Interactive Workshop on the Industrial Application of Verification and Testing, ETAPS 2019 Workshop (InterAVT 2019)

Preface

3 pages

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This volume contains the proceedings of the first Interactive Workshop on the Industrial Application of Verification and Testing (InterAVT 2019) which was co-hosted with ETAPS 2019 and took place in the Faculty of Mathematics and Physics building at Charles University, Prague on the 6th of April 2019.

InterAVT aims to breach the barriers that hinder the application of modern verification and testing techniques in industrial practice. This years' workshop focused on barriers and challenges such as the industrial scale and complexity of "real" systems, usability/feasibility of formal techniques in practice, new system paradigms, which make systems harder to model/analyse/verify/test (e.g., autonomous systems, machine learning), and domain-specific challenges and constraints, e.g., in safety-critical systems like automotive, aerospace, medical systems.

Arguably these challenges can only be tackled with increased communication and collaboration between academic researchers and industrial practitioners, hence, the InterAVT workshop focused on fostering communication between people working on similar problems and establishing new links and opportunities for collaboration between participants from different backgrounds.

To maximize the interaction between participants and the resulting progress, the workshop incorporated a combination of interactive sessions which included short presentations, a "speed-dating" session, in which participants engaged in a time-limited discussion with each other, and a collaboration session that focused on summarizing the identified key pain points facing the application of modern verification and testing techniques in industrial practice.

The workshop included the invited talk "End-to-End Verification of Intelligent Cyber-Physical Systems: Progress and Challenges" by Nathan Fulton (MIT-IBM Watson AI Lab) and an industry presentation by Stylianos Basagiannis (United Technologies Research Centre).

We thank the authors for their contributions and also express our deep gratitude to all the members of the program committee for their insightful and rigorous work, which was essential to ensure high-quality content.

Anila Mjeda Lero-The Irish Software Research Centre, IE; Stylianos Basagiannis United Technologies Research Centre, IE; Goetz Botterweck Lero-The Irish Software Research Centre, IE

InterAVT Workshop Organization

Organizing Committee:

Stylianos Basagiannis United Technologies Research Centre

Goetz Botterweck Lero - The Irish Software Research Centre and University of Limerick

Anila Mjeda Lero - The Irish Software Research Centre and University of Limerick

Program Committee:

Mathieu Acher University of Rennes 1, France

Alessandra Bagnato Softeam

Cinzia Bernardeschi University of Pisa

Dirk Beyer LMU Munich

Armin Biere Johannes Kepler University Linz

Jorg Brauer Verified Systems

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Maxime Cordy SnT, University of Luxembourg

Marco Dinatale Scuole Santa Anna

Alessandro Fantechi University of Florence

Alberto Griggio Fondazione Bruno Kessler

Klaus Havelund NASA/Caltech Jet Propulsion Laboratory

Patrick Heymans University of Namur

Radu Iosif VERIMAG, CNRS, Université Grenoble-Alpes

Mikoláš Janota INESC-ID, IST, ULisboa

Stefan Leue University of Konstanz

Tiziana Margaria University of Limerick and Lero - The Irish Software Research Centre

Anastasia Mavridou NASA Ames

David Parker University of Birmingham

Ken Pierce The University of Newcastle

Stavros Tripakis Northeastern University

Anthony Ventresque Lero and University College Dublin

Tomas Vojnar Brno University of Technology

Maurice ter Beek Istituto di Scienza e Tecnologie dell'Informazione "Alessandro Faedo"