**REPUBLIC OF TÜRKİYE**

**MONTH YEAR**

**GAZİANTEP UNIVERSITY**

**GRADUATE SCHOOL OF NATURAL & APPLIED SCIENCES**

**M.Sc./Ph.D. in Department’s Name**

**TITLE OF THESIS**

**M.Sc. /Ph.D. THESIS**

**IN**

**DEPARTMENT’S NAME**

**NAME SURNAME**

**BY**

**NAME SURNAME**

**MONTH YEAR**

**TITLE OF THESIS**

**M.Sc. /Ph.D. Thesis**

**in**

**Department’s Name**

**Gaziantep University**

**Supervisor**

**Prof. Dr. Name SURNAME**

**Co-Supervisor (if any)**

**Prof. Dr. Name SURNAME**

**by**

**Name SURNAME**

**Month Year**

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**THESIS TITLE**

submitted by **Name LASTNAME** in partial fulfillment of the requirements for the degree of Master of Science or Doctor of Philosophy in **Name of the Department, Gaziantep University** is approved by,

Title Name LASTNAME

Director of the Graduate School of Natural and Applied Sciences …………..............

Title Name LASTNAME

Head of the Department …………..............

Title Name LASTNAME

Supervisor …………..............

Title Name LASTNAME

Co-Supervisor, Name of the Department

Institution or University …………..............

Exam Date:

**Examining Committee Members:**

Title Name LASTNAME

Institution or University …………..............

Title Name LASTNAME

Institution or University …………..............

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Institution or University …………..............

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# ABSTRACT

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**SURNAME, Name**

**M.Sc. /Ph.D. in Department’s Name**

**Supervisor: Prof. Dr. Name SURNAME**

**Co-Supervisor: Prof. Dr. Name SURNAME (if any)**

**Month Year**

**…. pages**

Abstract should be one page and written in English

**Key Words:** Keyword 1, Keyword 2, Keyword 3, Keyword 4, Keyword 5

# ÖZET

**TEZİN BAŞLIĞI**

**SOYADI, Adı**

**Yüksek Lisans/Doktora Tezi, Bölüm Adı**

**Danışman: Dr. Öğr. Üyesi Adı SOYADI**

**İkinci Danışman: Doç. Dr. Adı SOYADI (varsa)**

**Ay Yıl**

**….sayfa**

Özet Türkçe ve tek sayfa olmalı

**Anahtar Kelimeler:** Anahtar Kelime 1, Anahtar Kelime 2, Anahtar Kelime 3, Anahtar Kelime 4, Anahtar Kelime 5.

##### DEDICATION

***‘’Dedicated to my family’’***

# ACKNOWLEDGEMENTS

I would like to thank my supervisor, Prof. Dr. …..for his guidance and support throughout the study. I am thankful for his encouragement and motivation.

I would like to express my love and gratitude to my family for their support, always best wishes.

This work is supported by …………………………………., through project …...

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# LIST OF SYMBOLS

|  |  |
| --- | --- |
| **α** | Alfa |
| **β** | Beta |
| **Ω** | Ohm |
| **π** | Pi |

# LIST OFABBREVIATIONS

|  |  |
| --- | --- |
| **A/D** | Analog to Digital |
| **B-SPM** | Bilinear Static Parametric Model |
| **CE** | Certainty Equivalence |
| **D/A** | Digital to Analog |
| **DC** | Direct Current |
| **DIN** | Dynamic Inertial System |
| **FD** | Fault Detection |
| **FDD** | Fault Detection Diagnosis |
| **FDI** | Fault Detection and Isolation |
| **FTC** | Fault Tolerant Control |
| **g-DIN** | Generalized Dynamic Inertial System |
| **ISE** | Integral Square Error |
| **ISR** | Interrupt Service Routine |
| **LQR** | Linear Quadratic Regulator |
| **LTI** | Linear Time Invariant |
| **MIMO** | Multi Input Multi Output |
| **MRAC** | Model Reference Adaptive Control |
| **MSE** | Mean Square Error |
| **PDJ** | Positive Diagonal Jordan |
| **PEA** | Parametric Eigenstructure Assignment |
| **PSUPA** | Power Supply/Power Amplifier Unit |
| **SISO** | Single Input Single Output |
| **SPR** | Strictly Positive Real |

# INTRODUCTION

## Motivation of Study

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**Figure 1.1.** Equivalent control system block diagram for time-varying gain control equivalent is system block diagram for time-varying gains.

There are wide varieties of control methods in FTC and an extensive research is still conducted. However the lack of a systematical approach is still an open problem. The equation sample can be given as follows:

  (1.1)

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 (1.2)

**Table 1.1.** Process parameters

|  |  |
| --- | --- |
| **Parameters** | **Value** |
| Tank height, *hmax* | 25 cm |
| Pomp voltage level | 0-5 V |
| Bottom area, Tank1, Tank2, *A1*, *A2* | 0.01389 m2 |
| Bottom area, Tank3, Tank4, *A3*, *A4* | 0.01389 m2 |
| Out pipe cross-sectional area, *a1,a3,,a2,a4* | 50.26e-6 m2 |
| Pomp constant, *k* | 2.2e-3 lt/Vs |
| Tank1 operating point level *h1o* | 8.0 cm |
| Tank2 operating point level *h2o* | 5.0 cm |
| Tank3 operating point level *h3o* | 1.5 cm |

**Table 1.2.** System operating point

|  |  |  |
| --- | --- | --- |
| Control Method | Output1 ISE | Output2 ISE (×103) |
| Design I | 391.59 | 1.0151 |
| Design II | 389.58 | 0.6418 |
| Design III | 379.61 | 0.0001 |
|  |  |  |

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# REFERENCES

APA 7th edition and IEEE formats are accepted.

Examples for APA 7th edition format

**Journal article**

Grady, J. S., Her, M., Moreno, G., Perez, C., & Yelinek, J. (2019). Emotions in storybooks: A comparison of storybooks that represent ethnic and racial groups in the United States. *Psychology of Popular Media Culture*, *8*(3), 207–217. <https://doi.org/10.1037/ppm0000185>

* ***Parenthetical citation***: (Grady et al., 2019)
* ***Narrative citation***: Grady et al. (2019)

**Books**

Jackson, L. M. (2019). *The psychology of prejudice: From attitudes to social action* (2nd ed.). American Psychological Association. <https://doi.org/10.1037/0000168-000>

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Author’s last name, First name initial. Middle initial. (Year of publication). *Title of the book in italics*. Publishing company. DOI or URL if available

Author’s last name, First name initial. Middle initial. (Year of publication). Title of the article. *Title of the Journal in Italics, volume number* (Issue number),pages used. DOI number

**Examples**

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References need not be cited in the text. When they are, they appear on the line, in square brackets, inside the punctuation. Grammatically, they may be treated as if they were footnote numbers, e.g.:

as shown by Brown [4], [5]; as mentioned earlier [2], [4]–[7], [9]; Smith [4] and Brown and Jones [5]; Wood *et al*. [7]

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or as nouns: as demonstrated in [3]; according to [4] and [6]–[9].

**Books**

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# APPENDIX

# CURRICULUM VITAE