软件学院　杨伟光

Heterogeneous Parallel Computing

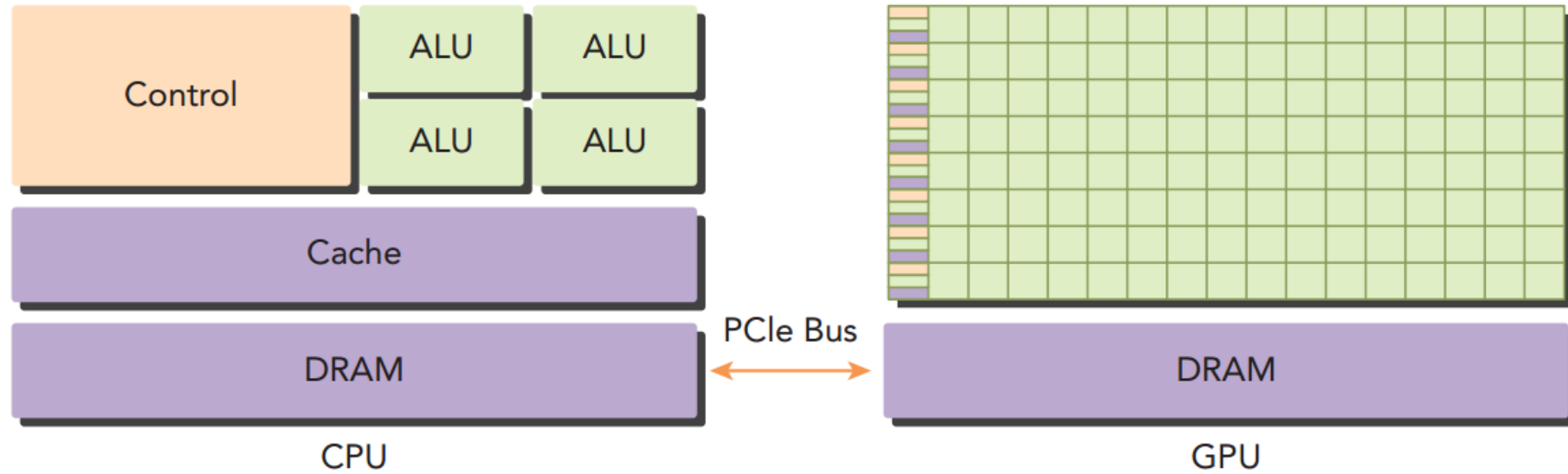# Menu

Heterogeneous Architecture

Paradigm of Heterogeneous Computing

Platforms for Heterogeneous Computing

CUDA Platforms for Heterogeneous Computing
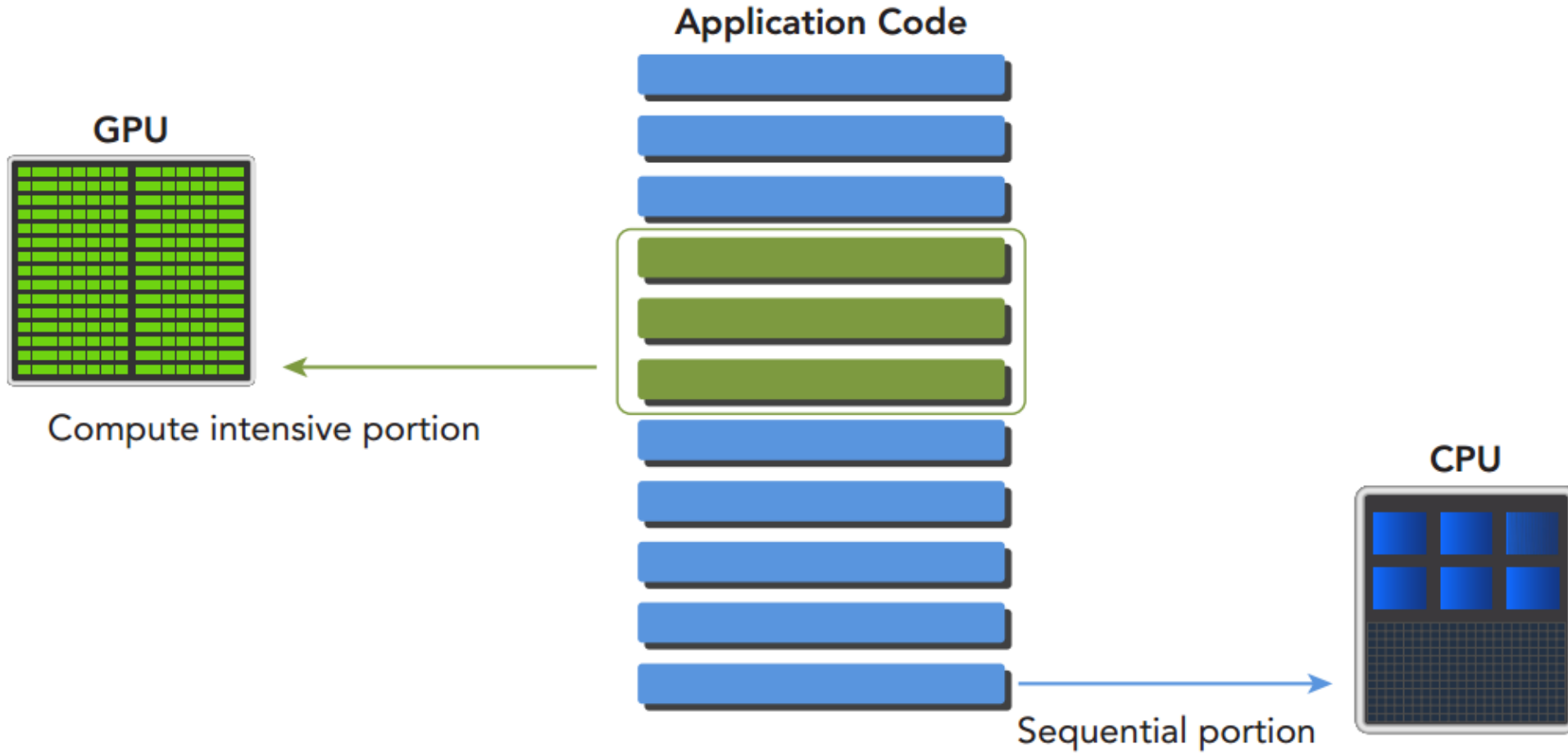
Heterogeneous Architecture
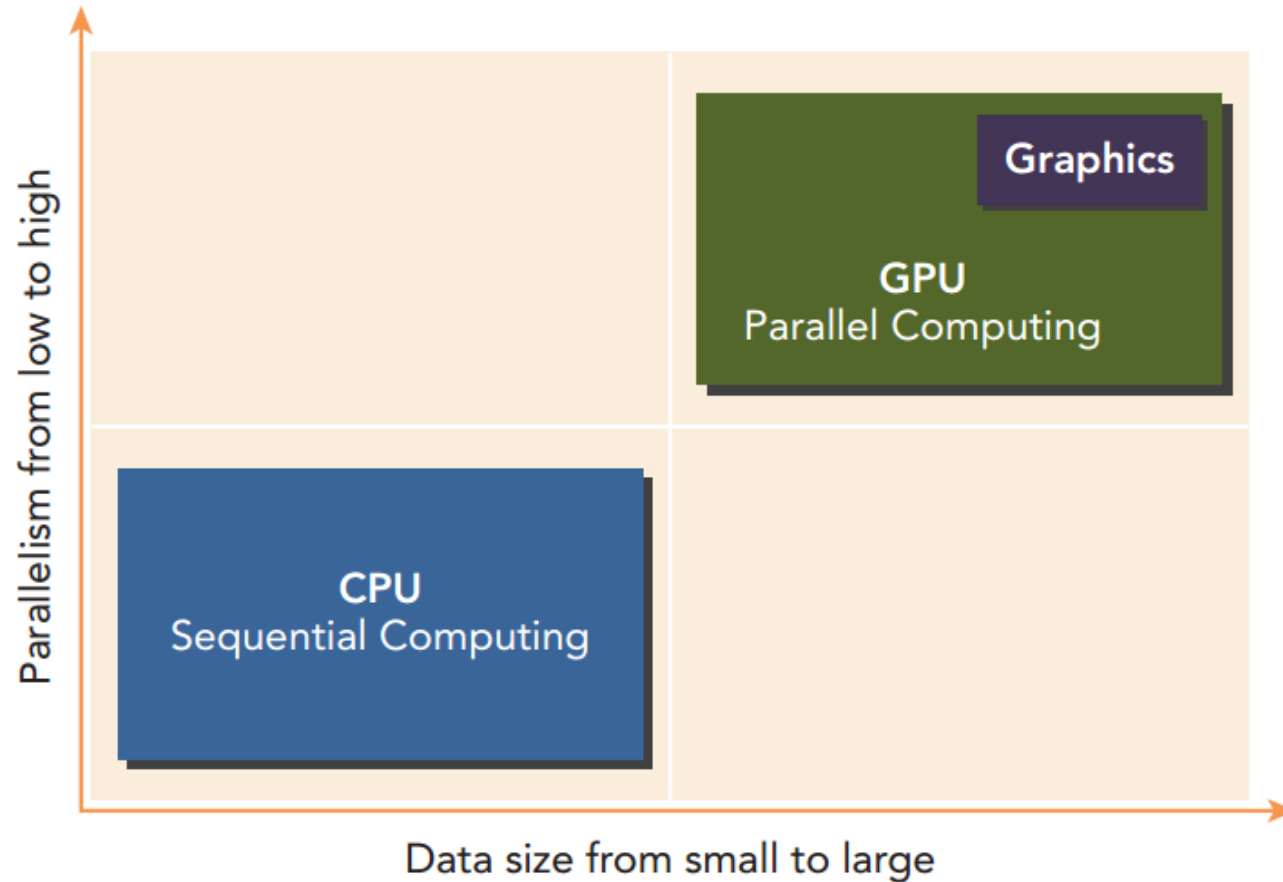
A heterogeneous application consists of two parts:
➤ Host code
➤ Device code
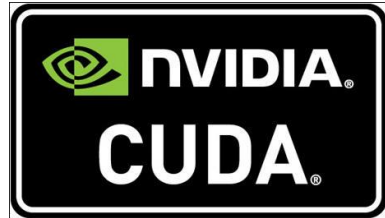*Host code* runs on CPUs and *device code* runs on GPUs.

Heterogeneous Architecture

Application Code

GPU

Compute intensive portion

CPU

Sequential portion

Paradigm of Heterogeneous Computing

Platforms for Heterogeneous Computing

Platforms for Heterogeneous Computing

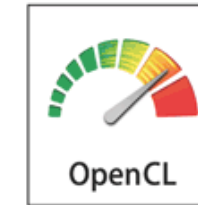# Platforms for Heterogeneous Computing

Ecosystem

Platforms for Heterogeneous Computing

How to choose?

Platforms for Heterogeneous Computing

How to choose?
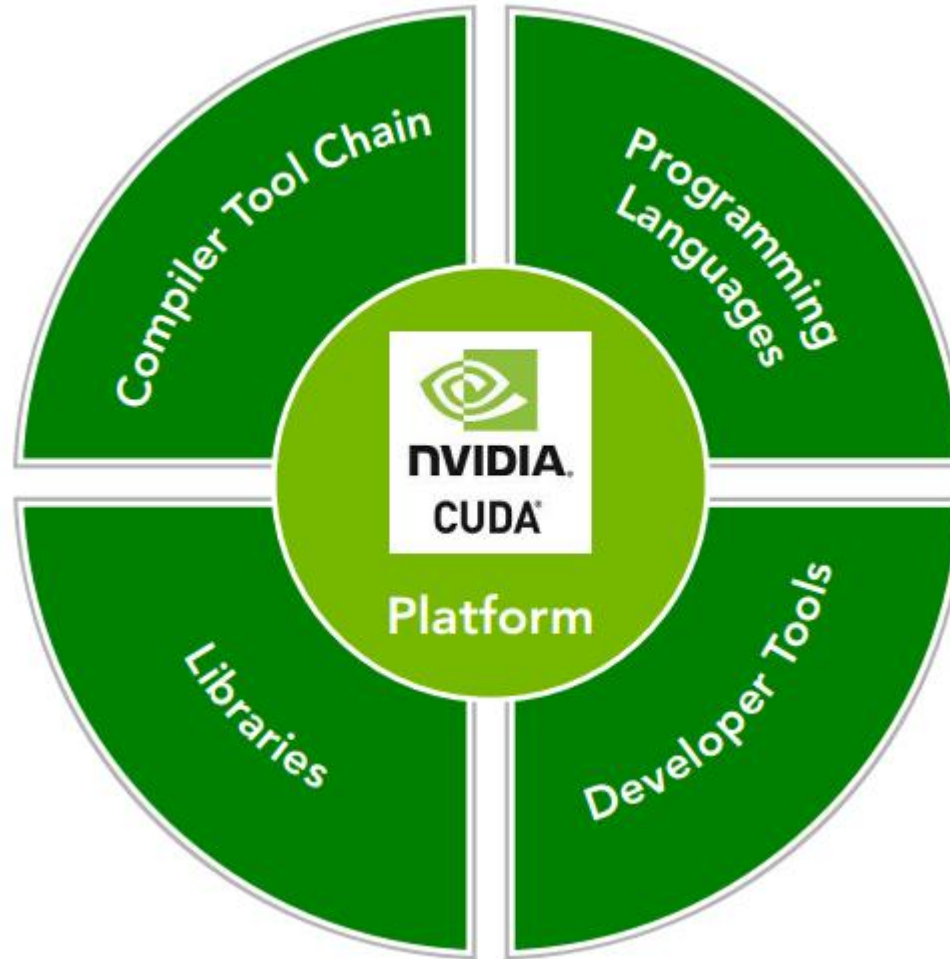
performance

portability

CUDA Platforms for Heterogeneous Computing

CUDA Platforms for Heterogeneous Computing

- GeForce ➡ GTX The ultimate GPU for gamers
- Tesla ➡ supercomputing solutions
- Quadro ➡ Quadro Professional Workstation Solutions
- Tegra ➡ The World's Fastest Mobile Processors

> NVIDIA Processors and how to choose GPU?

CUDA Platforms for Heterogeneous Computing

- GeForce ➔ GTX The ultimate GPU for gamers

Inexpensive	High Performance	Disadvantages

NVIDIA Processors and how to choose GPU?

Thanks