Advanced Algorithmics (6EAP)
MTAT.03.238
Organization of course
Jaak Vilo
2011 Spring

Short CV (Jaak Vilo)
• Tallinna Reaalkool (2. Keskkool) 1984
• UTartu – Applied mathematics 1986-1991
• University of Helsinki: 1989/90; 1991-1999
• European Bioinformatics Institute 1999-2002
• PhD 2002, Univ. of Helsinki. /Pattern discovery/
• EGeen 2002 => Quretec 2006
• U. Tartu: docent, sen. researcher,
• Professor (from dec 2007)
• STACC

Short CV (Jaak Vilo)
University of Tartu
University of Helsinki
EMBL-European Bioinformatics Institute, UK
Estonian biobank, biotech, IT startups
University of Tartu, professor 2007

Research
• Bioinformatics
• Data mining, Machine Learning, Visualization, ...
• Practical algorithms
• Data management and analysis

Goals
• To learn the main concepts and techniques of the algorithm design and analysis – the practical skills and theoretical basis
• To be able to choose, (design,) analyze and compare algorithms and data structures
• To learn to learn, use, solve, read, write, and present

Contact hours
• Lectures: Jaak Vilo
  – Wed. 10-12 (403)
  – Thu. 10-12 (405)

• Weekly practical sessions (homework):
  – Wed 12-14 Aivi Kaljuvee (315)
  – Thu 12-14 Oleg Šelajev (403)
Contacts:

- Jaak Vilo – prof. of bioinformatics vilo@ut.ee
- Aivi Kaljuvee  aivi@ut.ee
- Oleg Šelajev shelajev@gmail.com
- a?.algorithmics@lists.ut.ee

- JV: Office hour (Monday 3-4pm); room 327
  – Other times: knock on door or when door open
- Upon agreement

Course and Grade

- Lectures
- Homework 30  + bonus points
- Project work 25
- Essay 10
- Exam 35
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- Total 100p

Homework

- Most essential part of the course
- Obligatory to perform minimum 50% tasks
- Presentations orally during the practicals
- Submissions over the web

Essay

- Will be based on some article
- To be decided during the course
- Reading and writing skills
- A format of the scientific article (abstract, citations, etc)

Project

- A practical algorithm implementation development task plus analysis and comparisons of efficiency
- Presentation in form of a project report in scientific style
- Possibly presentations

Exam

- Will be based on questions similar to the homework assignments
- Knowledge of the basic principles of algorithms
- Creative use of the algorithms
Contact

- Lectures, practicals – active hours
- Email (vilo @ ut.ee)

Questionnaire

- To assess the basic starting point and expectations before the course start
- Please fill in the form to the best of your ability as is during the next 30 minutes.