

## VSC Track at WETICE: Summary report and preface

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**Abstract—This report provides an introduction to the papers accepted for the VSC track at IEEE WETICE 2015, held in Larnaca Cyprus, from June 15th to 17th, 2015.**

### I. INTRODUCTION

The VSC track is the third IEEE WETICE event dedicated to systems validation techniques in the context of safety critical applications. Along the previous years the VSC track has provided researchers with a venue oriented to exchange results and ideas on the general context of software verification. Some papers have addressed issues related to hardware and software verification.

This year we have received a significant number of contributions under the general theme of the track and for ensuring a high quality, by means of an independent reviewing process, we have selected three contributions for the presentation at the VSC track 2015. We thank all the anonymous reviewers and the programme committee members for their dedicated work. We express our gratitude to the WETICE General Chair, Program Chairs and Steering Committee for the opportunity given us to contribute with the VSC track to the lively and friendly research forum provided by the WETICE community.

### II. BRIEF DESCRIPTION OF ACCEPTED PAPERS

The first paper, by H. M'Hemdi, J. Julliand, P.A. Masson and R. Robbana, is Non-Deterministic Timed Pushdown Automata-based Testing Evaluated by Mutation. The result of this work assist in test generation for automata that employ a stack. A preliminary step for such a test generation is obtained by automatically computing a finite reachability automaton satisfying the first automaton constraints. Then, it is possible to generate test cases that have the property to cover all the reachable locations and transitions of the first automaton. As a final step, the authors use mutation testing to assess the quality of the proposed generation. The work is general and can be applied in many practical cases.

The second paper by S. Iqtedar, O. Hasan, M. Shafique and J. Henkel, is Probabilistic Formal Verification Methodology for Decentralized Thermal Management in On-Chip Systems. The paper presents an approach for the verification of dynamic thermal management schemes for multi-core architectures. This is very important to ensure beforehand that chips can be safely employed. The approach is based on probabilistic model checking and derives a Markovian

model useful for any thermal scheme. Finally, a number of properties are also identified that thermal schemes designer can use to check their solutions. The approach seems very promising and it is sound.

The final paper by G. De Ruvo and A. Santone, Equivalence-based Selection of Best-fit Models to Support Wiki Design, and proposes some means to suggest how to organise the contents of a wiki. The authors derive models from an existing base of wikis and then check such models against the format of other newly available wikis. The most appropriate model, according to some equivalence, is then chosen and used as a basis for the design of the new wiki contents. The approach is geared towards the structure of wikis and is useful to have a common way to organise knowledge that has been proved as appropriate for previous wikies. The approach could be very useful to have some automatic means that suggest to organise contents for general repositories that provide a knowledge basis.

### III. ACKNOWLEDGMENT

This work has been supported by projects JACOS and PRIME funded within POR FESR Sicilia 2007-2013 framework, and project PRISMA PON04a2 A/F funded by the Italian Ministry of University within PON 2007-2013 framework.