Bachelor projects in Algorithms

A typical BSc project (and MSc thesis) consists of

- reading and **understanding in depth** one or more **research papers**
- getting an overview of **related** results in the **literature**
- **implementing** one or more algorithms / data structures
- **experimental evaluation** of the implementation
- writing a **report** summarizing all the above, incl. rephrasing central theory

Depending on ambition of the project group and the progress during semester

- technical complexity of algorithms considered
- balance between theory / implementation / experimental evaluation
- confirm known experiments / first implementation / novel research
- project description adjusted based on progress

Courses

BSc

Algorithms and Data Structures (CS, 1st semester, Brodal)
Computer Architecture, Networks and Operating Systems (CS & IT 4th semester, Afshani)
Machine Learning (CS, 5th semester, Larsen)
Optimization (CS, 6th semester, Hansen)
Introduction to Programming with Scientific Applications (non-CS, Brodal)

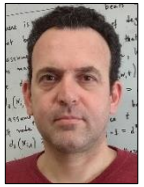
MSc

Computational Geometry: Theory and Experimentation (CS, 1st semester, Afshani / Arge)
Randomized Algorithms (CS, 2nd semester, Larsen)
Theory of Algorithms and Computational Complexity (CS, 3rd semester, Hansen)
+ new courses in Fall 2021

Peyman Afshani
associate professor
Computational geometry
External memory algorithms

Lars Arge
professor
External memory algorithms
Computational geometry

Gerth Stølting Brodal
professor
Data structures
External memory algorithms



Ioannis Caragiannis
Professor
Algorithmic game theory
Computational social choice

Kristoffer Arnsfelt Hansen
associate professor
Complexity theory
Game theory

Kasper Green Larsen
associate professor
Data structures
Lower bounds

Chris Schwiegelshohn
assistant professor
Machine learning
Dimension reduction

Srikanth Srinivasan
associate professor
Complexity theory
Pseudorandomness