

Instruction Level Parallelism

- Dependencies
 - data dependency
 - name dependency (antidependence/output dependence)
 - control dependency
- Dynamic scheduling w/ Tomasulo's algorithm
- Branch prediction
 - branch prediction buffer
 - correlating branch predictors
 - tournament predictors

- High Performance Instruction Delivery
 - branch target buffers
 - autonomous instruction fetch units
 - return address predictors

- Multiple Issue
 - superscalar
 - VLIW

- Speculation
 - reorder buffer
 - register renaming