

Just what is memory?

What are the semantics of memory?

What is a consistency model?

- How processor's see each other's writes (in what order)
- The guarantee you provide programs about when its values are written and read
- Rules for what writes and reads mean *across* processors
- x86 processors are processor consistent
- sequential cons \geq processor con x86 \geq relaxed ARM

What is a transactional memory interface?

- Danger! `foo() { printf(" "); }; int b; atomic { int a = foo(); b = a + 1 }`
- I/O problem
- Hardware supports bounded transactions, software extends to unbounded transactions

How do dataflow systems store values?

What is a stream?

Why processor-in-memory?