Components of a Computing System
Introduction to Computer Architecture and Operating Systems

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École Polytechnique — Licence 3 — INF422

2013–2014
# About Us

<table>
<thead>
<tr>
<th>Albert Cohen</th>
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<tbody>
<tr>
<td>Senior research scientist at INRIA Paris-Rocquencourt and DI, ENS Paris, PARKAS group</td>
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<td><a href="http://www.di.ens.fr/ParkasTeam.html">http://www.di.ens.fr/ParkasTeam.html</a></td>
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<td>- Automatic parallelization, optimizing compilation</td>
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<td>- Synchronous languages, data-flow languages, parallel programming</td>
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<th>Vincent Pilaud</th>
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<td>CNRS researcher at LIX, École Polytechnique, Combinatorics group</td>
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<th>Nhat Minh Lê</th>
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<td>PhD student at ENS Paris, INRIA PARKAS group</td>
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Organization

Practical Information

- 9 lectures (in English) and 9 labs (in French)
- One term exam (principles, algorithms, programmer interface)
- INF422 is not business as usual: lots of information, most of it is out in the wild (books, web, code, experience)
- If you are lost, do not wait before asking for help
- Elect a pair of delegates before November 16
  - Have lunch once or twice with the teachers
  - Interface for course and labs (global) concerns
  - Coordinate the course feedback/evaluation report

Prerequisites

- Attending lectures and labs
- Programming, reading code and documentation after lab hours

http://www.enseignement.polytechnique.fr/informatique/INF422
Labs

Goals

- Concrete, realistic examples
- Survey of the whole software system on a virtual machine
- Illustration of hardware principles through the study of device drivers
- Balance between principles, Java, script and system programming

History

- INF422 was the first Android-based course on computer organization and systems: it started with the Android SDK v0.9 in August-October 2008

Note: the very first course was created by Hal Abelson and Andrew Yu at MIT, for advanced programmers:
http://people.csail.mit.edu/hal/mobile-apps-spring-08

- We hope to teach the most relevant concepts, introducing standard interfaces and system architectures from the real world, without asking you to become a professional software developer