Potential topics can be (but not limited to):

Instruction set design and measurement.

Instruction-level parallelism: Pipeline structures, branch prediction.

Limits to ILP.

Next-generation microprocessors: System-on-chip processors, multicore processors, chip multiprocessors.

Smartphone architectures.

GPU-based architectures.

High-performance memory systems.

Cache policies.

Special-purpose hardware: Embedded systems.

Cache compression and decompression.

Accelerating the RISC processor using FPGAs.

Implementing cryptography on FPGAs.

Low-power architectures and systems.

Quantum computing.

Multithreaded new technologies and their architectural implications.

Multiprocessors/computers: Shared memory.

Distributed memory. Evaluate and compare current representative architectures.

Large computers: Clusters. Cloud computing.

Cognitive computing and augmented intelligence.

It is not limited to the topics above. Please, be creative.