2nd International Workshop on Autonomous Systems Design

ASD 2020, March 13, 2020, Grenoble, France
converted to a virtual event due to COVID-19, held in April 2020

Edited by

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ACM Classification 2012
Hardware → Analysis and design of emerging devices and systems; Computer systems organization → Robotic autonomy; Software and its engineering → Software safety; Computer systems organization → Dependable and fault-tolerant systems and networks

ISBN 978-3-95977-141-2

Published online and open access by
Schloss Dagstuhl – Leibniz-Zentrum für Informatik GmbH, Dagstuhl Publishing, Saarbrücken/Wadern, Germany. Online available at https://www.dagstuhl.de/dagpub/978-3-95977-141-2.

Publication date
August, 2020

Bibliographic information published by the Deutsche Nationalbibliothek
The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie; detailed bibliographic data are available in the Internet at https://portal.dnb.de.

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Digital Object Identifier: 10.4230/OASIcs.ASD.2020.0

ISBN 978-3-95977-141-2 **ISSN 1868-8969** **https://www.dagstuhl.de/oasics**

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ISSN 1868-8969

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OpenAccess Series in Informatics
OASICS Schloss Dagstuhl – Leibniz-Zentrum für Informatik, Dagstuhl Publishing, Germany

Preface

This volume contains the proceedings of the 2nd International Workshop on Autonomous Systems Design (ASD 2020). The workshop was originally planned to be held in Grenoble, France on March 13, 2020, and is co-located with the 23rd Design, Automation and Test in Europe Conference (DATE 2020). However, due to the global COVID-19 pandemic, the workshop was held as a virtual event along the virtual DATE 2020 conference.

In 2020, for the first time, we introduce the DATE initiative on Autonomous Systems Design, a two-day special event at DATE, which is the leading European conference on embedded hardware and software design. It focuses on recent trends and emerging challenges in the field of autonomous systems. Such systems are becoming integral parts of many Internet of Things (IoT) and Cyber-Physical Systems (CPS) applications. Automated driving constitutes today one of the best examples of this trend, in addition to other application domains such as avionics and robotics. ASD is organized as a Thursday Initiative day and Friday Workshop day to constitute a two-day continuous program covering different industrial and academic methods and methodologies in the design, verification and validation of autonomous systems.

The workshop for which the proceedings at hand are published was organized into sessions with peer-reviewed research and demo papers selected from an open call, complemented by invited talks and distinguished keynotes.

Five selected papers are included in this volume, complementing four talks and one demo. The papers included in this volume discuss recent development approaches for autonomous systems, presenting two perspectives on advanced automotive software and system platforms for autonomous driving, as well as a development and simulation platform for agent-based automotive architectures. Another contribution is targeting a cloud system perspective for automated and networked vehicles and an extended abstract introduces an approach to systematic simulation-based testing for CPS, considering formal requirements.

Support and Acknowledgement

We would like to thank all speakers for their valuable support of the workshop despite the challenging situation. We would also like to acknowledge the contributions of authors and the help of program committee members in the review process. A big thank you goes to Ege Korkan for creating and managing the workshop website. We extend our appreciation to the DATE organizing committee and K.I.T Group GmbH Dresden for their help and support in the logistics arrangements. ASD 2020 is partially supported by Autonomous Intelligent Driving GmbH, we would therefore like to acknowledge their financial contribution. Lastly, we would like to thank the editorial board of the OASICs proceedings.

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