Carole-Jean Wu
CRA-W Grad Cohort, Class of 2007

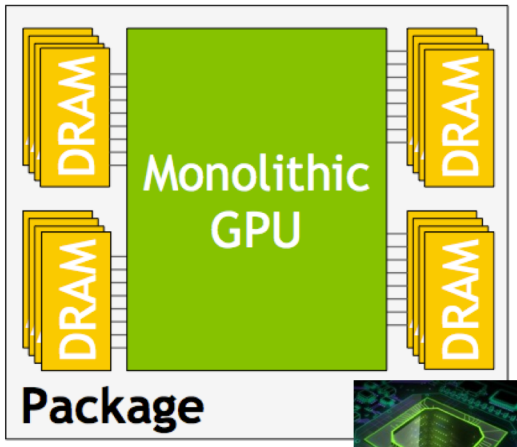
Carole-Jean Wu

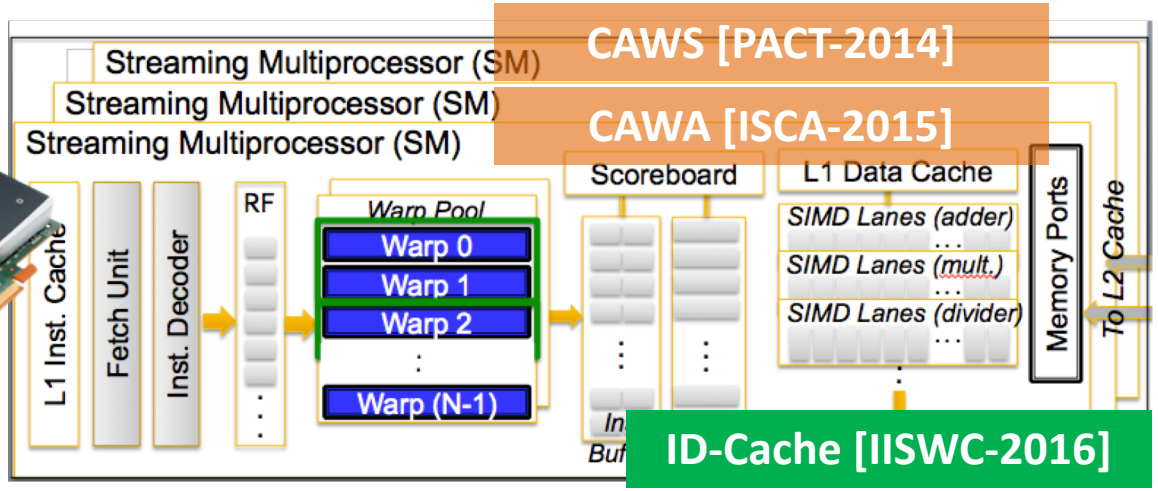
Designing System and Processor Architecture for High Performance and Energy Efficiency

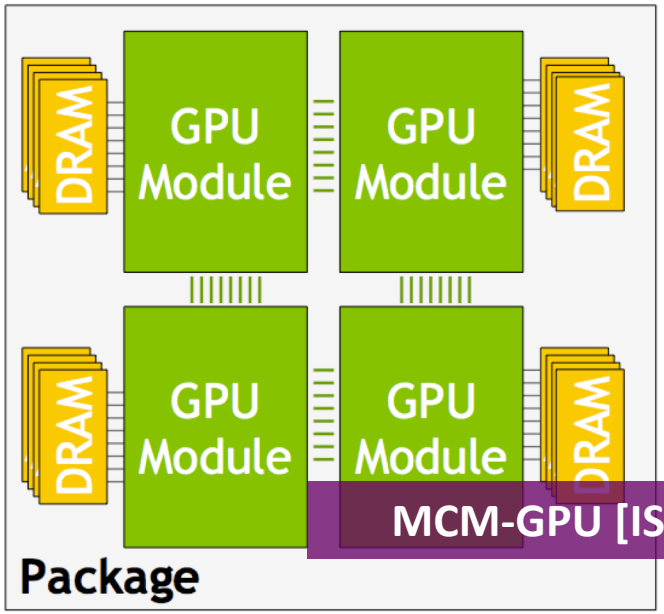
- Assistant Professor, ASU
- PhD, Princeton University
- BS, Cornell University

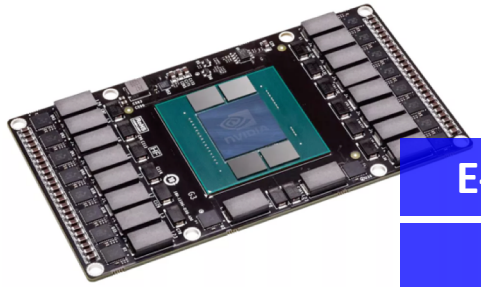
- Research topics
  - Heterogeneity for performance acceleration and energy efficiency optimization
  - Energy harvesting for emerging computing platforms
  - Advanced processor and system cooling designs and energy management

High performance and energy efficient acceleration with GPUs









Latency Characterization [ISPASS-2014]

CAWS [PACT-2014]

CAWA [ISCA-2015]

ID-Cache [IISWC-2016]

Ctrl-C [ICCD-2016]

heteroPDP [IISWC-2017]

LATTE-CC [HPCA-2018]

E-ECC [MEMSYS-2015; TC-2016]

RATT-ECC [TACO-2016]

Multi-Granularity ECC

MCM-GPU [ISCA-2017]

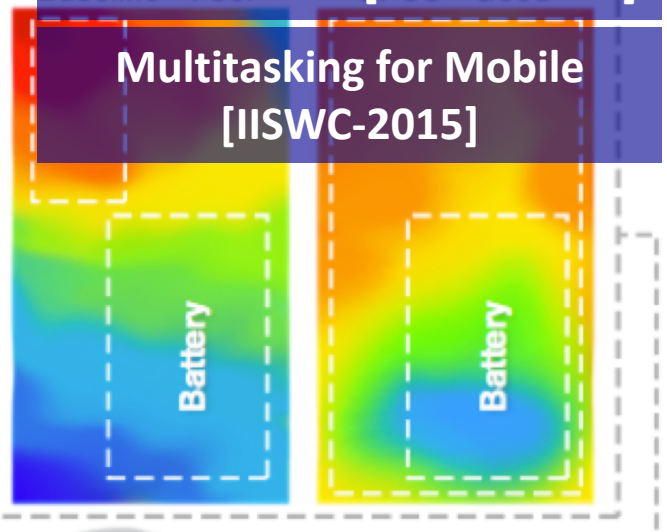
Performance, temperature, energy management for ***portable electronics***

MobileBench [IISWC-2013]

Joule/Instruction [IISWC-2014]

TLP for Mobile [ISPASS-2015]

Multitasking for Mobile [IISWC-2015]



STEAM [TECS-2014]

Statistical PPW Optimization [HPCA-2016]

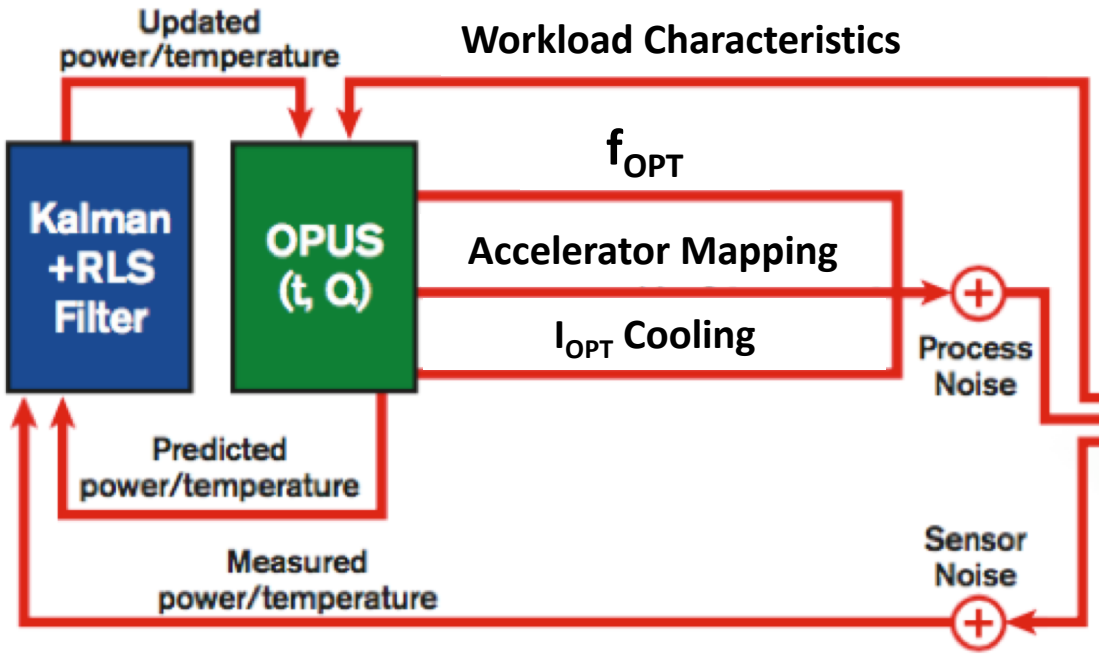
heteroPDP [IISWC-2017]

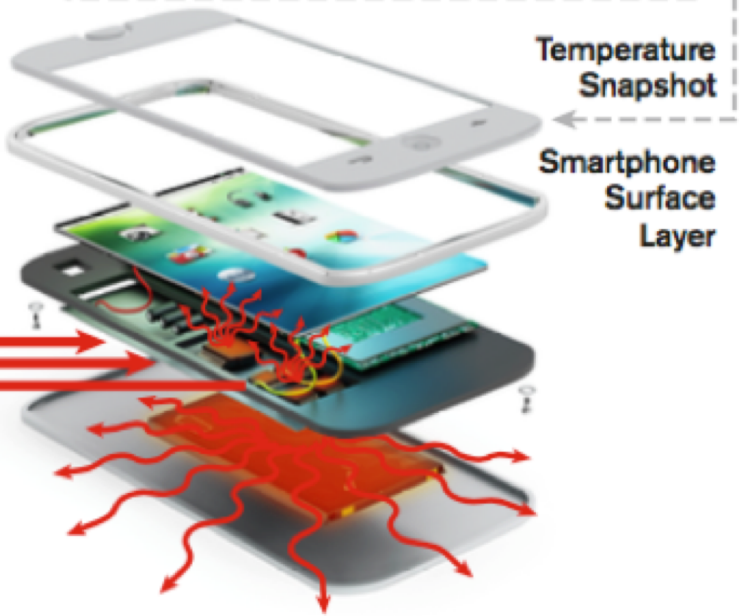
DORA [ISPASS-2018]

aPC PPW Optimization

Hybrid Device Cooling

Feedback Control Loop





CRA-W Grad Cohort 2007, 2008, 2009

Grad Cohort 2007

Grad Cohort 2008

Grad Cohort 2009

PhD, 2012

CRA-W

Computing Research Association
Women

Carole – Lessons from Grad Cohort

- Be ready and be open-minded for exciting opportunities
- Identify important problems and explore less well studied research paths
- Do excellent research & present your work – exciting opportunities will follow
- Cultivate relationships – mentors, supports, advocators, sponsors

- Prioritize and take time to recharge yourself!