**Features:**
- ISA ARM
- Executes unmodified binaries
- Leverages QEMU
- Supports Time-Based Sampling
- Detailed Performance models
- Out-of-order: ROB, RAT, window...
- In-order: superscalar, load-hit...
- Configurable memory hierarchy
- Validated against ARM Cortex A15
- Multicore MOESI coherence
- Detailed Power and Temperature models
- Out-of-order: ROB, RAT, window...
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**ESESC is FAST:**
- Faster than any other available cycle accurate simulator

**ESESC is accurate**
- Validated against ARM A15 (chromebook)

**We need sampling for fast simulations**
- Select a representative subset
- Automatic without profiling
- Just simulate a subset of the program

**Current Sampling Problems:**
- It does not work for multithreaded
- It does not work for temperature

Using direct measurements, we observed that if we estimate the initial condition, we can do sampling for temperature.

**References:**