Proceedings of the 8th International Symposium on Highly-Efficient Accelerators and Reconfigurable Technologies (HEART)

Message from the Symposium General Chairs

It is our pleasure to welcome you to the Eight International Symposium on Highly-Efficient Accelerators and Reconfigurable Technologies (HEART), being held from June 7-9, 2017 in Bochum, Germany.

Over the past few years, the use of application accelerators has received a tremendous growth in interest both in high-performance and in embedded computing systems. Researchers and the industries have turned to the use of general-purpose graphics processing units (GPUs), heterogeneous multi-core processor, as well as reconfigurable technologies such as field-programmable gate arrays (FPGAs) to achieve unprecedented improvement in performance and power efficiency over traditional CPU-based systems in a wide range of application areas.

The goal of this symposium is to establish a forum for reporting state-of-the-art research on high-performance efficient computing with application accelerators. The symposium was first affiliated with the ACM International Conference on Supercomputing in 2010 as a workshop, and became an independent workshop in 2011 when it was held at Imperial College London and in 2012 when it was held in Okinawa, Japan. In 2013, HEART was held in Edinburgh, Scotland, UK as a symposium and continued to be held around the world in Sendai, Miyagi Prefecture, Japan in 2014 and Boston, USA in 2015. In 2016 HEART was held in Hong Kong, China.

This year, HEART is being held in Bochum, Germany. The program includes 18 regular papers, 10 posters from over 17 countries around the world. In addition, three keynotes are delivered by Ephrem Wu of Xilinx about Unlocking Latent Performance and by Peter Brands of ESAOTE about New developments in point-of-care ultrasound functional imaging. Last but not least John Freeman from Intel talks about FPGA Acceleration in the Era of High Level Design.

Special thanks must go to the three Program Co-Chairs, Holger Blume, Leibniz University Hannover, Germany, Martin Herbordt, Boston University, United States and Hiroki Nakahara, Tokyo Institute of Technology, Japan, for putting together an excellent technical program; to the Publication Chair, Yuichiro Shibata who did an excellent job in arranging the connection to ACM ICPS, in which the proceedings of the 2017 HEART symposium will appear; to the Design Competition Chair, Donald Bailey, for managing an excellent TRAX FPGA design competition.

In addition, HEART 2017 would not have be such a success without the support from our sponsors. For that, we would like to acknowledge the Xilinx University Program, Digilent for their supports and prize donation for the design competition.

Last but not least, we would like to thank the entire Steering Committee for their advice and wisdom, in particular with Kentaro Sano, Tohoku University, who has been instrumental in guiding the organization of this year's symposium.

Diana Göhringer and Michael Hübner
The Eights HEART Symposium, General Chairs
Bochum, June 2017