Active/HardBD Panel

Mohammad Sadoghi, Purdue University
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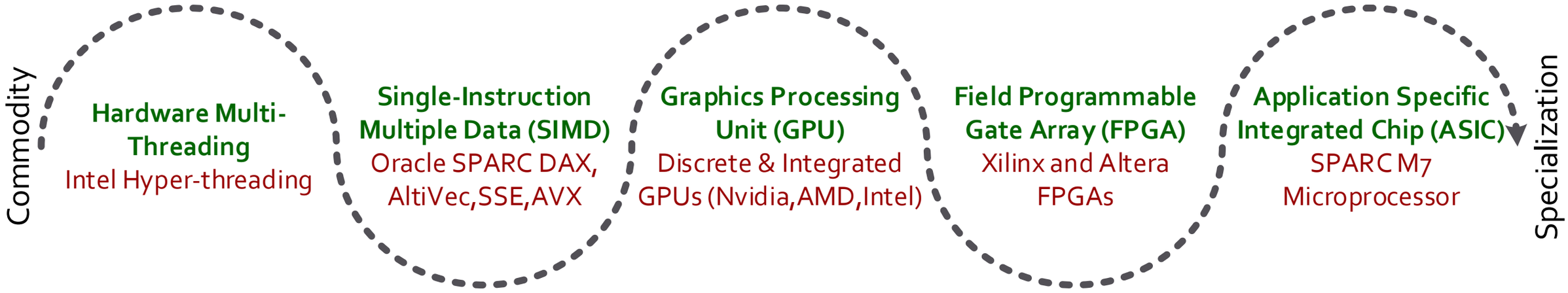
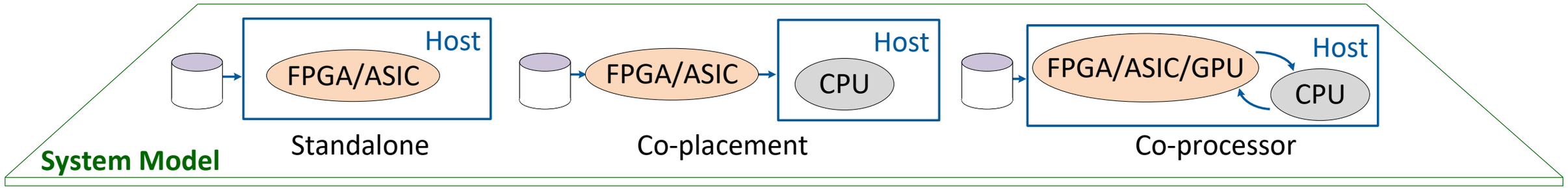
Vassilis J. Tsotras, University of California – Riverside

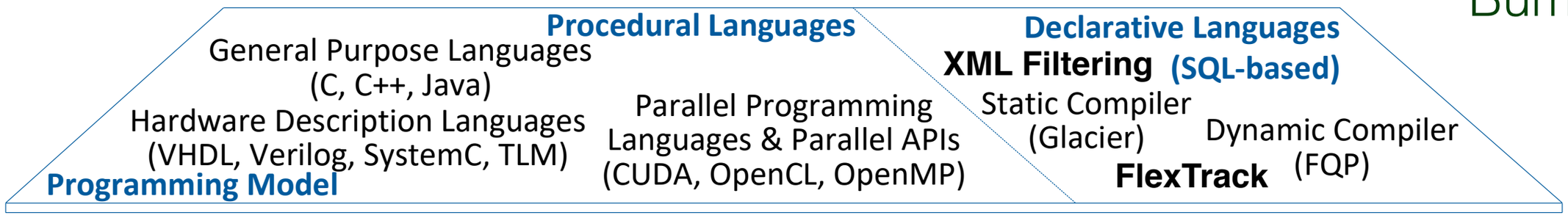
Accelerator Spectrum

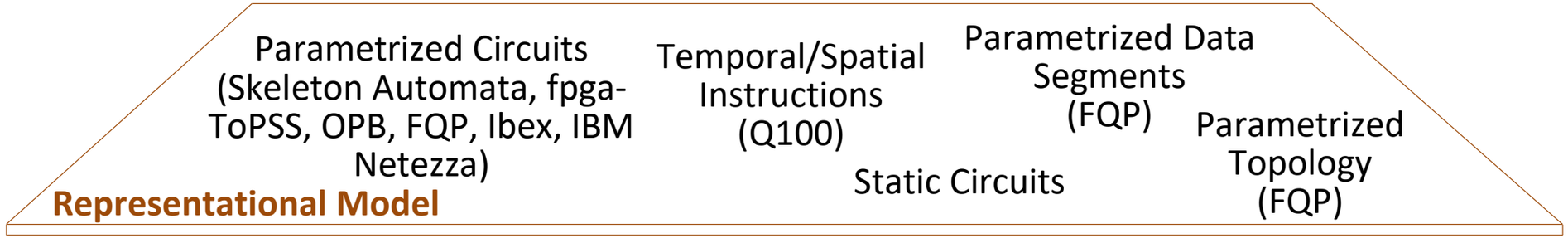


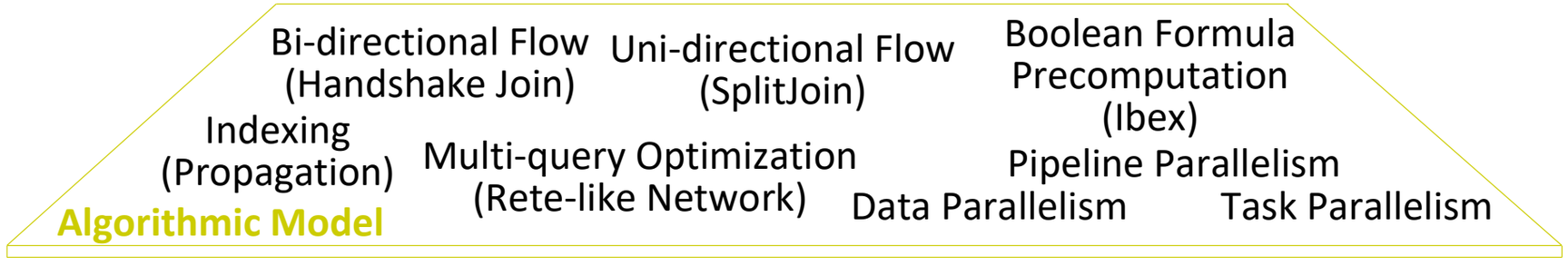
Hardware Acceleration Landscape



Bump-in-the-wire
Active Path

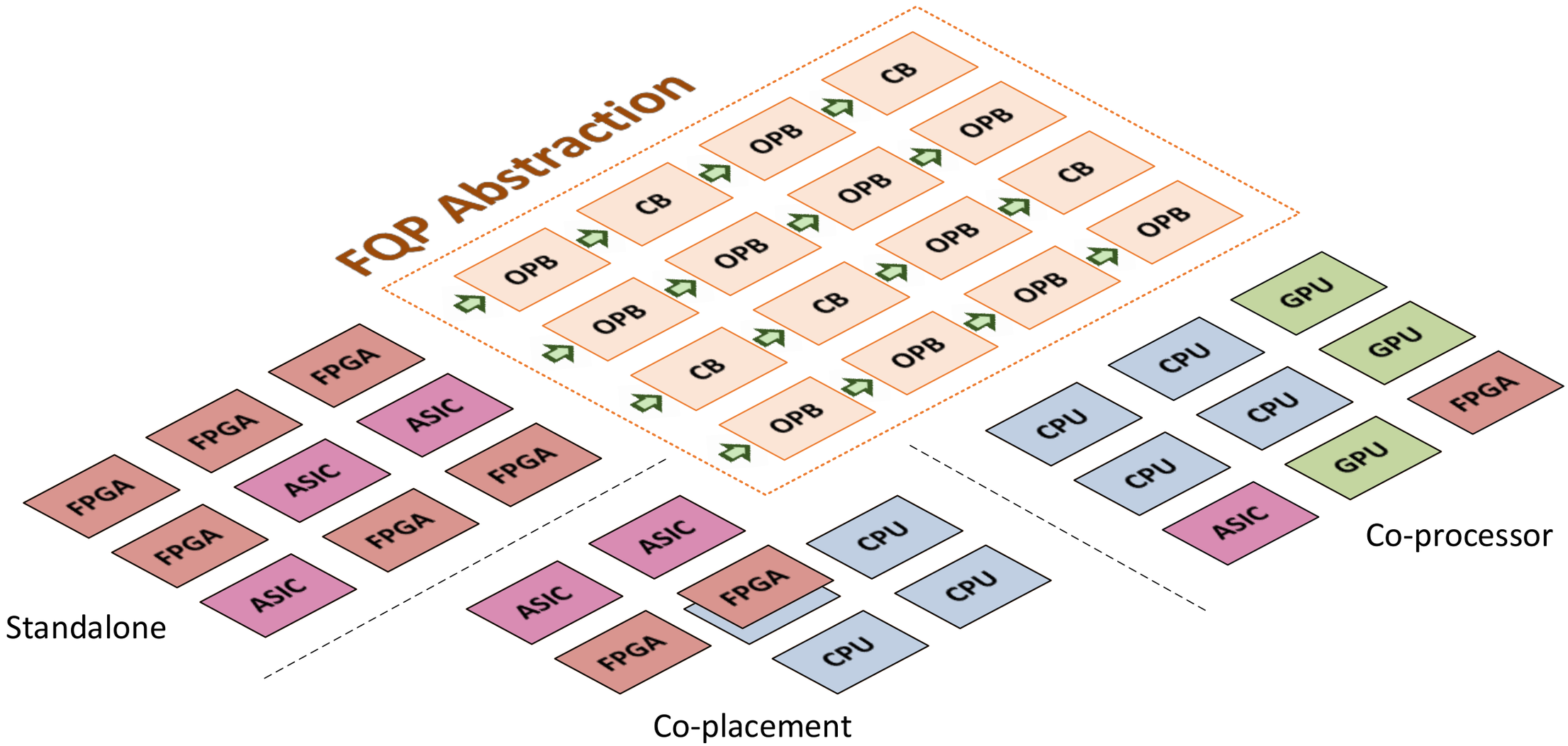






Hardware Acceleration Landscape for Distributed Real-time Analytics: Virtues and Limitations, ICDCS'17

Heterogeneous Hardware Virtualization



Hardware Acceleration Landscape for Distributed Real-time Analytics: Virtues and Limitations, ICDCS'17

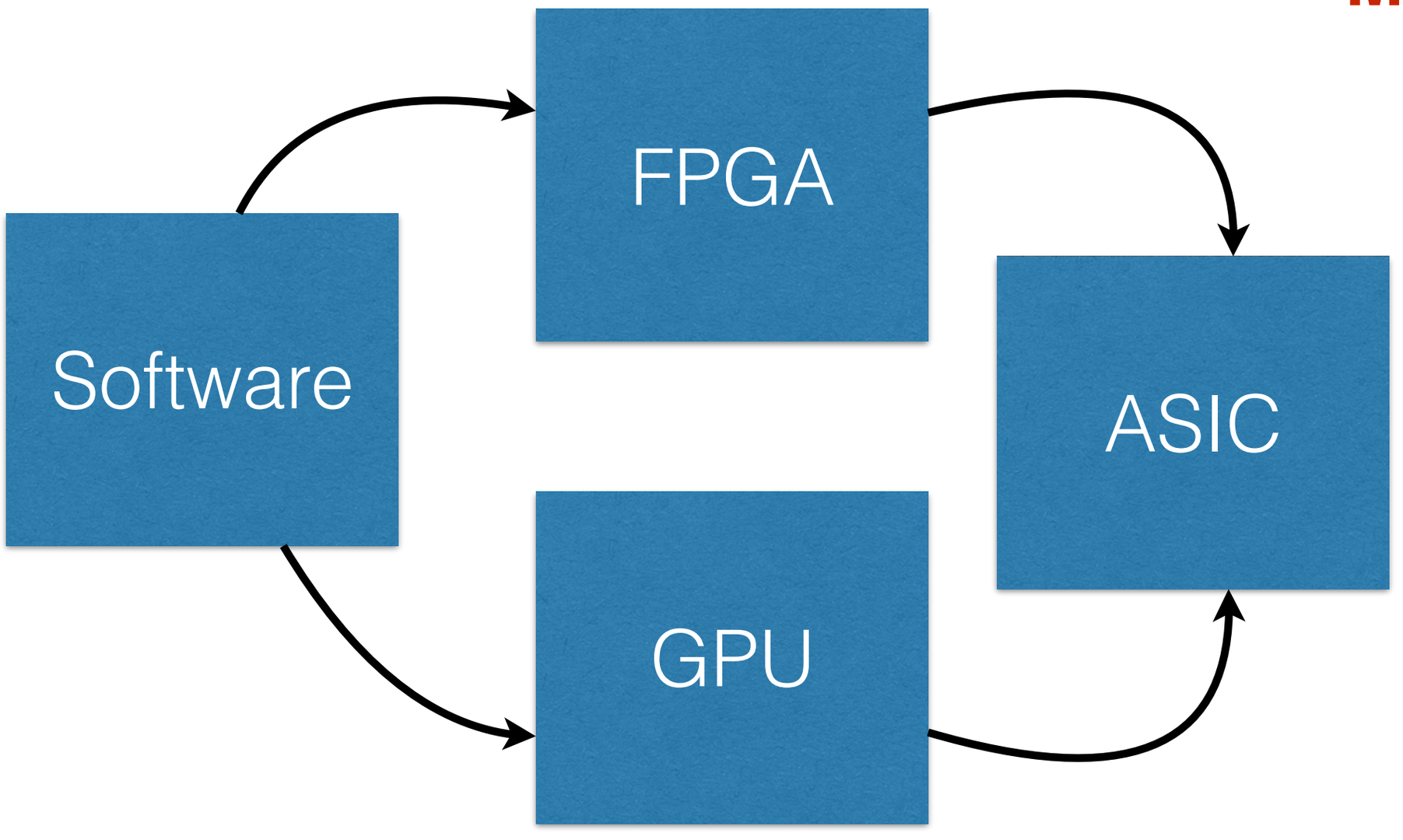
Software-Hardware Life-cycle for Modern Accelerators

Moore's Law Limit

Heterogeneous Architecture?

Homogeneity? (abstraction)

Software-Hardware Life-cycle for Modern Accelerators

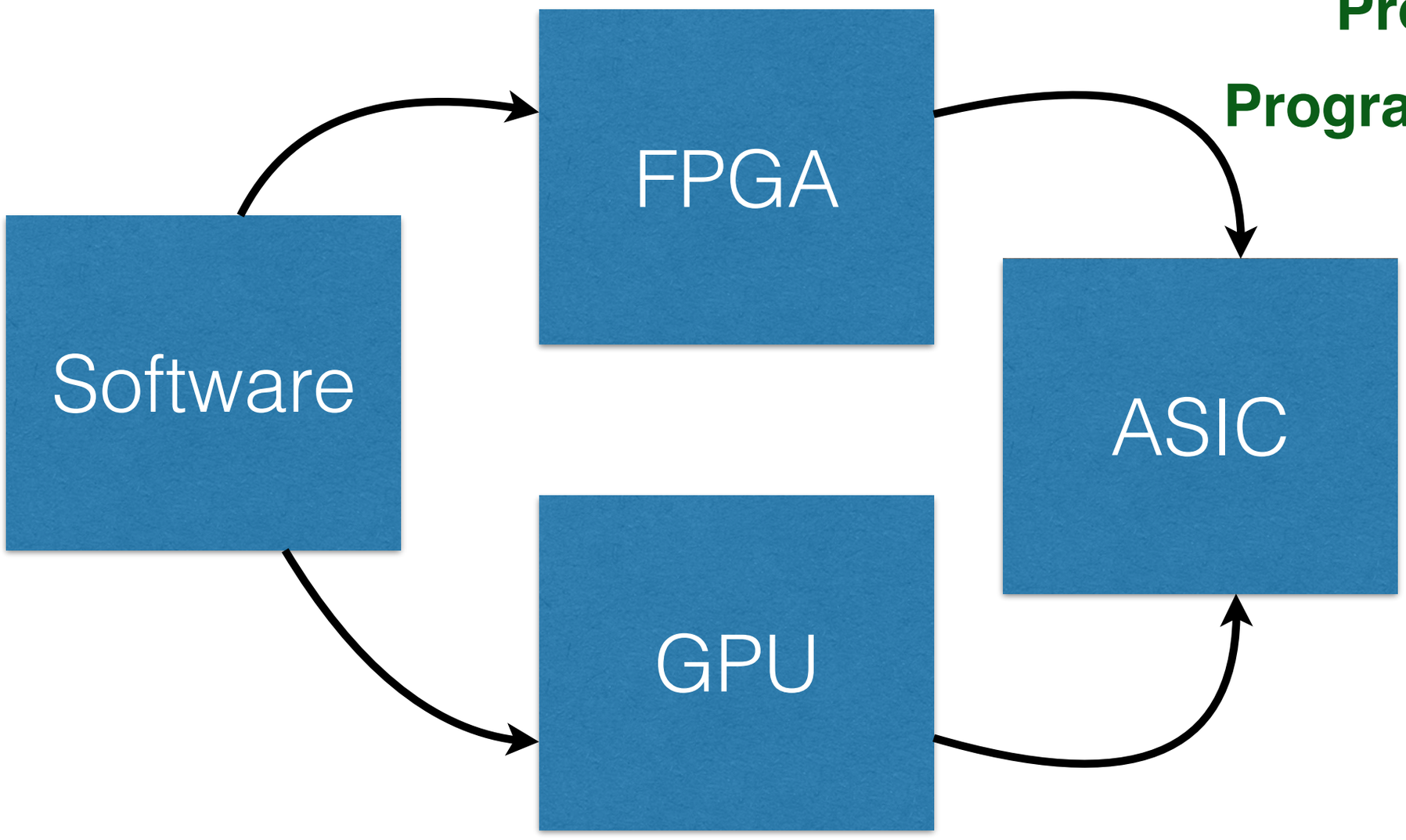


Moore's Law Limit

Heterogeneous Architecture?

Homogeneity? (abstraction)

Software-Hardware Life-cycle for Modern Accelerators



Abstraction?

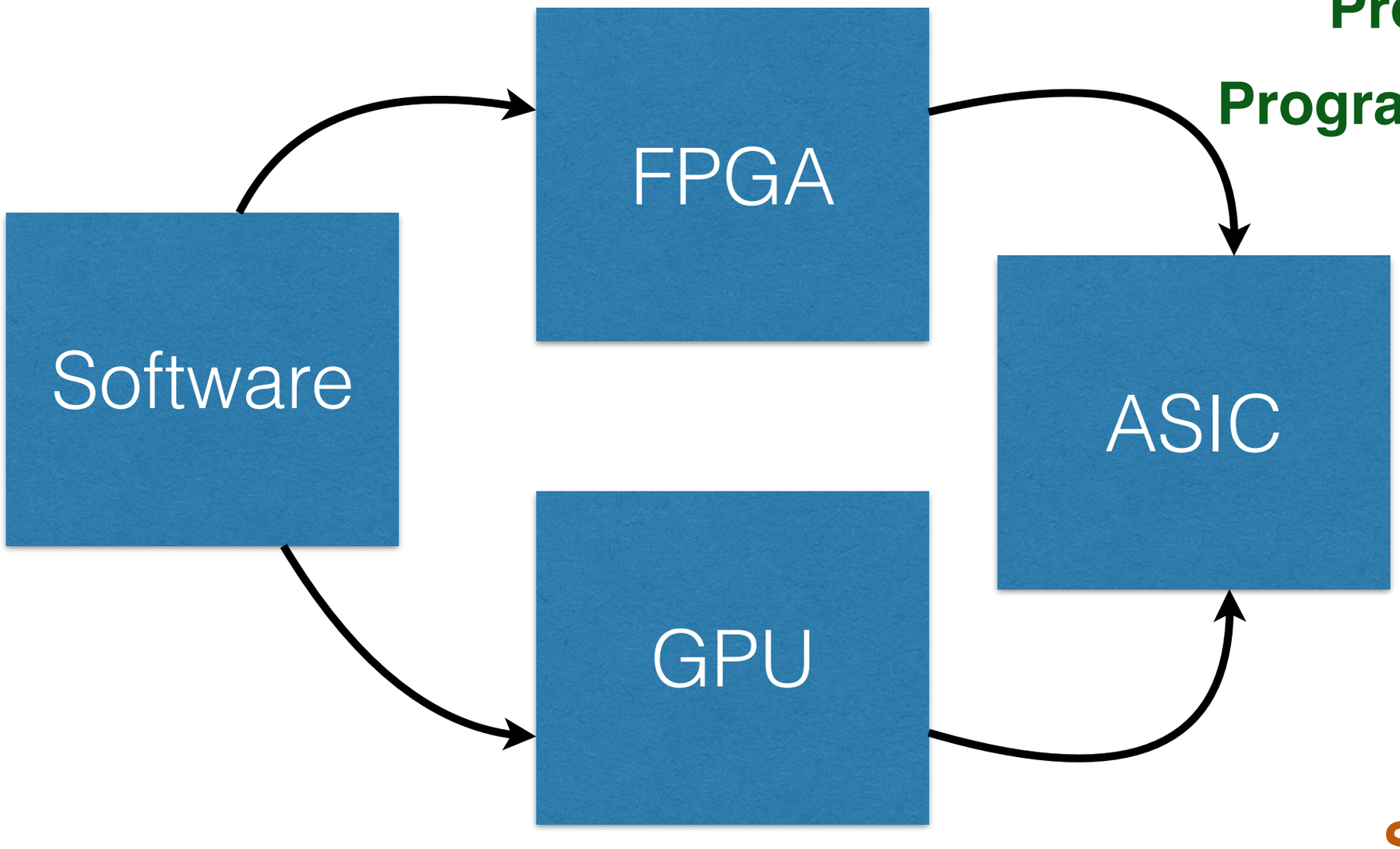
Programming Models?

Programming Executions?

Logical/Physical Independence?

Virtualization?

Software-Hardware Life-cycle for Modern Accelerators



Abstraction?

Programming Models?

Programming Executions?

Logical/Physical Independence?

Virtualization?

Compiler?

Optimizer?

Co-processor Optimization?

Code Generation?

Spatial vs. Temporal Sharing/Scheduling?

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