

Preface

The tenth anniversary of the LOPSTR¹ symposium provided the incentive for this volume. LOPSTR started in 1991 as a workshop on logic program synthesis and transformation, but later it broadened its scope to logic-based program development in general, that is, program development in computational logic, and hence the title of this volume.

The motivating force behind LOPSTR has been the belief that declarative paradigms such as logic programming are better suited to program development tasks than traditional non-declarative ones such as the imperative paradigm. Specification, synthesis, transformation or specialization, analysis, debugging and verification can all be given logical foundations, thus providing a unifying framework for the whole development process.

In the past 10 years or so, such a theoretical framework has indeed begun to emerge. Even tools have been implemented for analysis, verification and specialization.

However, it is fair to say that so far the focus has largely been on programming-in-the-small. So the future challenge is to apply or extend these techniques to programming-in-the-large, in order to tackle software engineering in the real world.

Returning to this volume, our aim is to present a collection of papers that reflect significant research efforts over the past 10 years. These papers cover the whole development process: specification, synthesis, analysis, transformation and specialization, as well as semantics and systems.

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¹ <http://www.cs.man.ac.uk/~kung-kiu/lopstr/>