Pipeline

Take care of the order of the instructions

IF	ID	EX	MEM	WB				
i	IF	ID	EX	MEM	WB			
<i>t</i>		IF	ID	EX	MEM	WB		
			IF	ID	EX	MEM	WB	
				IF	ID	EX	MEM	WB

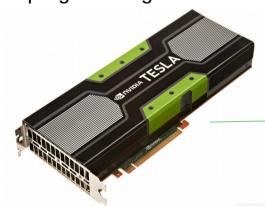
Many cores

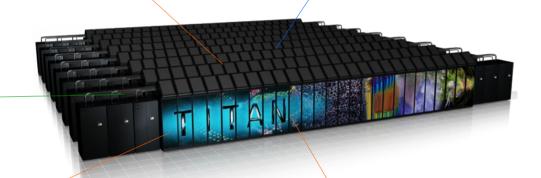
Efficient parallelism is complicated



GPUs

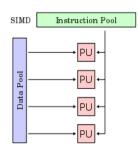
Different architecture and way of programming than CPUs





Vector support

Manipulate vector instead of scalar variables



Memory hierarchy

Data locallity → memory access patterns

