



Contribution ID: 23

Type: **not specified**

## Software Design in the Many-Cores era - Lecture 4

*Friday, August 29, 2014 8:45 AM (1 hour)*

Understanding, Debugging and Profiling a Complex Multithreaded Application

Writing thread-safe code is a complex problem and difficult to master. This lecture explains basic tools and techniques assisting you in parallel software development. Firstly, we will show basic examples and tools for static code analysis. Then we will have a look at how to understand and debug a multithreaded application with the GNU debugger. Finally, we will tackle performance measurements of applications and how to identify which parts deserve speed improvement or parallelization.

**Presenters:** HEGNER, Benedikt (CERN); PIPARO, Danilo (CERN)

**Session Classification:** Base Technologies