

# Part I

## Organizational Matters

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- ▶ Modul: IN2004
  - ▶ Name: “Efficient Algorithms and Data Structures II”  
“Effiziente Algorithmen und Datenstrukturen II”
  - ▶ ECTS: 8 Credit points
  - ▶ Lectures:
    - ▶ 4 SWS
      - Wed 12:15–13:45 (Room 00.13.009A)
      - Fri 10:15–11:45 (MS HS3)
  - ▶ Webpage: <http://www14.in.tum.de/lehre/2017SS/ea/>

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- ▶ Harald Räche
- ▶ Email: [raecke@in.tum.de](mailto:raecke@in.tum.de)
- ▶ Room: 03.09.044
- ▶ Office hours: (per appointment)

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- ▶ Tutor:
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  - ▶ stotz@tum.de
  - ▶ Room: 03.09.057
  - ▶ per appointment
- ▶ Room: 03.11.018
- ▶ Time: Wed 16:00–17:30

- ▶ Harald Räcke
- ▶ Email: raecke@in.tum.de
- ▶ Room: 03.09.044
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  - ▶ 2.5 hours
  - ▶ Date will be announced shortly.
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- An assignment sheet is usually made available on Wednesday on the module webpage.
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- You can hand in your solutions by putting them in the right folder in front of room 03.09.020.
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- The first one will be out on Wednesday, 3 May.

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Part 1: Linear Programming

Part 2: Approximation Algorithms

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## 2 Literatur

-  V. Chvatal:  
*Linear Programming*,  
Freeman, 1983
-  R. Seidel:  
*Skript Optimierung*, 1996
-  D. Bertsimas and J.N. Tsitsiklis:  
*Introduction to Linear Optimization*,  
Athena Scientific, 1997
-  Vijay V. Vazirani:  
*Approximation Algorithms*,  
Springer 2001

## 1 Literatur

Part 1: Linear Programming

Part 2: Approximation Algorithms

-  David P. Williamson and David B. Shmoys:  
*The Design of Approximation Algorithms*,  
Cambridge University Press 2011
-  G. Ausiello, P. Crescenzi, G. Gambosi, V. Kann, A.  
Marchetti-Spaccamela, and M. Protasi:  
*Complexity and Approximation*,  
Springer, 1999

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