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)
- ► IN0011
 - "Basic Theoretic Informatics"
 - "Einführung in die Theoretische Informatik" (THEO)
- ► IN0015
 - "Discrete Structures"
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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 (Schmid) A02 Monday, 12:00-14:00, 00.09.038 (Stotz) A03 Monday, 14:00-16:00, 02.09.023 (Liebl) **B04** Tuesday, 10:00–12:00, 00.08.053 (Schmid) **B05** Tuesday, 12:00–14:00, 03.11.018 (Kraft) **B06** Tuesday, 14:00–16:00, 00.08.038 (Somogyi) **D07** Thursday, 10:00–12:00, 03.11.018 (Liebl) **E08** Friday, 12:00–14:00, 00.13.009 (Stotz) **E09** Friday, 14:00-16:00, 00.13.009 (Kraft)

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.
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If you obtain a bonus your grade will improve according to the following function

$$f(x) = \begin{cases} \frac{1}{10} \text{round} \left(10 \left(\frac{\text{round}(3x) - 1}{3} \right) \right) & 1 < x \le 4 \\ x & \text{otw.} \end{cases}$$

► It will improve by 0.3 or 0.4, respectively. Examples:

10/15

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 - **▶** 3.3 → 3.0
 - **≥** 2.0 → 1.7
 - **▶** 3.7 → 3.3
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 - > 4.0 no improvement

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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
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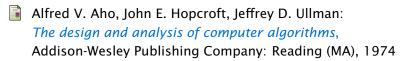
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2 Literatur



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Michael T. Goodrich, Roberto Tamassia: Algorithm design: Foundations, analysis, and internet examples,

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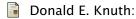
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