

## Information technologies for teaching mathematics

Anita Jansone, Liepaja University, 14 Lielā Street 14, Liepāja, [anita.jansone@liepu.lv](mailto:anita.jansone@liepu.lv)

Nowadays, the increasing information technologies are used to challenge the mathematics task. Although, there are a lot of software for direct mathematical challenge solving, such as MatLab, Mathematica, it is an important skill to develop own software. Programming skills are very important to develop solution for non-standard mathematical tasks. Consequently, using special mathematics software and programming skills are an important part of the study program.

In the paper, the author describes the course "Programming and computers", for students of maths and physics study program.

To obtain the programming skills, at first, the student should acquire the term of algorithm and methods for algorithm's graphic view. The next step for the student is to acquire the program code writing skills. The programming skill acquisition process is complicated, because the program requires a very good understanding of the algorithm, the formation and execution.

Usually the programming skill acquisition choice of the procedural programming languages are such as C + +, Pascal, Fortran, Basic, and others.

Mastering programming skills, students are more likely to participate in various projects in the mathematical study of the problem.

At Liepaja University<sup>1</sup>, the mathematical challenges are mastered programming language C++, but the mathematical software - MatLab and Mathematica.

Liepaja University Institute of Mathematical Sciences and Information Technology<sup>2</sup> implement the European Social Fund (ESF) project "Material Science, Environmental and Economic Studies of Mathematical Physics Direct and Inverse Problem Effective Analytical and Numeral Method Development", where one of the results are programs set for this mathematical challenges.

---

<sup>1</sup> <http://www.liepu.lv>

<sup>2</sup> <http://imsit.liepu.lv>