SBESC 2013 guest editor's introduction

Lisane Brisolara de Brisolara¹ ·
Ricardo Santos Ferreira²

Received: 14 April 2015 / Accepted: 28 April 2015 / Published online: 19 May 2015
© Springer Science+Business Media New York 2015

In 2013, Brazilian Symposium on Computing Systems Engineering (SBESC) received 46 full submissions. From those submissions, six were identified as Best Paper Candidates by the program committee and thus also were invited to appear in this special issue of DAEM. We invited the authors of all six papers to submit a revised paper for consideration in this journal, and five chose to do so. After a strict review process we selected three papers for inclusion in this special issue. The excellent result is now available to the readers of DAEM!

The first paper is “A Multiple-ISA Reconfigurable Architecture” by Fernanda Mathias Capella, Marcelo Brandalero, Luigi Carro and Antônio Carlos Beck. In this paper the authors propose a new mechanism based on a dynamic two-level binary translation (BT) system in order to generate code for a dynamic reconfigurable array. In conclusion, the proposed mechanism provides a way to the designer take advantage of a BT system and program for multiple application fields, without worrying about the underlying architecture.

The second paper is “Cyber-Physical Systems Design: Transition from Functional to Architectural Models” by Rosane Fátima Passarini, Leandro Buss Becker, Jean Marie Farines and João Miguel Fernandes. In this paper the authors propose an approach called Assisted Transformation of Models (AST), which aims at transforming functional (simulation) models designed in the Simulink environment into architectural models represented in the Architecture Analysis & Design Language (AADL). The use and benefits of the proposed approach are exemplified through a case study focused on the design of a typical CPS: an Unmanned Aerial Vehicle.

The third paper is “Network design and planning of wireless embedded systems for industrial automation” by Ramon Hugo de Souza, Stefano Savazzi and Leandro Buss Becker. This

✉ Lisane Brisolara de Brisolara
lisane@inf.ufpel.edu.br

Ricardo Santos Ferreira
ricardo@ufv.br

¹ CDTec – Centro de Desenvolvimento Tecnológico, Universidade Federal de Pelotas, Pelotas, RS, Brazil

² Department of Computer Science, Universidade Federal de Viçosa, Viçosa, MG, Brazil

paper focuses on the problem of wireless node deployment in wireless industrial networks, with special focus on WirelessHART IEC 62591 and ISA SP100 IEC 62734 standards. The proposed node deployment approach is validated through a case study in an oil refinery environment. Obtained results were validated by on-site measurements.

We would like to thank the Program Committee of SBESC for their hard work reviewing the papers for the conference and also the additional reviewers who helped and the authors themselves for their contributions.

Guest Editors and Technical Program Chairs, SBESC 2013.