

Preface

There is a growing interest in building more effective technologies for future software engineering by properly integrating formal techniques into conventional software engineering process. The development of the Structured Object-Oriented Formal Language (SOFL) over the past two decades has shown some possibilities of achieving effective integrations to build practical formal techniques and tool support for requirements analysis, specification, design, inspection, review, and testing of software systems. SOFL integrates Data Flow Diagram, Petri Nets, and VDM-SL to offer a graphical and formal notation for writing specifications; a three-step approach to requirements acquisition and system design; specification-based inspection and testing methods for detecting errors in both specifications and programs; and a set of tools to support modeling and verification. Meanwhile, the Modeling, Simulation, and Verification Language (MSVL) is a parallel programming language developed over the past decade. Its supporting tool MSV has been developed to enable us to model, simulate, and verify a system formally. The two languages complement each other.

Following the success of the previous SOFL workshops, the 4th international workshop on SOFL+MSVL (SOFL+MSVL 2014) was jointly organized in Luxembourg by Shaoying Liu research group at Hosei University, Japan, and Zhenhua Duan research group at Xidian University, China, with the aim of bringing industrial, academic, and government experts and practitioners of SOFL or MSVL to communicate and to exchange ideas. The workshop attracted 20 submissions on specification-based testing, specification inspection, model checking, specification animation, formal methods education, formal verification, formal semantics, and formal analysis. Each submission was rigorously reviewed by two or more PC members on the basis of technical quality, relevance, significance, and clarity, and 12 papers were accepted for publication in the workshop proceedings. The acceptance rate is 60 %.

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