmanı Doç. Dr. Nihal Özaras, çocukların fiziksel ve ruhsal gelişimi için hareket etmenin önemini vurguladı.</span></p><p style=\"text-align:justify\"><span style=\"font-size:16px\"> </span></p><p style=\"text-align:justify\"><span style=\"font-size:16px\">Doç. Dr. Nihal Özaras, geçtiğimiz son iki yılda pandeminin etkisiyle çocukların çok fazla hareketsiz kaldıklarını hatırlattı. Doç. Dr. Nihal Özaras, “Çocuklar bu dönemde evde daha çok kaldıkları için oturarak ya da telefon, tablet veya bilgisayar karşısında vakit geçirme çok yaygınlaştı. Bu durum hem fiziksel hem de ruhsal açıdan pek çok sağlık sorununu beraberinde getiriyor.” uyarısında bulundu.</span></p><p style=\"text-align:justify\"><span style=\"font-size:16px\"> </span></p><p style=\"text-align:justify\"><strong><span style=\"font-size:16px\">Günde en az 1 saat hareket etmeliler!</span></strong></p><p style=\"text-align:justify\"><span style=\"font-size:16px\"> </span></p><p style=\"text-align:justify\"><span style=\"font-size:16px\">Dünya Sağlık Örgütü’nün çocuk ve ergenlerin günde en az bir saat fiziksel olarak aktif olmalarını önerdiğine dikkat çeken </span>Doç. Dr. Nihal Özaras<span style=\"font-size:16px\">, “Bu planlanmış bir spor aktivitesi olabileceği gibi yürümek, parkta ya da bahçede oynamak şeklinde de olabilir.” diye konuştu.</span></p><p style=\"text-align:justify\"><span style=\"font-size:16px\"> </span></p><p style=\"text-align:justify\"><strong><span style=\"font-size:16px\">Açık havada oynamak çocuğun gelişimine katkılar sağlıyor</span></strong></p><p style=\"text-align:justify\"><strong><span style=\"font-size:16px\"> </span></strong></p><p style=\"text-align:justify\"><span style=\"font-size:16px\">Çocuklarda fiziksel olarak aktif olmanın hem bedensel ve hem de ruhsal sağlık açısından çok önemli olduğunu vurgulayan </span>Doç. Dr. Nihal Özaras<span style=\"font-size:16px\">, “Koşma, zıplama, yürüme, uzanma, tırmanma gibi hareketler içeren sporlar veya ev dışında oynanan oyunların, kas iskelet sistemi, denge ve koordinasyon, kalp damar sistemi açısından sayısız faydaları bulunuyor. Ayrıca kalori harcanmasını sağladıkları için kilo kontrolünde de yararlıdır.” dedi.</span></p><p style=\"text-align:justify\"><span style=\"font-size:16px\"> </span></p><p style=\"text-align:justify\"><strong><span style=\"font-size:16px\">Hayal gücünü geliştiriyor</span></strong></p><p style=\"text-align:justify\"><span style=\"font-size:16px\"> </span></p><p style=\"text-align:justify\">Doç. Dr. Nihal Özaras<span style=\"font-size:16px\">, araştırmalarda, özellikle planlama olmadan serbestçe oynanan sokak oyunlarının, çocukların hayal güçlerini geliştirdiğini, yükseklik korkusu gibi bazı korkularını azalttığının ortaya çıktığını söyledi. </span></p><p style=\"text-align:justify\"><span style=\"font-size:16px\"> </span></p><p style=\"text-align:justify\"><strong><span style=\"font-size:16px\">Açık havada yaşıtlarıyla oyun oynasınlar</span></strong></p><p style=\"text-align:justify\"><span style=\"font-size:16px\"> </span></p><p style=\"text-align:justify\"><span style=\"font-size:16px\">Fizik Tedavi ve Rehabilitasyon Uzmanı Doç. Dr. Nihal Özaras, sözlerini şöyle tamamladı:</span></p><p style=\"text-align:justify\"><span style=\"font-size:16px\">“Bu araştırmalarda sokak oyunları, yaşıtları ile iletişim becerilerinin ve problemlerle baş etme yeteneklerinin de arttığı ortaya konulmuş. Bu nedenle çocukların ve ergenlerin mümkünse bol bol temiz havada, yaşıtlarıyla oynayarak vakit geçirmelerini öneriyoruz. Yine sevdikleri spor aktivitelerinde yer almaları fiziksel ve ruhsal gelişimleri için çok faydalı olacaktır.”</span></p><p><br>Kaynak: (BHA) - Beyaz Haber Ajansı</p>', 'Wed, 01 Jun 2022 10:11:00 +0300');
25. ```