Program parallelization 2015
Course INF213, Lab INF3, Thursday 10h15-12h00, 13h15-15h00

Week 1 (17 Sept) Course: Intro to parallel computing (2-3h)  
Lab0: Visual C++ & launching parallel programs (1-2h),  

Week 2 (24 Sept) Course: Parallel computing and DPS (2h)  
Lab 1 : DPS basics (2h)  

Week 3 (1 Oct) Course: Advanced features (2h)  
Labs 1&2 : DPS: flow control & load balancing (2h)  

Week 4 (8 Oct) Lab 2: DPS (4h), Lab 1 report due 12th Oct.  

Week 6 (15 Oct) Course: Exploration of solution space using heuristics, (1h) by Dr R. Rossier  
Lab 3 (Travelling salesman) (3h), Lab 2 report due 19th Oct.  

Week 5 (22 Oct) Course: Performance prediction (2h)  
Exercice: Performance prediction (2h), Lab 3 report due 26th Oct.  

Week 7 (29 Oct) OpenMP, MPI and scientific computing (2h), by Dr V. Keller  
Laboratory exercise (2h)  

Week 8 (5 Nov) Presentation & visit of Supercomputing center (2h, INF213)  
Project proposals (2h, INF213)  

Week 9 (12 Nov): 10h15: Introduction to GPUs and CUDA (R.D.Hersch, ~1h)  
Project (3h),  

Week 10 (19 Nov): 10h15-12h00: Talk by Dr Sebastian Ponce (invited): Software parallelization at CERN : from multi cores to the Grid  
Delivery of project analysis due Wed. 25th Nov  
(project analysis, possible solutions, preferred solution, theoretical speedup analysis, project planning)  
Project (2h)  

Week 11 (26 Nov): Visit at CERN (Dr Sebastien Ponce)  

Week 12 (3 Déc): Project (4h),  

Week 13 (10 Dec): Project (4h)  

Week 14 (17 Dec): Final presentation (10 min) & project  

Project delivery deadline: 4th of January 2015  
Evaluation: Project: theoretical analysis, solution adopted, final presentation, report, rounding of grade according to Lab. reports  

Files on http://moodle.epfl.ch (password: etudlsp)  
Source code for dps: \dps.epfl.ch