

Project 3

Parallel MatLab (multicore) and Parallel Python (pp and ipython)

Due December 10, 2012

- 1) Reproduce the study “**MATLAB Parallel Computing Toolbox Benchmark for an Embarrassingly Parallel Application**” for as large multicore machine you can find using the benchmark code in this paper.
- 2) Implement the above study in ipython notebook using parallel commands
- 3) Prepare a report similar to the above study.
- 4) Run in parallel the project 1 code in MatLab and ipython and prepare a performance report
- 5) **Implement the parallel Least Squares Mean method presented in class and project 1.4 in ipython for extra points (individual effort NOT GROUP)**

References

- 1) https://computing.llnl.gov/tutorials/parallel_comp/#WhatIs
- 2) Parallel MATLAB for Multicore and Multinode Computers (αρχείο στο eclass)
- 3) MATLAB Parallel Computing Toolbox Benchmark for an Embarrassingly Parallel Application (αρχείο στο eclass)
- 4) Programming on parallel machine (αρχείο στο eclass)
- 5) Parallel MatLab (Houstis presentation in eclass)
- 6) Parallel Python: Interactive parallel computing (αρχείο στο eclass)
- 7) Using ipython for parallel computing (<http://minrk.github.com/scipy-tutorial-2011>)
- 8) Study the notebooks in file talk_master
- 9) Study my presentation and examples posted in eclass