MEI/PDC
Reading assignment in CSP

Read_me_first

The main goal of this reading assignment is to develop in students <u>transversal skills</u> applied to a specific topic in the module *Computer Systems and Performance*: the methodology on the characterization of the performance bottlenecks on each computing platform and on the code profiling and its performance analysis on that platform.

The development of these skills will be achieved through training in <u>literature search</u>, <u>reading & interpreting scientific papers</u>, <u>planning experimental work</u>, <u>synthesizing relevant information</u>, <u>writing a short essay</u> on a given theme and a short (10 min) <u>oral communication and discussion</u> of the results (on the 27th November).

The starting material for this reading is a paper on the performance model known as Roofline, complemented with the Gustafson extension and with a revision of the Amdahl law applied to heterogeneous multicore computers. Everyone should read it and try to characterize its own laptop based on the supplied information on the paper.

The next step is related to get acquainted with one of the most popular portable interface (in the form of a library) to hardware performance counters on current processor architectures, PAPI, by reading one of the papers that address this approach.

Later on we will supply the specification of the group/individual activities, through a revised edition of this document.

Braga, 07/Nov/12