

# Preface

With some pride, we present to you the proceedings of the 34<sup>th</sup> International Conference on Computer Safety, Reliability, and Security, SAFECOMP 2015, held at Delft University of Technology during 23–25 September 2015. SAFECOMP has become an excellent and high-quality platform for exchanging ideas between industry and academia about safety considerations in programmable industrial systems.

International collaboration constitutes an important success factor for conferences such as these. This volume contains contributions from Austria, Brazil, Finland, France, Germany, Iran, Ireland, Italy, the Netherlands, Spain, Sweden, UK, and USA. In the same spirit, the SAFECOMP Program Chair is shared by Delft University of Technology in the Netherlands and the University of Huddersfield in the UK.

The 34<sup>th</sup> edition of SAFECOMP focused on the challenges arising from networked multi-actor systems for delivery of mission-critical services. Such services are expanding rapidly in all domains of life. Society has, therefore, become very vulnerable to breaches in delivery of service, thus imposing serious risks to life and limb of people. This year's call for papers focused on assured connectivity. This put the emphasis on papers that focus on connectivity of systems and software applications to support that connectivity. Assured connectivity is important in the three major themes that emerged from the papers accepted for the conference: transport systems, medical systems, and security. The conference program was designed accordingly.

The conference started with a keynote address on communication networks by Andrey Nikishin, Director of Special Projects and Future Technologies of Kaspersky Lab. The subsequent sessions regarded automotive systems from various perspectives. Transport systems have always been heavily dependent on the safety of computer systems. The application of computers in safety-related critical systems is pivotal for the smooth operation of critical infrastructures. Though there is much emphasis on the ISO 26262 standard for road transport, human factors, technical systems, and flight systems are treated in this year's SAFECOMP.

The second day was devoted to medical technology systems and assurance. The keynote address is by Cor Kalkman, anesthesiologist at Utrecht University Medical Center. Medical systems are strongly interconnected and are critical almost by definition.

The theme of the third day was security and safety. The keynote address was by Eric Luijff, principal consultant C(I)IP&Cyber Ops at TNO, the Netherlands, and it discussed industrial security. Protection from security attacks and cyber security are a necessity in today's systems, requiring attention and integration with safety critical systems. Here, the concept of an intelligent adversary in critical infrastructures adds complexity in the design of safe systems.

Some papers focus on the development of new methods rather than industry-related themes. These papers are placed in separate sessions, each of which is treated on a

separate day: error detection on the first day, safety cases on the second, and programming and compiling on the third.

The reviewing and selection of papers is a careful process, which depends on the collaboration of many individuals. First of all it depends on authors willing to submit a paper to the evaluation process. This year 33 papers were accepted out of 104 submissions. We thank all authors for their submissions and would encourage all authors, particularly also the ones that were not accepted in SAFECOMP 2015, to consider SAFECOMP 2016 for publishing their papers. A team of 66 active International Program Committee members performed peer reviews, at least three per paper, and the International Program Committee decided on which papers to accept on April 15 at the University of Huddersfield. The quality and success of the SAFECOMP conference depends on the readiness and willingness to participate in the reviewing and selection process. We thank everyone for their efforts on this. EWICS TC7 has provided the stable background for SAFECOMP since its inception in 1979. We thank Francesca Saglietti, in her role as chair for EWICS TC7, for the continued support from EWICS TC7.

This conference was flanked by several workshops on safety and security considerations in programmable industrial systems and critical infrastructures. The acronyms for these workshops are: ASSURE, DECSoS, ISSE, ReSA4CI, and SASSUR. What these acronyms mean and the proceedings of these workshops can be found in LNCS volume 9338.

It has been the honor and pleasure of the program chairs to work with a team of such dedicated individuals. We thank the authors, the reviewers, the International Program Committee, EWICS TC7 members, and the Local Organizing Committee for their pleasant cooperation. We would also like to thank prior organizers of SAFECOMP, Andrea Bondavelli, Andrea Ceccarelli, Friedeman Bitsch, and Jérémie Guiochet, for sharing their experience. We also thank Saba Chockalingam and Yamin Huang for their contribution in formatting and completing the proceedings.

Last, but not least, we want to thank you, the participants at this year's SAFECOMP. We hope you enjoyed an interesting conference and a pleasant stay in Delft!

September 2015

Floor Koornneef  
Coen van Gulijk

Computer Safety, Reliability, and Security  
34th International Conference, SAFECOMP 2015, Delft,  
The Netherlands, September 23-25, 2015, Proceedings  
Koornneef, F.; van Gulijk, C. (Eds.)  
2015, XXII, 486 p. 141 illus. in color., Softcover  
ISBN: 978-3-319-24254-5