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Foreword

The present volume contains the proceedings of the Third International Workshop on Constructive Methods for Parallel Programming, CMPP 2002, which was held at Schloß Dagstuhl (Germany) on July 10, 2002, as a satellite event of MPC 2002, the Sixth International Conference on Mathematics of Program Construction.

CMPP's focus is on the combination of precision and practicality in the construction of parallel programs. Programming parallel computers effectively and correctly is a conceptually challenging task for all but the simplest of applications. Consequently, there is widespread research interest in formal models and practical methodologies to support this process.

In order to provide some degree of portability and durability, new approaches must abstract from the detailed characteristics of specific parallel systems, and still remain efficiently implementable by those systems. Most of the interest in parallel programming is motivated by the quest for improved performance when processing large applications; to gain credibility, constructive methods must be able to demonstrate their competitiveness in the respect. Similarly, they should convincingly enhance the applicability of the underlying technology by simplifying the expression of real programs for real problems.

This issue features the eight papers presented at CMPP 2002. The main issues addressed include:

- formalisms for the specification and cost prediction of parallelism,
- parallel and distributed applications using skeletons,
- high-level parallel constructs (skeletons, patterns) and issues relating to their efficient composition and implementation, and
- the impact of target architectures on program design and compilation.

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