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Applied Reconfigurable Computing

15th International Symposium, ARC 2019
Darmstadt, Germany, April 9–11, 2019
Proceedings

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Preface

The 15th International Symposium on Applied Reconfigurable Computing (ARC) was held in April 2019 at TU Darmstadt in Germany. It is highly appropriate that ARC came to Darmstadt as TU Darmstadt was the first university worldwide to create a Chair for Electrical Engineering, awarded to Professor Erasmus Kittler in 1882.

Even closer to ARC's key focus on reconfigurable computing are two globally renowned research and high-tech institutions, both located in Darmstadt: The GSI Helmholtz Centre for Heavy Ion Research is a hotbed of high-energy physics research, employing a number of accelerators, detectors, lasers, and storage rings for advanced experiments. Discoveries made at GSI include six new elements, among them Darmstadtium (Ds, atomic number 110). Many of the scientific instruments employ reconfigurable devices such as field-programmable gate arrays (FPGAs), which are the key subject of ARC, in critical functions.

A similarly keen interest in the use of FPGAs is also prevalent in the European Space Agency (ESA), which operates its European Space Operations Centre (ESOC) in Darmstadt. FPGAs are investigated by ESA in Darmstadt both for ground as well as for space use, e.g., as components for compact CubeSats. In the course of ARC 2019, excursions to both of these fascinating institutions were part of the symposium's program.

The main program of the symposium was formed by 20 full papers and seven poster presentations. They were selected from over 50 submissions from all around the world. The selection was driven by a thorough review process with more than 200 reviews in total, which resulted in a competitive process. Besides these high-quality scientific papers, one tutorial and an invited talk complemented the program.

We hope that you find the selected papers interesting and useful for your own research or development!

February 2019

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In memory of *Stamatis Vassiliadis* [1951–2007], ARC 2006–2007
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