



C EURO^{4SEE}

Introduction to HPC using GPUs,
Denizhan Tutar, Istanbul Technical University

Welcome to the Course



Meet the Instructor:

Denizhan Tutar

- Research Assistant at Istanbul Technical University

Preknowledge/Prerequisite(s)



- Entry level knowledge of CUDA
- General understanding of parallelization concepts and principles
- Basic programming skills in C++

Course Overview



- Remarks on performance working with CPU
- Remarks on parallelizm
- Computing with GPUs

What this course is



- A Revision of core concepts relating to computation, performance and parallelism
- A review of GPUs and introductory examples to CUDA programming model
- Some of the common obstacles to achieve high performance and how to circumvent those

What this course isn't



- An appropriate resource to learn discussed concepts for the first time or in detail
- An introduction to programming with CUDA

Introduction and Set Up/Configure/Install



- Access to a cuda-capable GPU
- CUDA Toolkit: compilers(nvcc, nvc++) and profilers (NVIDIA Visual Profiler, ..)
- Google Collab should be enough for purposes of this course

Thanks!



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