



# Euro-Par 2006

## Dresden, Germany

29th August - 1st September 2006

### European Conference on Parallel Computing

#### Topic 4: Compilers for High Performance

##### Description

This topic deals with compilation for high performance architectures, from general-purpose platforms to specialised hardware designs such as graphic coprocessors or low-power embedded systems. This includes language aspects, program analysis, program transformation systems for optimization of resource utilization, the interaction between compiler and hardware/operating system, runtime systems, and feedback-oriented and adaptive compilation. A non-exclusive selection of standard issues is listed below. We specifically welcome submissions that deal with the interface between compiler and runtime system for advanced irregular and adaptive applications and work on dynamic, iterative, and adaptive compilation systems that interact with performance analysis and prediction tools. We include all types of target programming styles, from conventional imperative languages to data parallel, object-oriented, and functional styles. We also invite submissions on practical experiences, in particular case studies to assess the benefits, limitations, and failures of current compiler and runtime systems for high performance computing.

##### Focus

- Compiling for multithreaded/multicore architectures
- Compiling for emerging architectures (low-power embedded systems, reconfigurable hardware, processors in memory, graphics coprocessors)
- Interaction between compiler and execution environment
- Locality management (including CC NUMA)
- Feedback-oriented, dynamic, and adaptive compilation
- Automatic generation of High Performance libraries
- Static analysis
- Program transformation systems
- Scheduling strategies

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