

Theoretical Computer Science (Bridging Course)

Introduction

Gian Diego Tipaldi



Time and Place

- Lectures

- Thursday 08:00 – 10:00
- Friday 10:00 – 11:00

- Exercises

- Friday 11:00 – 12:00

- Building 51 – SR 00 031 (Thu)
- Building 78 – SR 00 014 (Fri)

People

- Dr. Gian Diego Tipaldi (lecturer)
 - Office: Building 79
 - Office hours: by arrangement (via email)
 - Email: tipaldi@cs.uni-freiburg.de

- Mr. Federico Boniardi (assistant)
 - Office: Building 79
 - Office hours: by arrangement (via email)
 - Email: boniardi@cs.uni-freiburg.de

Website

<http://ais.informatik.uni-freiburg.de/>

- Go to Teaching (Lehre) WS 2014
- Choose Theoretical computer science

- Syllabus
- Slides
- Exercise
- Additional material

Course Facts

- Course language
 - Lectures are given in **English**
 - Exercises are given in **English**
 - Exam will be in **English**
- Literature
 - Michael Sipser. *"Introduction to the theory of computation"*. PWS Publishing Co., Boston, MA, 1996

Goal of This Course

- Provide an overview of topics in theoretical computer science
- Give the background knowledge to understand the concepts of computer science

Course Topics

- Formal Languages
- Grammars
- Programs and Turing Machines
- Decidability
- Reducibility
- Time and Space Complexity
- Propositional Logic
- First Order Logic

Homework Assignment

- Available on Thursday
 - At lecture
 - On the website
- Due on Thursday **one week** after
- Solutions discussed on Friday
- Questions
 - Email to Federico or to me
 - Google Group? Piazza?

Homework Rules

- Homework is graded 1 – 10 points
- Group of **max** 2 people
 - both names, one submission
- Plagiarism: **0 points**
- More than 2 people: **0 points**
- Exam is on the same topics:
Do the exercises!

Exam

- Written exam at the end
- Total points at the exam: 100
- Total points to pass: 50

Rule of thumb:

If you pass 50% of the exercises, you will pass the exam

Questions?