

# Topic 1

## Support Tools and Environments

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It is always an exciting moment to look at the papers that are submitted to Euro-Par's topic on "Support Tools and Environments". What types of tools will be presented? What shift of focus in research can we see? What can we conclude for the situation of the user who is always looking for sophisticated tools?

This year's topic will mainly focus on performance analysis and well-elaborated monitoring techniques. It seems as if finally our programs are running but need more tuning in order to be efficient.

The research that is conducted in the field of performance analysis is now very advanced. Not only do we find much work with a focus on semi-automatic or even automatic bottleneck detection. Also there is research in the field of comparing multiple experiments with programs and evaluating differences between program runs. This feature does well support the users as code tuning is always an evolutionary process.

Current monitoring techniques used as a basis for different types of tools are more generic than ever. They offer configurability with respect to sensors and actuators which cooperate with the program and to events which are triggered and cooperate with the tools.

Debuggers now deal with race detection, covering the most problematic error situations in parallel programs.

Even with debugging and performance analysis issues being well covered the design and construction of tools remains a challenging task. Users also need tools for e.g., computational steering and load balancing. This is particularly complicated when we consider new architectural structures like the Grid. The distribution of components of tools and programs and the potential failure of connections between them will have to result in more fault tolerant tool architectures. We are convinced that future Euro-Par conferences will reflect this trend.

However, independent of the specific research issues presented this year the goal of the topic is still to bring together tool designers, developers, and users and help them in sharing ideas, concepts, and products in this field.

This year we have received 19 submissions which is considerably more than in the last year. 7 papers were accepted as full papers for the conference (35%) and 2 papers as short presentation. One paper was accepted as demonstration.

We would like to thank all authors who submitted a contribution as well as all the reviewers who spent much time to guarantee a sound selection of papers and thus a high quality of the topic.

One final comment: We have seen a considerable number of submitted papers that more or less omitted comments how their project is related to earlier or ongoing work. We do not consider this as being proper scientific practice and warmly recommend to put more emphasis on related work sections. We have a 25 years history of tools for parallel computers and an active presence: refer to it.