Organizational Matters

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Modul: IN2003

Name: "Efficient Algorithms and Data Structures" "Effiziente Algorithmen und Datenstrukturen"

ECTS: 8 Credit points

Lectures:

► 4 SWS

Mon 10:00–12:00 (Room Interim2)

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Required knowledge:

- ► IN0001, IN0003
 - "Introduction to Informatics 1/2"
 - "Einführung in die Informatik 1/2"
- ► IN0007
 - "Fundamentals of Algorithms and Data Structures"
 - "Grundlagen: Algorithmen und Datenstrukturen" (GAD)
- ► IN001
 - "Basic Theoretic Informatics"
 - "Einführung in die Theoretische Informatik" (THEO)
- ► IN0015
 - "Discrete Structures"
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- ► IN0018
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The Lecturer

- Harald Räcke
- Email: raecke@in.tum.de
- Room: 03.09.044
- Office hours: (by appointment)

Tutorials

- A01 Monday, 12:00-14:00, 00.08.038 (Lederer)
- A02 Monday, 12:00-14:00, 00.09.038 (Stotz)
- A03 Monday, 14:00-16:00, 02.09.023 (Lederer)
- **B04** Tuesday, 10:00–12:00, 00.08.053 (Czerner)
- **D05** Thursday, 10:00–12:00, 03.11.018 (Stotz)
- E06 Friday, 12:00-14:00, 00.13.009 (Czerner)



Assignment sheets

In order to pass the module you need to pass an exam.

- An assignment sheet is usually made available on Monday on the module webpage.
- Solutions have to be handed in in the following week before the lecture on Monday.
- You can hand in your solutions by putting them in the mailbox "Efficient Algorithms" on the basement floor in the MI-building.
- Solutions have to be given in English.
- Solutions will be discussed in the tutorial of the week when the sheet has been handed in, i.e, sheet may not be corrected by this time.
- ► You should submit solutions in groups of up to 2 people.

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- Submissions must be handwritten by a member of the group. Please indicate who wrote the submission.
- Don't forget name and student id number for each group member.

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Assignment can be used to improve you grade

Requirements for Bonus

- 50% of the points are achieved on submissions 2-8,
- ▶ 50% of the points are achieved on submissions 9-14,
- each group member has written at least 4 solutions.

- Foundations
 - Machine models
 - Efficiency measures
 - Asymptotic notation
 - Recursion
- Higher Data Structures
 - Search trees
 - Hashing
 - Priority queues
 - Union/Find data structures
- Cuts/Flows
- Matchings



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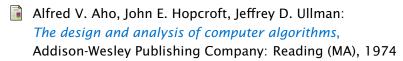


25. lan. 2019

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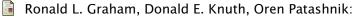


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Michael T. Goodrich, Roberto Tamassia: Algorithm design: Foundations, analysis, and internet examples, John Wiley & Sons, 2002

Ernst Mavr. Harald Räcke

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2. Auflage, Addison-Wesley, 1994

Volker Heun:

Grundlegende Algorithmen: Einführung in den Entwurf und die Analyse effizienter Algorithmen,

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Jon Kleinberg, Eva Tardos:

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The art of computer programming. Vol. 1: Fundamental Algorithms,

3. Auflage, Addison-Wesley, 1997



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Uwe Schöning:

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