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# Engineering of Computer-Based Systems

8th International Conference, ECBS 2023  
Västerås, Sweden, October 16–18, 2023  
Proceedings



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Jan Kofroň · Tiziana Margaria ·  
Cristina Seceleanu  
Editors


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# Preface

As General and Program Chairs, we would like to welcome you to the proceedings of ECBS 2023, the 8th International Conference on Engineering of Computer-Based Systems, which took place in Västerås (Sweden) on October 16th–18th, hosted by Mälardalen University in cooperation with ACM SIGSOFT.

The special theme of this year was “Engineering for Responsible AI”, which permeates many of its keynotes and technical contributions.

ECBS 2023 was an in-person event that integrated software, hardware, and communication perspectives of systems engineering through its many facets that include system modelling, artificial intelligence, requirements specification, simulation, architectures, safety, security, reliability, system integration, verification and validation, and project management. As such, the conference provided a bridge between industry and academia, blending academic research and industrial development. It provided an interdisciplinary forum for discussing the impact of the recent AI developments on research and industrial systems’ development, but also education, and society.

The program of ECBS 2023 comprised:

- three keynotes:
- **How To Be An Ethical Technologist**, by Moshe Vardi, Rice University, USA, on Oct 16th
- **Dynamic Logics for Computer-Based Systems**, by Wolfgang Ahrendt, Chalmers University of Technology, Sweden, on Oct 17th
- **Toward Responsible Artificial Intelligent Systems: Safety and Trust-worthiness**, by Francisco Herrera, University of Granada, Spain, on Oct 18th
- presentation of 11 regular papers, 7 short papers, and 6 posters in eight sessions over the three days.

ECBS 2023 received 26 submissions from 10 countries (Romania, Germany, UK, Denmark, Ireland, Serbia, Sweden, Israel, China, USA), and we accepted 24 papers (regular, short, and poster papers). Each paper was reviewed by 3–4 program committee members; a single-blind review process was used. We sincerely thank the three distinguished keynote speakers, Prof. Moshe Vardi, Prof. Wolfgang Ahrendt, Prof. Francisco Herrera, all the authors, speakers, and session chairs for their excellent scientific contributions to the conference, the members of the program committee and external reviewers for their time and thoroughness in selecting the papers to be presented, and the local Organization Chair, Susanne Fronnå, and local organization team, Leo Hatvani, Peter Backeman, Rong Gu, Eduard Paul Enoiu, Mikael Salari, Hawa Diouf for their continuous precious support during the entire period preceding the event. We thank Springer Nature for being, as usual, a very reliable partner for the proceedings production. We are also grateful to the Steering Committee of ECBS whose support has been invaluable.

Special thanks are due to Mälardalen University for sponsoring and hosting the event in the R building on the Västerås Campus.

We wish all the ECBS 2023 participants lively scientific discussions, ideally leading to new cooperation and ideas to be presented at future ECBS instances.

October 2023

Jan Kofroň  
Tiziana Margaria  
ECBS 2023 PC Chairs

Cristina Seceleanu  
ECBS 2023 General Chair

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