

# Preface

This volume contains the invited and contributed papers selected for presentation at the 42nd Conference on Current Trends in Theory and Practice of Computer Science (SOFSEM 2016), which was held January 23–28, 2016, in Harrachov, Czech Republic.

SOFSEM (originally SOFTware SEMinar) is devoted to leading research and fosters cooperation among researchers and professionals from academia and industry in all areas of computer science. SOFSEM started in 1974 in the former Czechoslovakia as a local conference and winter school combination. The renowned invited speakers and the growing interest of the authors from abroad gradually turned SOFSEM in the mid-1990s into an international conference with proceedings published in the Springer LNCS series, in the last two years in their prestigious subline ARCOSS: *Advanced Research in Computing and Software Science*. SOFSEM became a well-established and fully international conference maintaining the best of its original winter school aspects, such as a higher number of invited talks and an in-depth coverage of novel research results in selected areas of computer science. SOFSEM 2016 was organized around the following three tracks:

- Foundations of Computer Science  
(chaired by Rūsiņš Mārtiņš Freivalds)
- Software Engineering: Methods, Tools, Applications  
(chaired by Gregor Engels)
- Data, Information, and Knowledge Engineering  
(chaired by Barbara Catania)

With its three tracks, SOFSEM 2016 covered the latest advances in research, both theoretical and applied, in selected areas of computer science. The SOFSEM 2016 Program Committee consisted of 61 international experts from 22 different countries, representing the track areas with outstanding expertise.

An integral part of SOFSEM 2016 was the traditional SOFSEM Student Research Forum (chaired by Roman Špánek), organized with the aim of presenting student projects in both the theory and practice of computer science, and to give the students feedback on the originality of their results. The papers presented at the Student Research Forum were published in separate local proceedings (together with the accepted posters). The copy of these local proceedings is available via CEUR-WS.

In response to the call for papers, SOFSEM 2016 received 150 abstracts and after withdrawals and removal of double and fake submissions, the final number of submitted papers totaled 116 from 38 different countries. The submissions were distributed in the conference three tracks as follows: 62 in the Foundations of Computer Science, 21 in the Software Engineering, and 33 in the Data, Information, and Knowledge Engineering. From these, 34 submissions fell in the student category.

After a detailed reviewing process (using the EasyChair Conference System for reviewing and discussions), a careful selection procedure was carried out within each

track. Following strict criteria of quality and originality, 43 papers were selected for presentation, namely: 27 in the Foundations of Computer Science, six in the Software Engineering, and 10 in the Data, Information, and Knowledge Engineering.

Based on the recommendation of the chair of the Student Research Forum, 14 student papers were chosen for the SOFSEM 2016 Student Research Forum. Moreover, five posters were accepted for poster presentation.

As editors of these proceedings, we are grateful to everyone who contributed to the scientific program of the conference, especially the invited speakers and all the authors of contributed papers. We also thank the authors for their prompt responses to our editorial requests.

SOFSEM 2016 was the result of a considerable effort by many people. We would like to express our special thanks to:

- The members of the SOFSEM 2016 Program Committee and all external reviewers for their careful reviewing of the submissions
- Roman Špánek for his preparation and handling of the Student Research Forum
- The SOFSEM Steering Committee, chaired by Július Štuller, for guidance and support throughout the preparation of the conference
- The Organizing Committee, consisting of Martin Řimnáč (Chair), Pavel Tyl, Dana Kuželová, Július Štuller, and Milena Zeithamlová for the generous support and preparation of all aspects of the conference
- Springer for its continued support of the SOFSEM conferences
- CEUR-WS for publishing the copy of the second volume of the proceedings

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Barbara Catania  
Gregor Engels  
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