Managing Editor's Column

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This final issue of the year 2009 consists of two parts: the first 3 papers have been peer-reviewed by members of the J.UCS editorial board and deal with subjects from the areas of mathematics of computing, software engineering and knowledge management. I'd like to take this opportunity to thank the reviewers of these papers as well as all other members of the editorial board for their continuous support – many of them have been with us since the first issue of J.UCS 15 years ago!

The second part of this issue is a special section with the title "*Interactions between Discrete-event Control and Computer Science*". The guest editors of this section are Jean-Michel Muller from the CNRS-Laboratoire LIP, ENS Lyon, France, Eric Niel and Laurent Piétrac from the Laboratoire Ampère, INSA de Lyon, France and Eric Rutten from the INRIA Grenoble Rhône-Alpes, France. The guest editors write:

"This special section focuses on the fruitful possible interactions between discrete-event control and computer science, especially in the domain of the modelling, analysis and control of real-time, reactive systems. The topics covered by the call for papers included, typically: formalisms and modelling methodologies; reactivity of discrete-event systems; performance evaluation; discrete approaches of hybrid, reactive, and embedded systems; applications; software tools enabling efficient handling of industrial-sized systems; and specification and programming languages for describing discrete-event and reactive systems.

After a thorough reviewing procedure, with the help of external experts, three papers were selected.

"Modeling of Robustness Margins of the Control of a Predictive Control-Supervisory Architecture", by Telmoudi, Nabli and M'hiri, presents a new control-supervisory architecture of Flexible Manufacturing Systems (FMS),and considers particularly the construction and modelling of FMS robust control of flow-shop type to time constraints, using P-time Petri Nets. Themain purpose of the paper is to propose a modeling approach to evaluate the modular robustness of a set operations executed by a basic circuit of machine.

"A Chronicle-based Diagnosability Approach for Discrete Timed-event Systems: Application to Web-Services" by Pencole' and Subias, addresses the problem of diagnosability analysis in the application domain of Web Ser-vices, quite new to the techniques considered in this special section. In particular, it focuses on the analysis of the impact of time to the diagnostic capabilities in Web Service workflows, using language- based analysis and reachability graphs of time Petri nets.

"Parametric Model-Checking of Stopwatch Petri Nets" by Traonouez, Lime and Roux, considers parametric verification that can be used to synthesize constraints on

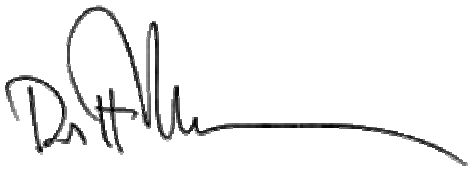
the parameters to ensure that a system verifies given specification. This makes it a contribution at the border between control and verification. The work relies on time Petri nets with inhibitor arcs. The authors define the formal syntax and the semantics of the parametric inhibited time Petri nets, give some decidability results, and propose semi-algorithms for the parametric model-checking of a subset of parametric TCTL formulae.

We would like to thank the authors for submitting their papers, including the authors of articles that could not be included in this special section. We also thank the reviewers for their scrutiny: they did an excellent job in providing the information on which the selection was based."

I thank the guest editors and particularly Jean-Paul Muller, a longstanding member of the J.UCS editorial board, for the efforts they put into the preparation of the special section.

Enjoy the issue!

Cordially,



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