

**ANKARA YILDIRIM BEYAZIT UNIVERSITY  
GRADUATE SCHOOL OF NATURAL AND APPLIED  
SCIENCES**



**THESIS TITLE THESIS TITLE THESIS  
TITLE THESIS TITLE THESIS TITLE THESIS TE**

**M.Sc. Thesis by  
Name Name SURNAME**

**Department of Computer Engineering**

**September, 2023**

**ANKARA**

**THESIS TITLE THESIS TITLE THESIS  
TITLE THESIS TITLE THESIS TITLE THESIS TE**

**A Thesis Submitted to the  
Graduate School of Natural And Applied Sciences of  
Ankara Yildirim Beyazit University  
In Partial Fulfillment of the Requirements for the Degree of Master of Science in  
Computer Engineering, Department of Computer Engineering**

**by  
Name Name SURNAME**

**September, 2023**

**ANKARA**

## M.Sc. THESIS EXAMINATION RESULT FORM

We have read the thesis entitled "**THESIS TITLE THESIS TITLE THESIS TITLE THESIS TITLE THESIS TITLE THESIS TITLE THESIS TE**" completed by **NAME NAME SURNAME** under supervision of **PROF. DR. BBBB BBBB** and we certify that in our opinion it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Science.

Prof. Dr. Bbbb BBBB

---

Supervisor

Prof. Dr. Ccccc CCCCC

---

Jury Member

Prof. Dr. Ddddd DDDDD

---

Jury Member

Prof.Dr. Aaaa AAAA

---

Director

Graduate School of Natural and Applied Sciences

## ETHICAL DECLARATION

I hereby declare that, in this thesis which has been prepared in accordance with the Thesis Writing Manual of Graduate School of Natural and Applied Sciences,

- All data, information and documents are obtained in the framework of academic and ethical rules,
- All information, documents and assessments are presented in accordance with scientific ethics and morals,
- All the materials that have been utilized are fully cited and referenced,
- No change has been made on the utilized materials,
- All the works presented are original,

and in any contrary case of above statements, I accept to renounce all my legal rights.

**Date: 2023, 20 September**

**Signature:** \_\_\_\_\_

**Name & Surname: Name Name SURNAME**

## **ACKNOWLEDGEMENTS**

Firstly, I would like to express my sincere gratitude to my advisor Prof. Asds ASDAS for continuous support of...

Beside my advisor, I am deeply indebted to Prof. Asdas

I thank my colleagues at AYBU...

**September, 2023**

**Name Name SURNAME**

**THESIS TITLE THESIS TITLE THESIS TITLE THESIS  
TITLE THESIS TITLE THESIS TE**

**ABSTRACT**

Imaging in sub-Terahertz (THz) band has become an attractive research area with emerging technology since it has a wide range of potential applications in defense, security or airborne systems...

**Keywords:** Compressed sensing, sub-THz, single pixel imaging, super-resolution, computational ghost imaging, millimeter wave, image quality assessment, convex optimization, matching pursuit, hadamard.

**TÜRKÇE TEZ BAŞLIĞITÜRKÇE TEZ BAŞLIĞITÜRKÇE TEZ  
BAŞLIĞITÜRKÇE TEZ BAŞLIĞITÜRKÇE TEZ BAŞLIĞI  
ÖZ**

Terahertz (THz)-altı bandında görüntüleme, savunma, güvenlik veya havacılık sistemlerinde çok çeşitli potansiyel uygulamalara sahip olması nedeniyle, gelişen teknolojiyle birlikte çekici bir araştırma alanı haline gelmiştir...

**Anahtar kelimeler:** Sıkıştırılmış algılama, THz-altı, tek piksel görüntüleme, süper-çözünürlük, hesaplamalı hayalet görüntüleme, milimetre dalga, görüntü kalitesi değerlendirme, konveks optimizasyon, eşleştirme algoritması, hadamard.

## CONTENTS

M.Sc. THESIS EXAMINATION RESULT FORM .....	ii
ETHICAL DECLARATION .....	iii
ACKNOWLEDGEMENTS .....	iv
ABSTRACT .....	v
ÖZ .....	vi
NOMENCLATURE.....	viii
LIST OF TABLES.....	ix
LIST OF FIGURES .....	x
<b>CHAPTER 1 – INTRODUCTION.....</b>	<b>1</b>
1.1 Section Title .....	1
1.1.1 Subsection title .....	1
<b>CHAPTER 2 – MATERIALS AND METHODS .....</b>	<b>4</b>
2.1 Section Title .....	4
2.1.1 Subsection Title .....	4
2.1.1.1 Subsubsection Title.....	5
<b>REFERENCES.....</b>	<b>6</b>
<b>APPENDICES.....</b>	<b>7</b>
Appendix A – First Appendix .....	8
Appendix B – Another Table .....	9
<b>CURRICULUM VITAE .....</b>	<b>10</b>



## NOMENCLATURE

### Roman Letter Symbols

$T$  Absolute temperature,  $K$

$U$  Overall heat transfer coefficient,  $W/(m^2.K)$

### Greek Letter Symbols

$\alpha$  Ratio of heat transfer area of one side to total heat exchanger volume,  $m^2/m^3$

$\beta$  Complex numbers

$\rho$  Density of fluid,  $kg/m^3$

### Subscripts

$c$  Cold fluid

$h$  Hot fluid

### Acronyms

BDC Bottom Dead Center

CI Compression-ignition

**LIST OF TABLES**

<b>Table 1.1</b>	Surface characteristics .....	1
<b>Table 2.1</b>	Örnek tablo.....	4
<b>Table A.1</b>	Örnek tablo.....	8
<b>Table B.1</b>	Örnek tablo.....	9

## LIST OF FIGURES

<b>Figure 1.1</b>	Iris.....	2
<b>Figure 1.2</b>	Iris demonstrations .....	3

# CHAPTER 1

## INTRODUCTION

Bu döküman Ankara Yıldırım Beyzıt Üniversitesi Fen Bilimleri Enstitüsünün Haziran 2021 kurallarına göre güncellenmiştir. Söz konusu tarihte tez tesliminde kullanılmıştır. Enstitünün resmi şablonu değildir. Tüm sorumluluk kullanan kişiye aittir. Enstitü yazım kuralları sürekli güncellendiği için, değişiklikleri takip etmek yazarın sorumluluğundadır.

Referans vermek için bir *References.bib* dosyasına gerekli referans bilgileri BibTeX formatında eklenir. Sonra ilgili referans `\cite{ReferansAdı}` kodu ile eklenir. Enstitü kılavuzunda makale [1], kitap [2], internet alıntısı [3] gibi farklı türdeki referanslar için farklı kurallar mevcuttur. *References.bib* dosyası oluşturulurken doğru türde (*article*, *misc*, *book*) referans eklenmelidir. Toplu alıntılar için `\cite{ReferansAdı1,ReferansAdı2,ReferansAdı3}` şeklinde virgül ile tek `\cite{}` kodu içinde alıntı yapılır. Ör: [1–3]

### 1.1 Section Title

This is a text inside the section .....  
 .....  
 .....

Örnek tablo:

**Table 1.1** Surface characteristics of fins

<b>Fin type</b>	Fin density	Plate spacing	Hydraulic diameter	Fin thickness
Plain 9.03	355.5	20.9	4.463	0.203
Plain 11.11	437	6.35	3.081	0.152

Before subsection text

#### 1.1.1 Subsection title

After subsection text.....  
 .....

.....  
.....  
.....

Örnek figür:

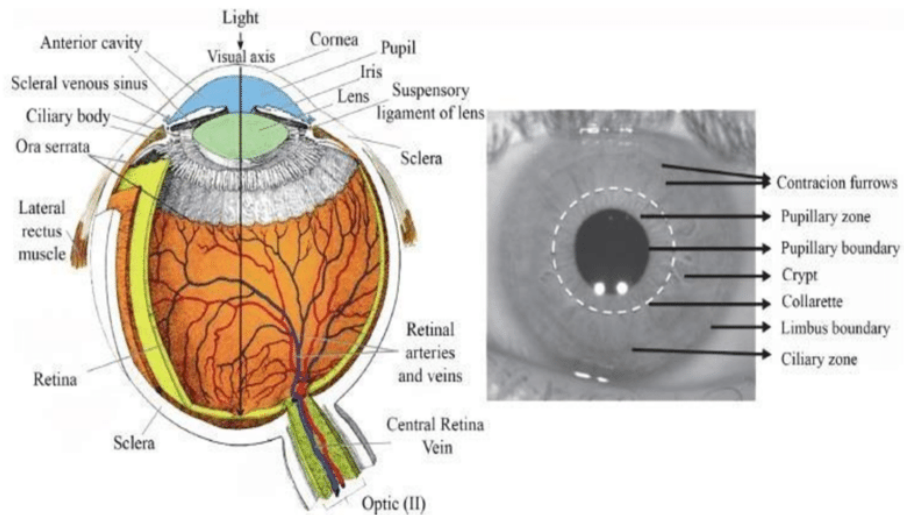
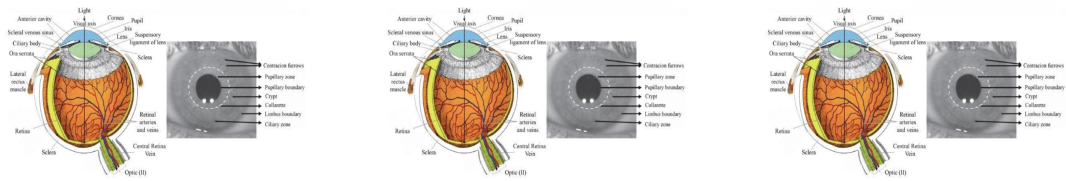


Figure 1.1 Iris demonstration [4]

By putting `\autoref{fig:eye}` where `fig:eye` is the label of the figure, you may reference your figure or in similar way your table, e.g.: see Figure 1.1 or see Table 1.1 and also see Table 2.1 .....  
.....

Also by putting `\Cref{ch:1}` where `ch:1` is the label of the chapter and 1 at the end is the chapter number, you can reference a chapter, e.g.: Chapter 1 includes the necessary information about blah blah. .... If you put `\cref{ch:2}` where the first letter of command is not capital, you will get something like: The second chapter has blah blah .....  
.....  
.....  
.....  
.....  
.....



(a) Iris demonstration 1 [4]

(b) Iris demonstration 2 [4]

(c) Iris demonstration 3 [4]

**Figure 1.2** Iris demonstrations [4]

.....  
 .....

Example equation:

Pythagorean theorem:  $x^2 + y^2 = z^2$  (1.1)

Pythagorean theorem:  $x^2 + y^2 = z^2$  (1.2)

By putting `\eqref{equation: 1}` you can create equation reference. Ex: Equation **1.1** is showing the Pythagorean theorem. ....

.....  
 .....  
 .....

# CHAPTER 2

## MATERIALS AND METHODS

### 2.1 Section Title

This is a text inside the section .....  
 .....  
 ..... Bu döküman Ankara Yıldırım Beyzıt Üniversitesi Fen Bilimleri Enstitüsünün Mart 2022 kurallarına göre güncellenmiştir. Söz konusu tarihte tez tesliminde kullanılmıştır. Enstitünün resmi şablonu değildir. Tüm sorumluluk kullanan kişiye aittir. Enstitü yazım kuralları sürekli güncellendiği için, değişiklikleri takip etmek yazarın sorumluluğundadır.

Referans vermek için bir *References.bib* dosyasına gerekli referans bilgileri BibTeX formatında eklenir. Sonra ilgili referans `\cite{ReferansAdı}` kodu ile eklenir. Enstitü kılavuzunda makale [1], kitap [2], internet alıntısı [3] gibi farklı türdeki referanslar için farklı kurallar mevcuttur. *References.bib* dosyası oluşturulurken doğru türde (*article*, *misc*, *book*) referans eklenmelidir. ....  
 .....

Örnek tablo:

**Table 2.1** Örnek tablo

<b>A</b>	1
<b>B</b>	2
<b>C</b>	3

#### 2.1.1 Subsection Title

.....  
 .....  
 .....  
 .....  
 .....  
 .....





# REFERENCES

- [1] Pelleg D. and Moore A., “Accelerating exact k-means algorithms with geometric reasoning,” *Proceedings of the Fifth ACM SIGKDD International Conference on Knowledge Discovery and Data Mining*, p. 277–281, 1999.
- [2] Goodfellow I., Bengio Y., and Courville A., *Deep Learning*. Cambridge: MIT Press, 2016.
- [3] Google Inc, “Kaggle,” 2020, retrieved April 1, 2020. [Online]. Available: <https://www.kaggle.com/>
- [4] Zidan K. and Stephan J., “A review on iris recognition system based different classification techniques,” *Solid State Technology*, vol. 64, pp. 5106–5119, 04 2021.

# APPENDICES

**Appendix A:** First Appendix.

**Appendix B:** Another Table.

**Appendix C:** Thermophysical Properties of Air.

**Appendix D:**  $K_c$  and  $K_e$  Coefficients.

## Appendix A – First Appendix

This is a text inside the section

**Table A.1** Örnek tablo

<b>A</b>	1
<b>B</b>	2
<b>C</b>	3

## Appendix B – Another Table

This is a text inside the section

**Table B.1** Örnek tablo

<b>A</b>	1
<b>B</b>	2
<b>C</b>	3

# CURRICULUM VITAE

## PERSONAL INFORMATION

**Name Surname :** Name Name SURNAME

**Date of Birth :** 01.01.1990

**Phone :**

**E-mail :**



## EDUCATION

**High School :**

**Bachelor :**

**Master Degree :**

## WORK EXPERIENCE

**Research Assist. or Engineer etc. :** T.C. bla bla

## TOPICS OF INTEREST

- Thermodynamics

- Fluid Mechanics

- Heat Transfer

- Internal Combustion Engines

## PRESENT ORGANIZED SOURCES / PRESENTATION

bla bla

**September, 2023  
ANKARA**

**Department of Computer Engineering**

**Name Name SURNAME**

