Proceedings of the

21st International Workshop on Software and Compilers for Embedded Systems

SCOPES 2018

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21st International Workshop on Software and Compilers for Embedded Systems

SCOPES 2018

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St. Goar, Germany

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Editor

Sander Stuijk, Eindhoven University of Technology, The Netherlands

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Preface

Dear Colleague,

Welcome to Sankt Goar and the SCOPES workshop. This year we are presenting a workshop program that features many interesting talks on all aspects related to the design of modern embedded systems. I hope that you will find our program interesting, stimulating and exciting.

The influence of embedded systems is constantly growing. Increasingly powerful and versatile devices are developed and put on the market at a fast pace. Their functionality and number of features is increasing, and so are the constraints on the systems concerning size, performance, energy dissipation and timing predictability. To meet all these constraints, multi-processor systems on a chip (MPSoCs) are becoming popular in embedded systems. In order to meet the performance and energy constraints of embedded applications, heterogeneous architectures incorporating functional units optimized for specific functions are commonly employed. This technological trend has dramatic consequences on the parallelization, mapping, compiler and design technology used to develop these systems. The SCOPES workshop focuses on the software generation process for these modern embedded systems. Topics of interest include all aspects of the compilation and mapping process of embedded single and multi-processor systems.

SCOPES received a total of 18 research papers coming from many different countries in Europe, North-America, Asia, Middle-East, Africa, and Australia. Each paper has been reviewed by at least three independent reviewers to ensure the quality of the workshop. Each reviewer provided a score together with detailed comments and suggestions on how to improve the overall quality of each paper. After an on-line meeting, the program committee has decided to accept 7 papers out of these 18 submissions. This gives an acceptance rate of 39% which is similar to earlier editions of the SCOPES workshop. It also reflects our commitment to only select high quality papers for presentation at our workshop.

In addition to the research papers, the workshop features also 13 research presentations. The idea of research presentations was previously used at the Map2MPSoC workshop. After the merger of SCOPES and Map2MPSoC this idea has been continued in the SCOPES workshop program. Research presentations show research results relevant to the topics addressed by the workshop. These presentations may be based on on-going work or research results that have previously been presented in other forums. Research presentations may include a short publication in the SCOPES proceedings. Therefore all submitted presentations have undergone a light review.

In conclusion, I would like to thank the members of the program committee and the external reviewers for their contribution to the quality of this workshop. I would also like to thank all authors for choosing SCOPES as the workshop where to report your research and your contributions to the scientific community. Finally, I would like to thank our sponsors for their support to SCOPES 2018. I wish all of you a fruitful conference and a pleasant stay in Sankt Goar.

Sander Stuijk
SCOPES 2018 Program Chair
Eindhoven University of Technology, NL
s.stuijk@tue.nl

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