Electronic Communications of the EASST
Volume 71 (2015)

Graph Computation Models
Selected Revised Papers from GCM 2014

Preface

1 pages

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ECEASST Home Page: http://www.easst.org/eceasst/ ISSN 1863-2122

Preface

Graphs are common mathematical structures which are visual and intuitive. They constitute a natural and seamless way for system modeling in several areas of science including computer science, life sciences, business processes, etc. Graph computation models (GCM) constitute a class of very high level models where graphs are first-class citizens. They, thus, generalize classical computation models based on strings (e.g., Chomsky's grammars) or on trees (e.g., term rewrite systems). Their mathematical foundations, in addition to their visual feature, contribute to facilitate specification, validation and analysis of complex systems. A variety of computation models has been developed yet, using graphs and rule-based graph transformations. These models include features for programming languages and systems, paradigms for software development, concurrent calculi, local computations and distributed algorithms, biological or chemical computations, etc.

This issue of Electronic Communications of the EASST includes five extended articles which have been selected out from the proceedings of the Fifth International Workshop on Graph Computation Models (GCM 2014). All submissions were subject to a careful and standard international journal peer-reviewing process. The topics of the different articles include theoretical aspects of graph transformations, proof methods as well as distributed execution techniques.

We would like to thank all the reviewers for their hard work which contributed substantially to ensure the high quality of this issue. We also thank the different authors as well as the EASST staff for their help in preparing this issue.

July, 2015

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