

# CSC 255/455 Schedule for Spring 2009

Week	Lectur	Date	Topic	Reading	Assignment
1	1	14-Jan	program, programming, program behavior	EAC Ch. 8	
2	2	21-Jan	redundancy removal		
3	3	26-Jan	value numbering, local		
	4	28-Jan	value numbering, superlocal		project assigned
4	5	2-Feb	data flow analysis, AVAIL	EAC Ch. 9.2, 10.2	
	6	4-Feb	data flow analysis, LIVE		
5	7	9-Feb	data flow properties	Kam/Ullman 1976	trivial due
	8	11-Feb	def-use chains, dead-code removal	AK Ch. 4.4	
6	9	16-Feb	static single assignment	EAC Ch. 9.3	weird control flow due
	10	18-Feb	PRE, instruction-level parallelism	EAC Ch. 10.3.2, 12.3	
7	11	23-Feb	register allocation	EAC Ch. 13.1-4	local value numbering due
	12	25-Feb	mid-term exam		
8	13	2-Mar	high-level transformation, dependence	AK Ch. 1-2	
	14	4-Mar	distance and direction vectors		
9	15	16-Mar	vectorization		
	16	18-Mar	dependence testing	AK Ch. 3.2-3.3 (no 3.3.3)	data flow due
10	17	23-Mar	improving parallelism	AK Ch. 5.2-5.5	hw 1 assigned
	18	25-Mar	control dependence	AK Ch. 7.3	
11	19	30-Mar	interprocedural analysis, point-to analysis	AK Ch. 11.2	
	20	1-Apr	parallel programming models	in-class notes	
12	21	6-Apr	analysis of message-passing code		final project due
	22	8-Apr	large-scale program behavior		hw 1 due
13	23	13-Apr	programming language semantics	in-class notes	hw 2 assigned
	24	15-Apr	lambda calculus		
14	25	20-Apr	eager evaluation semantics		
	26	22-Apr	lazy evaluation semantics		
15	27	27-Apr	slack		hw 2 due
	28	29-Apr	project presentation, class evaluation		

EAC: Engineering a compiler, by Cooper and Torczon

AK: Optimizing compilers for modern architectures, by Allen and Kennedy