VNVe
High Performance Computations

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Introduction

- Guarantee: Ing. Václav Šátek Ph.D.
- Lecturers:Ing. Václav Šátek Ph.D., Ing. Petr Veigend
- Lab instructor: Ing. Petr Veigend

Question: do you want lectures

- once per week (two hours) or
- once per two weeks (four hours) ?

Organization of the course

- Term project (20 points)
  - responsibility of Mr. Šátek
  - will be ready in the next several weeks
  - individual project
- Laboratories
  - to be announced, possible tutorials would include
    - introduction to the computer centre (CVT) - available software, LaTeX, simple solution of differential equations
    - basics of MATLAB, Simulink, TKSL, FOS,... solution of ordinary differential equations
    - tutorial for some tasks from the term projects
  - laboratory (N203, CVT) is currently reserved every Friday (17:00 – 18:50), you can use it to work on your project
    - the laboratories (for Czech studets) with instructor are going to take place on Tuesday from 12:00 to 13:50 in the room N203, you can also work on your projects
- Mid-term exam (20 points) – **to be announced**
- Term exam (60 points)

Materials, information

- Annotation of the lectures, overview of the course, information about the lecturers and more information can be found on the course card
  `https://www.fit.vut.cz/study/course/VNVe/.en`
- Study materials (lectures, term project, laboratories and other stuff) can be found on the private student page
  `https://www.fit.vutbr.cz/study/courses/VNVe/private/`

High Performance Computations

- high performance computations are represented by the numerical solution of the differential equations
- some problems can be transformed into the differential equations (for example function generation, algebraic equations, . . .)
- the system of differential equations can be an effective example of parallel processing

Take a paper and pen...