1 Concurrence et Compilation 2001 (Compilation)

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2 English

- My French is not good enough
- I will try to answer French questions
- Try to make the best out of it
  - You will probably need it some day
  - Language of the internet
  - Jobs in IT will often require it

3 Material

WWW

- Homepage: http://lampwww.epfl.ch
- Course page: http://lampwww.epfl.ch/courses/progavancee01
- Slides in PDF (for viewing)
- Slides in Postscript (4 slides a page, for printing)
- Newsgroup: epfl.di.cours.dsc.compilation

Books

- Andrew W.Appel: Modern compiler implementation in Java. Addison-Wesley, 1998
- (Erich Gamma, Richard Helm, Ralph Johnson, John M. Vlissides, Design Patterns: Elements of Reusable Object-Oriented Software. Addison-Wesley, 1995.)

4 Organization

- Class: Friday 10.00 - 12.00
- Practical work: Friday 11.00 - 12.00
- This will be flexible

5 Exercises & Project

- Exercises
  - Sample Solutions next week.
  - You can hand them in in groups.
  - Not obligatory.
- Project
  - Language that describes bit-streams and their Stringrepresentation
    - Converts bit-streams to Strings.
    - Decoding of e.g UTF8.
    - Advanced: Visualization of TCP-packages
  - Framework is given, you do the interesting parts
  - Not obligatory.
  - It is a group project (2 - 3 people)

6 LAMP: Who we are, what we do

- Prof. Martin Odersky, Prof. Uwe Nestmann, Philippe Altherr, Vincent Cremet, Christine Röckl, Michel Schinz, Christoph Zenger, Matthias Zenger
- Functional Nets
  - Uniform foundation for programming.
  - Programming language Funnel, based on functional nets.
  - New concept of concurrency, join-calculus.
- Java - Compilers
  - EspressoGrinder: First non-SUN Java compiler
  - Pizza: Generic types, algebraic types, first class functions
  - GJ: Generic types, backwards compatible
  - Jaco: Extensible Java compiler

  Since JDK 1.3: javac = GJ