

Computational Geometry

semester : Winter 2016/2017 [Other terms: [Winter 17/18](#) · [Winter 11/12](#) · [Winter 10/11](#) · [Winter 09/10](#) · [Winter 07/08](#)]

Module # : INF-ALG-04 , INF-ALG-18

Event # : INF-ALG-007 , INF-ALG-008

program : Diplom Informatics, Master Computer Science, Diploma Business Informatics, Master Business Informatics

IBR Group (s) : ALG (Prof. Fekete)

grade : Lecture /

Lecturer :



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Assistant :



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Credits : 5

hours : 2 + 1 + 1

Time & Place : Lecture: Tuesday, 09:45 - 11:15, room IZ 305

Exercise: Friday, 9:45 - 11:15, room IZ 160, every two weeks (see semester plan).

Lesson: Thursday, 15:00 - 16:30 , Room IZ 305, every two weeks (see semester

plan) An overview of the dates of all lectures, great exercises and small exercises, as well as the departure, departure and return of the housework is compiled in the [semester](#) plan . Changes reserved.

begin : October 10th, 2016

Prerequisites : no

Certificates : Study achievement: At least 50% of the exercise
credits Exam performance: Exam

content : The graduates of the module are familiar with basic modeling of geometric algorithms. They are able to classify the algorithmic difficulty of geometric questions and formulate appropriate objectives. They master various solution techniques and can also work out algorithmic methods for problems that have not yet been considered. They survey the practical relevance of questions and problem solutions.

Subject areas are:

1. Geometric problems and data structures
2. triangulation
3. localization
4. Voronoi diagrams
5. Convex envelopes
6. Motion planning for robots

References :

- Mark de Berg, Marc van Kreveld, Mark Overmars and Otfried Schwarzkopf: *Computational Geometry: Algorithms and Applications* , Second. Edition, pages 367, Springer-Verlag, 2000 ([deBerg2000](#) , [BibTeX](#))
- Rolf Klein: *Algorithmic Geometry* , pages 1-355, examen.press, 1997 ([Klein1997](#) , [BibTeX](#))

General information

- Results of the exam (without a rifle)
- There is a [mailing list](#) . We will distribute up-to-date information about this list. So I'm writing to you :)

Hausaufgaben

- The 1st Exercise Sheet is now [online](#) . Delivery see sheet.
- The 2nd Exercise Sheet is now [online](#) . Delivery see sheet.
- The 3rd Exercise Sheet is now [online](#) . Delivery see sheet.
- The 4th exercise sheet is now [online](#) . Delivery see sheet
- The 5th Exercise Sheet is now [online](#) . Delivery see sheet