Second Interactive Workshop on the Industrial Application of Verification and Testing, ETAPS 2020 Workshop (InterAVT 2020)

Preface

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This volume presents the proceedings of the second Interactive Workshop on the Industrial Application of Verification and Testing (InterAVT 2020), a workshop co-hosted with ETAPS 2020. InterAVT aims to remove barriers that hinder the application of modern verification and testing techniques in industrial practice. Modern verification and testing techniques are highly relevant for industrial software- intensive systems. Recent technological trends (e.g., the new dominating role of software in traditional domains like automotive and aerospace, the arrival of autonomous and "smart" systems in everyday life) only increase the need for industrial-scale robust approaches. However, there are still many barriers and challenges that impede the application of modern verification and testing techniques in industrial practice. The industrial scale and complexity of "real" systems (transfer and scale-up of research prototypes); usability or feasibility of formal techniques in practice (packaging novel approaches in usable tools); new system paradigms, which make systems harder to model, analyse, verify and test (e.g., autonomous systems, machine learning); domain-specific challenges and constraints, e.g., in safety-critical systems like automotive, aerospace, medical systems; and, research approaches targeting problems that lead to publishable results, but are disconnected from industrial practice are but a few examples of the current and pressing challenges for industry. Arguably these challenges can only be tackled with increased exchange and collaboration between academic researchers and industrial practitioners. Hence, the InterAVT workshop focuses on fostering communication between people working on similar problems and establishing new links and opportunities for collaboration between participants from different backgrounds. Initially, it was planned to hold an in-person workshop that maximises the interaction between participants and the resulting progress – with a program that includes short presentations, a "speed-dating" session, in which participants engage in a time-limited discussion with each other, and a collaboration session that focuses on summarising the identified key pain points facing the application of modern verification and testing techniques in industrial practice. However, due to the continued effects of the ongoing COVID 19 pandemic, InterAVT 2020 focussed on reviewing and selecting articles for a special issue on the topic. We sincerely hope to return to interactive in-person events very soon. 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.

Stylianos Basagiannis, Anila Mjeda, and Goetz Botterweck

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