



Sabancı
Üniversitesi



EURO²

Performance Engineering on CPUs and GPUs

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Welcome to the Course



Meet the Instructor:

- Kamer Kaya, Sabanci University

What you will learn

- **Little things on CPU performance**
 - How CPUs run instructions?
 - Memory, caches, locality
 - Prefetching, branches
- **Little things on GPU performance**
 - Memory coalescing
 - Load balancing
 - Shared memory
 - Bank conflicts

Preknowledge Prerequisite(s)

- Experience with C++
- Experience with CUDA

What this course is and isn't?

- This course is about the little things that you need to be careful when performance matters.
- It will not teach you parallelism in any way.
- Also it will not be about how to use the tools for performance engineering.
- But it will introduce the concepts necessary to understand performance drawbacks/gains once you change your code.

Introduction and Set Up/Configure/Install



- Download the codes from

<https://github.com/SU-HPC/EuroCC2-MOOC>

and try on your computer.

Thanks



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