Generic Autotuning Technology for GPU Applications

Workshop program, version February 18, 2022.

Day 1
09:30 – 10:00  Zoom room open
10:00 – 10:15  Welcome by Lorentz Center
10:15 – 11:30  Welcome by the organizers & round of introductions
11:30 – 12:00  Coffee break
12:00 – 12:30  Presentation: Ben van Werkhoven - Kernel Tuner
12:30 – 14:00  Lunch break
14:00 – 14:30  Presentation: Jiri Filipovic - Kernel Tuning Toolkit (KTT)
14:30 – 15:00  Presentation: Ari Rasch - Auto-Tuning Framework (ATF)
15:00 – 15:30  Invited Talk: Luigi Nardi - Practical Design Space Exploration and Its Applications
15:30 – 16:00  Coffee break
16:00 – 17:30  Plenary discussion to identify open problems & to refine workshop topics
17:30         Drinks (on-site only)

Day 2
09:00 – 09:30  Invited talk: Mary Hall - title tba
09:30 – 10:00  Invited talk: Anne Elser - ML and Benchmarks for Autotuning: Experiences and Challenges
10:00 – 10:30  Invited talk: Cosmin Oancea - Dataset Sensitive Autotuning of Multi-versioned Code Based on Monotonic Properties
10:30 – 11:00  Coffee break
11:00 – 12:30  Summary, sharpening, and selection of open problems, forming of group
12:30 – 14:00  Lunch break
14:00 – 15:30  Parallel work in groups
15:30 – 16:00  Coffee break
16:00 – 16:30  Short plenary presentations of work plans of each group
16:30 – 17:30  Parallel work in groups

Day 3
09:00 – 09:30  Invited talk: Richard Vuduc - Feedback-directed control for autotuning
09:30 – 10:30  Parallel work in groups
10:30 – 11:00  Coffee break
11:00 – 12:30  Parallel work in groups
12:30 – 14:00  Lunch break
14:00 – 15:30  Parallel work in groups
15:30 – 16:00  Coffee break
16:00 – 16:45  Plenary discussion and short progress update by work groups
17:30 – 18:30  Workshop social event: boat trip
18:30         Workshop dinner
Day 4
09:00 – 09:30 Invited talk: Chiel van Heerwaarden - (Auto)-tuning of the RTE+RRTMGP radiation model to speed up weather and climate models
09:30 – 10:30 Parallel work in groups
10:30 – 11:00 Coffee break
11:00 – 12:30 Parallel work in groups
12:30 – 14:00 Lunch break
14:00 – 15:30 Parallel work in groups, making workshop follow-up plans
15:30 – 16:00 Coffee break
16:00 – 17:30 Parallel work groups finalize their results and follow-up plans

Day 5
09:00 – 10:30 Detailed reports on the results by the work groups
10:30 – 11:00 Coffee break
11:00 – 12:30 Workshop wrap-up, presentation of follow-up plans
12:30 – 14:00 Lunch break (optional)