Preface

This special issue consists of selected papers presented at the Ninth Symposium on Programming Languages and Software Tools (SPLST), held in August 2005 in Tartu, Estonia. This event has long traditions: the first Symposium was held in 1989 in Szeged, Hungary, and since then the event has been arranged every second year, circulating in three countries involved in the organization: Estonia, Finland, and Hungary.

When SPLST started, the world was very different from what it is now, both politically and with respect to information technology. The big change in the European politics touched the Symposium closely: during the second Symposium, held in August 1991 in Pirkkala, Finland, Estonia was declared independent. Since then, the development has been faster than anyone could imagine: all three countries belong to EU, and two of them to NATO.

In information technology, the development has been equally revolutionary. Originally, the overall theme of the Symposium was thought to be something like "software construction technology", which in1989 meant topics like programming languages and environments, compilers and compiler-compilers etc. This was also reflected in the name of the Symposium. Today, the area of software development has exploded into entirely new directions that were hardly even seen in late 80's. This is largely due to the industrial viewpoint on software development, emphasizing the disciplined process of manufacturing software products together with supporting tools. According to this, important modern topics, related to software development, include process models, software product-lines, software modelling and architecture, software reuse, testing etc. However, it is equally important to carry on research related to more fundamental issues of software construction like programming languages and compilers.

The selection of papers, presented in this special issue, is a nice combination of topics related both to traditional research areas and to more industry-oriented ones. In the former category, there are four papers: the paper by Gergely et al. discusses the compression of binary code representations, the paper by Horváth et al. proposes a new technique for analysing programs, the paper by Nestra studies mathematical models of slicing (locating the interesting part of a program on the basis of a certain criterion) and Surakka et al. investigate the optimization of compilers with respect to the energy consumption of the resulting code – a topic highly relevant for mobile devices. In a broader sense, all these papers are related to the creation of the optimized and correct program code.

In the software engineering category, there are two papers. Merilinna and Niemelä propose a tool concept for creating the architecture of a software system in a way that satisfies given quality criteria. Peltonen and Harsu study existing process models for product-line based software development and compare the artifact types and their relationships in these process models. These papers study software development at a considerably higher abstraction level than the first category of papers, considering mostly the development phases, preceding the actual coding.

Finally, we would like to thank Varmo Vene for his help by organizing the Symposium and the reviewing process. We also thank the program committee of SPLST and all the reviewers of the papers.

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