Name: **Intelligent Development Tools**		*NEPTUN-code:* *NMXIF1SMNE*	*Number of periods/week:* full-time: 0 lec + 0 sem + 2 lab
Credit: 3 *Requirement:* mid-term mark		*Prerequisite:* NBXRI1EMNE System- and Control Theory	
Responsible: József TAR, Ph.D.	*Position:* professor, habil.	*Faculty and Institute name:* John von Neumann Faculty of Informatics Institute of Applied Mathematics	

Way of assessment:

- solving a chosen task (submission of program, documentation, presentation and presenting the results)

Competences

Course description:

The aim is to provide the Students with modern and efficient development tools that can help them in solving various mathematical and technical problems, and in the presentation of their results.
Besides mentioning the Computer Algebra Systems (CAS), numerical methods, statistical computations and their automation and visualization of the results are discussed and exemplified.
Softwares to be used: LaTeX, bash, awk, gnuplot, Wolfram Alpha, Maxima, Octave, FreeMath, R, Scilab, Atom – Julia.

Literature

A. Kovács, R.E. Precup, B. Paláncz, L. Kovács – Modern numerical methods in engineering, „Modern mathematics" collection, Ed. Politehnica, Timisoara, pp. 1-482, 2012
R. Hiptmair: Numerical Methods for Computational Science and Engineering, 2016 (electronic notes)