

TDDDB29 Compilers & Interpreters TDDDB44 Compiler Construction 2006 Organizational Issues

Christoph Kessler, IDA

Staff 2006

- [Peter Fritzson](#), Examiner, Course leader
- [Christoph Kessler](#), Examiner, Course leader
- [Jonas Wallgren](#), Course assistant TDDDB29
- [Mikhail Chalabine](#), Course assistant TDDDB44
- [Adrian Pop](#), Lab assistant TDDDB29 + 44
- [Anne Moe](#), Course secretary
- [Erik Larsson](#), Studierektor

Lecture Plan



- F1: Introduction [Christoph Kessler \(CK\)](#)
- F1.5: [\[opt. f. TDDDB44\]](#) Short introduction to formal languages and automata [\(CK\)](#)
- F2: Lexical analysis; Symbol tables [\(CK\)](#)
- F3: Parsing; Top-Down Parsing [\(CK\)](#)
- F4: Top-Down Parsing cont., Bottom-Up Parsing (intro) [\(CK\)](#)
- F5: Bottom-Up Parsing [\(CK\)](#)

Lecture plan (cont.)



- F6: Semantic analysis and internal forms. Syntax-driven translation. [\(Peter Fritzson\)](#)
- F7: Memory Management; Run-time organization [\(PF\)](#)
- F8: Code optimisation [\(PF\)](#)
- F9: Code generation, general [\(PF\)](#)
- F10: [\[opt. f. TDDDB29\]](#) Code generation for RISC and superscalar processors [\(PF\)](#)
- F11: Error management. Interpreters [\(PF\)](#)
- F12: Bootstrapping. Compiler Generators [\(PF\)](#)

Labs

- Separate for TDDDB29 (1.5p) and TDDDB44 (2p)
 - TDDDB29: 3 lab groups
 - [Jonas Wallgren \(2\)](#), [Adrian Pop \(1\)](#)
 - TDDDB44: 3 lab groups
 - [Mikhail Chalabine \(2\)](#), [Adrian Pop \(1\)](#)
- Teams of size 2
- Register via webreg (linked from the course homepages)
 - Deadline for registration:
 - TDDDB29: This friday (27/10/2006) = Lab 1
 - TDDDB44: Next friday (3/11/2006)



Literature

Mandatory:

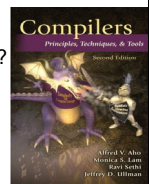
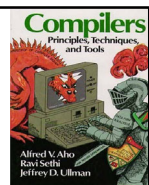
- Aho, Sethi, Ullman: *Compilers Principles, Techniques, and Tools*. Addison-Wesley, 1986.
- Or the forthcoming second edition Aho, Lam, Sethi, Ullman: ..., 2nd edition, 2006?

Mandatory for TDDDB44:

- *Compiler Construction Lab Assignments*, Kompendium, 2005, Bokakademin

Optional:

- P. Fritzson: *TDDDB44 Compiler Construction Lecture Notes*, 2003, Bokakademin. – Also on the course home page.
- *Compiler Construction Exercises*, Kompendium



For more information ...

- Schedule
- Reading directions
- References to additional literature
- Lab instructions for TDDB29
 - (but the lab skeletons are in /home/TDDB29)

See the course homepages,

- www.ida.liu.se/~TDDB29
- www.ida.liu.se/~TDDB44

What comes after this course?

- New follow-up course, HT 2007:
Compiler optimizations and code generation, 4p
(C. Kessler)
- Join our compiler research team at PELAB and do a ***master thesis project*** in compiler technology!
 - Compiling for OO modeling languages (P. Fritzson)
 - Natural semantics (P. Fritzson)
 - Compiling for parallel / embedded systems (C. Kessler)
 - Code generation (C. Kessler)
 - Debugger technology (P. Bonus)
 - ... and more!

