Self-Awareness in Systems on Chip, Part II

This issue highlights the second part of the highly successful special issue of “Self-Awareness in Systems on Chip.” Thanks to Guest Editors Nikil Dutt and Axel Jantsch for their work in bringing five research articles to this special issue. The first part of this special issue was published in the November/December 2016 issue (vol. 34, no. 6). I want to also particularly point to the survey article published in that issue, entitled “Self-Awareness in Systems on Chip—A Survey,” which should be read along with this second part of the special issue.

In this issue, we have two general interest articles. In “An Empirical Set of Metrics for Embedded Systems Testing,” the authors Alfonso Alongi, Giuseppe Vitello, Salvatore Vitabile, and Vincenzo Conti describe new metrics for the performance evaluation of embedded hardware/software systems. In “Enabling Automated Bug Detection for IP-Based Designs Using High-Level Synthesis,” the authors Pietro Fezzardi, Fabrizio Ferrandi, and Christian Pilato tackle the problem of system-level integration of systems that are composed of IP blocks. Specifically, they deal with automated bug detection using high-level synthesis methods.

A further highlight is the tutorial article, “Advances in Forensic Data Acquisitions” by Felix Freiling, Tobias Groß, Tobias Latzo, Tilo Müller, and Ralph Palutke. The tutorial reports on the challenges to acquire data of embedded devices for the purpose of evidence in a court of law. Current practices are described as well as recent research results.

The 55th Design Automation Conference (DAC) was held at the Moscone Center West, San Francisco, CA, on 24–28 June 2018. Thanks to Sharon Hu, the general chair, for the coverage of the event, and thanks to our report editor Massimo Poncino.

Last but not least, many thanks to Scott Davidson for The LastByte, “Self-Test and Self-Aware.”

Many thanks to all who have contributed to this issue of IEEE Design&Test. If you have any questions or ideas, please contact me at henkel@kit.edu.

Jörg Henkel
Editor-in-Chief
IEEE Design&Test