COMP 5704: Parallel Algorithms and Applications in Data Science

Announcements

* Office Hours: Thursdays 4:00-5:00, room HP 5431

Course Outline

Multiprocessor architectures from an application programmer’s perspective: programming models, processor clusters, multi-core processors, GPUs, algorithmic paradigms, efficient parallel problem solving, scalability and portability. Projects on high performance computing in Data Science, incl. data analytics, bioinformatics, simulations. Programming experience on parallel processing equipment.

Course Material

* [Lectures](http://www.scs.carleton.ca/~dehne/teaching/5704/lectures/index.html)
* [Resources](https://dehne73176131.wordpress.com/teaching/resources/)

Student Projects

* [Steps & Deadlines](https://dehne73176131.wordpress.com/teaching/comp-5704-parallel-algorithms-and-applications-in-data-science/steps-deadlines/)
* [Project Template](http://www.scs.carleton.ca/~dehne/teaching/resources/project-template.zip)
* [Project & Presentation Tips](https://dehne73176131.wordpress.com/teaching/comp-5704-parallel-algorithms-and-applications-in-data-science/project-presentation-tips/)
* [How To Organize A Research Paper](https://dehne73176131.wordpress.com/teaching/resources/how-to-organize-a-research-paper/)
* [How To Give A Good Research Talk](https://dehne73176131.wordpress.com/teaching/resources/how-to-give-a-good-research-talk/)
* [List of Projects & Presentations](https://dehne73176131.wordpress.com/teaching/comp-5704-parallel-algorithms-and-applications-in-data-science/projects-presentations/)

Student Evaluation

**Student Projects**: Every student is expected to select a topic of interest for a parallel programming project. A project includes (a) a literature review, (b) research and programming work, and (c) a final paper.

**Student Presentations**: Every student is expected to give a class presentation related to his/her project.

There are no further assignments or exams. The course evaluation is based on the project (70%: 20% for literature review, 30% for the quality of the research or programming work, 20% for the final paper organization and style) and presentation (30%: 15% for the quality of the slides, 15% for the quality of the presentation).