Track report for Formal Verification of Service Based Systems : FVSBS 2015

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Abstract—This report gives a brief overview of the main concerns addressed by the authors at the third international track on Formal Verification of Service Based Systems, held at WETICE 2015 conference. A presentation of the main topics is given and then a summary of the paper accepted by this conference track is reported.

I. INTRODUCTION

The third international track on Formal Verification of Service Based Systems (FVSBS 2015), held this year on June 15-17, 2015 in Larnaca - Cyprus. The goal of the track is to present advances of formal verification on software architecture from different issues, such as Service Oriented Architecture (SOA), Business Process Management (BPM), model checking, Model-Driven Engineering (MDE), Software testing and testing tools. The main topics of the track related (but not limited) are the following:

- Service oriented architecture, SOA migration and governance checking
- Service-oriented and component-based software applications and architectures modeling verification
- SCA based software applications checking
- Formal Web services composition checking
- Formal Tools and technologies for Web Services development, deployment and management
- Impact of formal methods on Web Services and SOA and SCA base applications
- Formal verification of service and component based system approaches for dynamic composition
- Model-Driven Engineering (MDE) and SOA
- Modeling and Meta-modeling and SOA based applications

We received 8 submissions. As outcome of the reviewing and paper selection process, the organizers decided to accept one paper as full paper. The following section briefly describes the content of the paper.

II. OVERVIEW OF THE PAPERS

The FVSBS'15 track presents one paper. The paper "Integrating the SysML and ACME in a Model Driven Engineering approach to verify the Web service composition" accepted as full paper by Raoudha Maraoui and Bechir Ayeb. In this paper, authors propose an approach for Web services composition. The proposed approach consists in an alignment of SysML concepts with an identified subset of the ACME language, using similarities between both languages. A SysML models and a transformation towards the ACME/ARMANI language are presented for verifying web service composition consistency. The obtained MDE (Model Driven Engineering) process is applied to a simplified concrete case study of travel system online: a SysML model is designed with properties, then automatically transformed into ACME/ARMANI, and finally imported into AcmeStudio tool for automated proof of the properties.

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