

Register Allocation

Introduction to Register Allocation

Full Compiler Structure

Code Generation

Code Generation Quiz

Register Allocation

Register Allocation 2

Register Allocation Definitions

Register Allocation Definitions 2

Register Allocation Definitions 3

Graph Example

Register Allocation Defined

Available Registers Quiz

Webs Part 1

Webs Part 2

Interference

Interference Graph

Register Allocation and Graph Coloring

Graph Coloring

Graph Coloring Heuristics

Graph Coloring Heuristics (cont)

Graph Coloring Example 5

Graph Coloring Example 6

Graph Coloring Example 6 (cont)

Graph Coloring Quiz

Coloring Quiz

When Coloring Fails

Choosing a Web

Spill Costs

Computing Spill Costs

Spill Cost Example

Splitting the Web

Splitting Example

Splitting Heuristic

Cost and Benefits of Splitting

Further Optimization