

Applied Mathematics for Virtual Reality

Alina Petrescu-Niță
alina.petrescu@upb.ro

General Goals

- Development of all the skills involved in solving a task:
 - Precisely stating the problem;
 - Representing the problem in terms of logical programming;
 - Querying a knowledge base;
 - Analysing and judging incorrect solutions;
 - Setting up a team suitable for tackling the problem.

Theoretical Knowledge and Understanding

- Presentation of the fundamental mathematical techniques and methods that model Virtual Reality;
- Grasping the fundamental concepts, principles and basic techniques used in Artificial Intelligence;
- Knowledge and use of the mathematical concepts and techniques for problem solving using declarative programming (logical programming);
- Knowledge of the principles and methods to design such systems.

Theoretical Skills Acquired

- Design and implement mathematical models;
- Improve knowledge of Information Technology;
- Develop and improve computer-oriented skills;
- Correct use of logical programming for problem solving;
- Synthetic capacity for fundamentals of mathematical tools used in Virtual Reality

Practical Skills Acquired

- The ability to go through all steps involved tackling and solving a modelling or simulation problem;
- General knowledge of logic programming principles;
- Teamwork, responsibility and correctness.

Examination

- Continuous and throughout the semester:
 - Project (individual or team-based);
 - Homework.
- Final exam.