UNIVERSITÀ
DI SIENA
1240

DEPARTMENT OF
INFORMATION ENGINEERING AND MATHEMATICS

M. Sc. Program
ELECTRONICS AND COMMUNICATIONS ENGINEERING

Fantastic and Extraordinary Title of Your Incredibly Long and Beautiful Thesis

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Dr. Name Surname

Academic Year 2021-2022

Contents

Chapter 1

Introduction

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An equation that I really like is

$$f(x, y) = \left(\frac{(x^2 + \log_{10} y)^2}{\sqrt{x^3 - \frac{5}{y}}} \right)^3 . \tag{1.1}$$

Please use punctuation in the equations, as if they were in the middle of the text. Reffering to eq. (1.1), the calculated values are reported in Table 1.1. Remember

Col1	Col2	Col2	Col3
A	6	87.837	787
S	7	78	5415
F	545	$z^x - 2$	7507
W	545	18744	7560
Q	88	788	$\sqrt{x^2 + 1}$

Table 1.1: Table to test captions and labels.

that $\pi \approx 3.14\ldots$ is not an integer number, even if you have been told so. Integer in ligula at nulla rutrum mattis ut quis odio. Suspendisse potenti. Pellentesque convallis auctor nisi, ac bibendum dui facilisis sed. Maecenas posuere ligula sit amet urna tincidunt malesuada. Praesent tellus lacus, mattis auctor eros id, gravida imperdiet lorem. Fusce convallis eget justo a scelerisque. In quis massa nec lectus viverra dictum. Mauris at porta nunc.

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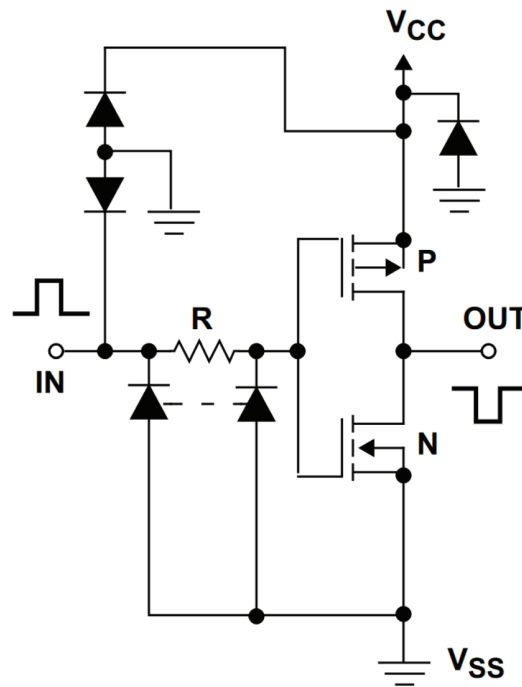
Figure 1.1: This is the caption of my figure. Write good captions to improve clarity of your work.

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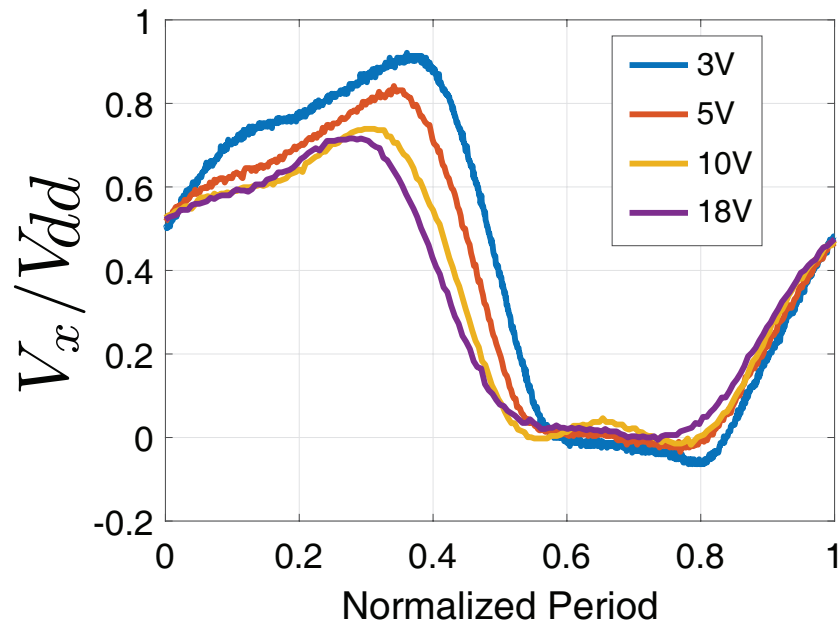
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Chapter 2

Evaluation Criteria

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2.2   This is another section of my thesis

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Appendix A

I wrote a lot of code. The following scripts have been developed using my computer, working hard. day after day.

Function to show an example

The package `listings` is very useful to present code listings.

```python
import numpy as np

def incmatrix(genl1,genl2):
    m = len(genl1)
    n = len(genl2)
    M = None #to become the incidence matrix
    VT = np.zeros((n*m,1), int)  #dummy variable

    #compute the bitwise xor matrix
    M1 = bitxormatrix(genl1)
    M2 = np.triu(bitxormatrix(genl2),1)

    for i in range(m-1):
        for j in range(i+1, m):
            [r,c] = np.where(M2 == M1[i,j])
            for k in range(len(r)):
                VT[(i)*n + r[k]] = 1;
                VT[(i)*n + c[k]] = 1;
                VT[(j)*n + r[k]] = 1;
                VT[(j)*n + c[k]] = 1;

                if M is None:
                    M = np.copy(VT)
                else:
                    M = np.concatenate((M, VT), 1)
```

```
            VT = np.zeros((n*m,1), int)

    return M
```

Another Function to show an example

```c
#include <stdio.h>
int main() {
    int dividend, divisor, quotient, remainder;
    printf("Enter dividend: ");
    scanf("%d", &dividend);
    printf("Enter divisor: ");
    scanf("%d", &divisor);

    // Computes quotient
    quotient = dividend / divisor;

    // Computes remainder
    remainder = dividend % divisor;

    printf("Quotient = %d\n", quotient);
    printf("Remainder = %d", remainder);
    return 0;
}
```

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```c
    printf("Quotient␣=␣%d\n", quotient);
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```

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```

```
    printf("Quotient␣=␣%d\n", quotient);
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    return 0;
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Acknowledgements

I would like to thank my parents who raised me since I was born, and still they are doing.