Offloading Computation to a GPU with OpenMP

Kamer Kaya, Sabancı University

Welcome to the Course

Meet the Instructor:

- Kamer Kaya, Sabancı University

What you will learn

Preknowledge Prerequisite(s)

Understanding the basic device execution model and its constructs

- Host-centric design using thread teams.

- Distinction between "teams" and "parallel" execution.

Work distribution among threads and associated constructs

- Utilizing worksharing constructs like distribute and for/do

Mapping data between the host and device, relevant constructs, and data scopes

- Strategies for reducing unnecessary data transfers and managing data scopes effectively for key constructs.

- Experience with C++ and OpenMP

What this course is and isn't?

- This course is about offloading computation to a GPU via OpenMP

- It will not teach you OpenMP but basic material will be covered.

- But you will learn what to do when you only know OpenMP (and not CUDA) but still want to use your GPU.

Introduction and Set Up/Configure/Install

- Download the codes from

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

and try on your computer.

Thanks