

Technical University of Munich  
TUM School of Engineering and Design  
Univ.-Prof. Dr. Constantinos Antoniou,  
Chair of Transportation System Engineering  
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# **Your Thesis Title**

## **Subtitle**

Author:	Student Name
Supervision:	Prof. Dr. Constantinos Antoniou
Mentoring:	Dr.-Ing. Mentor
Study Program:	Rail, Transport and Logistics
Matriculation Number:	Matriculation Num
Submission Date:	DD/MM/YYYY



Technical University of Munich

TUM School of Engineering and Design

Univ.-Prof. Dr. Constantinos Antoniou, Chair of Transportation System Engineering

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# MASTER'S THESIS

of John Smith

Date of Issue: 2024-01-22

Date of Submission: 2024-06-22

**Topic: Arial 14 Bold**

The text is written with line spacing at 1.2 with "Spacing before" = 12 pt, Font Arial 12. In the topic page the scope and research questions of the thesis will be described. The text shall be formulated in accordance to the mentors and has to be signed by the head of the examination board.

The topic page contains several paragraphs and could be longer than one page. If so, then the next page does not have a header. It is an essential element of the thesis which forms the legal framework. It contains a detailed description of what is to be done within the thesis. The timeframe as well as the names of the mentors and the approximate dates of when the candidate has to show intermediate results are also given in this page.

**Note 1:**

**Students who are enrolled in FPSO 20131 need not give a speech about the results of the master's thesis.**

**Note 2:**

**Students who are enrolled in FPSO 20161 must give a speech about the results of the master's thesis.**

**The loading of the master's thesis is as follows:**

**written dissertation: 95%**

**speech, presentation, defence of the master's thesis (max. 60 minutes): 5%**

**Note 3:**

**It is not allowed to change this style sheet.**

**Note 4:**

**For MSc. Rail, Transport & Logistics master's thesis students the following paragraph has to be used at the end of the master's thesis description:**

The student will present intermediate results to the supervisor(s) Prof. Dr.-Ing. Sophie Carter and to the mentor(s) Dr. Albert Einstein (external company) in the 5<sup>th</sup>, 10<sup>th</sup>, 15<sup>th</sup> and 20<sup>th</sup> week.

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Univ.-Prof. Dr. Constantinos Antoniou

# Abstract

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**Keywords:** KEYWORD1, KEYWORD2, ...

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# List of Abbreviations

This document is incomplete. The external file associated with the glossary ‘acronym’ (which should be called `Main.acr`) hasn’t been created.

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# Glossary

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# List of Symbols

$c_0$	[km/h]	Propagation speed of kinematic waves
$\eta_0$	[km/h]	Viscosity coefficient
$\nu$	[km <sup>2</sup> /h]	Kinematic viscosity



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# 1. This is Chapter1

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## 1.1 This is a section

Now I will use my acronym: the European Central Bank (ECB) is the central bank of Europe. Actual president of the ECB is Christine Lagarde.

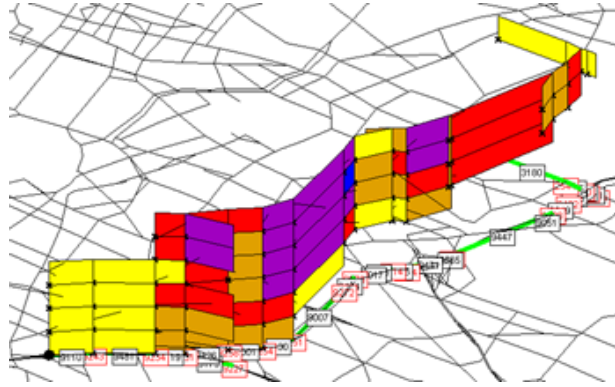
The European Union (EU) is a union of 27 European member states. In 2012 the EU received the Nobel Peace Prize.

Here we discuss the **Cycle** in traffic signals. The **Phase** is another important concept in traffic systems.

$$f(x) = a_0 + \sum_{n=1}^{\infty} \left( a_n \cos \left( \frac{n\pi x}{L} \right) + b_n \sin \left( \frac{n\pi x}{L} \right) \right) \quad (1.1)$$

### 1.1.1 This is a subsection

G.A. Akerlof wrote one of the most popular papers in economics which is called the Market for "Lemons"(Akerlof, 1970).



**Fig. 1.1** Test Figure1

Romer (Romer, 1990)

**This is a subsubsection**

This is one level below subsection

**This is a paragraph** This is one level below subsubsection

**This is a subparagraph** This is one level below paragraph

left column	mid column	right column
A	B	C
!	2	3
a	b	c
i	ii	iii

**Tab. 1.1** Test table1

## **2. This is Chapter2**

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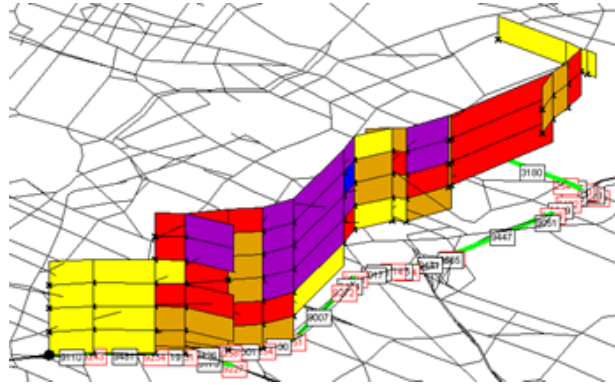
### **2.1 This is a section**

Now I will use my acronym: the ECB is the central bank of Europe. Actual president of the ECB is Christine Lagarde.

The EU is a union of 27 European member states. In 2012 the EU received the Nobel Peace Prize.

#### **2.1.1 This is a subsection**

G.A. Akerlof wrote one of the most popular papers in economics which is called the Market for "Lemons"(Akerlof, 1970).



**Fig. 2.1** Test Figure2

Romer (Romer, 1990)

### **This is a subsubsection**

This is one level below subsection

**This is a paragraph** This is one level below subsubsection

**This is a subparagraph**    This is one level below paragraph

left column	mid column	right column
A	B	C
!	2	3
a	b	c
i	ii	iii

**Tab. 2.1** Test table2

# Bibliography

- Akerlof, G. A. (1970). The market for "lemons": Quality uncertainty and the market mechanism. *The Quarterly Journal of Economics*, 84(3), 488–500.
- Romer, P. M. (1990). Endogenous technological change. *Journal of Political Economy*, 98(5), 71–102.

## **A. Appendix: Test1**

**A.1 Detailed Appendix1**

**A.2 Detailed Appendix2**



## **B. Appendix: Test2**

**B.1 Detailed Appendix1**

**B.2 Detailed Appendix2**

# Statutory Declaration

(according to § 20 Par. 5 FPSO)

I solemnly declare the research in the chapters of this thesis was in full my own without the use of other sources of help not mentioned or cited in this thesis and that this thesis in substantially its present form has not been submitted or accepted previously for the award of a degree or diploma in this or any other tertiary institution and is not being submitted for a degree or diploma in any other tertiary institution or for another degree or diploma at this institution.

Start of Thesis: DD/MM/YYYY

Date of submission: DD/MM/YYYY

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Date, Place

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Signature