Furkan TEMEL

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CENG 322

VIDEO ASSIGNMENT#2

• What are the advantages of heterogeneous/asymmetric computing? Give examples

Heterogeneous or asymmetric computing means to use a processor that features different capabilities, which helps to improve performance and energy usage for different workloads. Such a system, for instance, can have both high-power and low-power cores in order to process both the demanding tasks and the less power-intensive ones in an energy-efficient manner. Also it can be seen at this video especially about parallelism: (https://www.youtube.com/watch?v=-P28LKWTzrI)

• What are the topics already covered in our lectures? What are the topics new to you in the video?

This course have been on such topics as heterogeneity in the systems, the idea of asymmetric multi-core systems, and various aspects of parallel computing and memory systems. The video gave a number of illustrations of asymmetric computing in today's processors, like the joining of CPUs and GPUs, and went into detail about such subjects as critical section management and bottleneck acceleration, which were fresh in-depth topics for me.

• After watching the video, do you have the motivation to watch the recommended videos? Why? Why not?

Yes, I'm definitely inspired to check out the recommended videos. They seem to dive deeper into identifying and tackling bottlenecks in multi-core systems, which could really boost my understanding of how to optimize parallel computing tasks effectively. Also, I am studying CUDA project with our lecturer, so it motivated me to get into the details.

• What is the question you want to ask to the lecturer? Why?

I would like to address the matter of whether or not heterogeneous computing models can actually be used in common consumer technology. What are the main obstacles that are currently preventing a more widespread use of these technologies and how are they being overcome in the current research and development processes? This is the subject that piques my interest because if one can see the practical challenges and solutions that exist, the possible trends in computing technology will be clearer.