

# The Terminology of CS-322

Absolute v. Relative Branches  
Access Link / Static Link  
Activation Records (i.e., Stack Frames)  
Activation Tree  
Array Indexing Computations  
Available Expressions  
Available Expressions  
Basic Block  
Big / Little Endian  
Calling Sequence / Return Sequence  
Code Generation Algorithm #1  
Code Generation Algorithm #2  
Common Sub-expression Elimination  
Constant Folding  
Control Flow Graph (Initial Block, Predecessors, Successors)  
Control Link / Dynamic Link  
Control Stack (Frame Stack, Activation Record Stack)  
Copy Propagation  
DAG / Tree / Nodes / Edges / Root / Leaves / Interior Nodes  
DAG-Based Optimization  
Dangling Reference  
Dead Code (unreachable v. unnecessary)  
Definition-Use (D-U) Chains  
Direct Jump Table (as implementation of Switch Stmt)  
Display Registers  
Dominates Relation / Dominator Tree  
Dynamic Programming (approach to tiling)  
Global v. Local Approaches  
Graph Coloring Algorithm , K-Coloring  
Heap  
Heap Fragmentation  
Heuristic Algorithm  
Induction Variables  
Inherited v. Synthesized Attributes  
Inline Expansion  
Inner / Outer Loops  
Instruction Cost Models  
Instruction Scheduling  
Instruction Selection  
Interference Graph  
Intermediate Representation (IR)

Invocation  
IR Code Generation  
Leaders (of Basic Blocks)  
Lexical / Dynamic Scoping  
Lexical / Static Nesting  
Lexical Analysis / Regular Expressions  
Live / Dead Variable  
Live Variable Analysis  
Local / Non-local variables  
Loop Back Edges  
Loop Invariant Computations  
Loop Unrolling  
L-Value / R-Value  
Mapping  
Natural v. Unnatural Loops  
Next-Use  
Offset (into an activation record)  
Optimization Phase of Compiler  
Order Restrictions (in DAG-Based Optimization)  
Parameters (i.e., Formals) v. Arguments  
Parsing / Syntax  
Partial Order  
Pass By Name  
Pass By Reference  
Pass By Value  
Pass By Value-Result (i.e., Pass By Copy-Restore)  
Peephole Optimizer  
Physical Registers, Virtual Registers  
Point, Path (in Control Flow Graph)  
Preheader  
Quicksort Algorithm  
Reaching Definitions  
Recurrence Equations  
Recycling Temporaries  
Reducible Flow Graph  
Reduction in Strength  
Register Allocation  
Register Allocation Strategies  
Register Assignment  
Register Transfer Language (RTL)  
Register-to-Register Model (v. Memory-to-Memory Model)  
RISC  
Routine / Function / Procedure  
Row-Major Order / Column-Major Order  
Short-Circuit Evaluation  
SPARC: Alignment (word / double / quad)

SPARC: Delay Slot  
SPARC: Local / Global / In / Out Registers  
SPARC: Register Windows  
SPARC: Save / Restore  
Spilling Registers  
State v. Environment  
Static v. Dynamic  
Syntax-Directed Translation  
Tail Recursion  
Target Code Generation  
Three-Address Instructions / Triples / Quadruples  
Tiling – Rules / Patterns / Replacement / Cost  
Tiling (approach to code generation)  
Topological Sort Order  
Two's Complement Number Representation  
Unreachable Code  
Use-Definition (U-D) Chains  
Variable (or Address) Descriptors / Register Descriptors