Eclipse SAAM Mobility 2021

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2nd Eclipse Research International Conference
on Security, Artificial Intelligence, Architecture and Modelling
for Next Generation Mobility

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FOREWORD

Increasingly autonomous, connected, intelligent and sustainable mobility in the future societies requires drastic software innovations that cross several research and innovation domains. This contributes to the rapid digitalization of contemporary societies. Current scenarios are characterized by constantly increasing demands of managing complex software constellations, rapid development cycles, while retaining high quality requirements for functional and non-functional requirements alike. A multitude of novel technologies – such as Edge Computing, Artificial Intelligence, Big Data Analytics, Digital Twins, and Security, Privacy, and Trust Schemes – are being investigated to be adopted in the current ecosystem-wide arrangements, standards, and tool chains. The role of open-source software and tool chains, such as OpenADx, is also emerging powerfully. Hence, designing, managing, and governing the next generation systems, software and services for the future autonomous and connected mobility solutions is set to become even more complex and needs help of new development technology and scientific research findings.

This book contains the proceedings of the 2nd Eclipse International Conference on Security, Artificial Intelligence, Architecture and Modeling for Next Generation Mobility (SAAM Mobility 2021). SAAM Mobility 2021 is the second scientific conference organized by Eclipse Foundation and the University of Oulu with the aim of promoting to build a richer public domain culture within the research community, with special attention to application of practical experiences in mobility software development within the design science paradigm. SAAM Mobility 2021 collected the latest research results in Europe and all around the world, with a specific focus on the open issues related to Security, Artificial Intelligence, Architecture and Modelling in the Next Generation Mobility applications. SAAM Mobility was also supported by the Oulu Automotive Cluster.

To evaluate each submission, a blind peer review was performed by the Technical Program Committee, whose members are highly qualified researchers in SAAM Mobility topic areas. Each paper was reviewed by at least three reviewers. Based on those reviews, papers that adequately balanced quality, originality and relevance to the conference themes were selected. Based on the classifications provided, 3 full papers and 6 short papers were selected to the proceedings. One poster and one demonstration were also presented. The authors presented projects and ideas from four countries: Germany, France, Turkey, and Finland. The conference also featured 2 keynote lectures delivered by experts, namely Andreas Riexinger (Robert Bosch GmbH) and Dr. Robert Hilbrich (DLR). These talks contributed to increasing the overall quality of the conference and to provide a deeper understanding of the conference fields of interest. The proceedings of SAAM Mobility 2021 was for publication to CEUR Workshop Proceedings (CEUR-WS.org), which is a free open-access publication service at Sun SITE Central Europe operated under the umbrella of RWTH Aachen University. CEUR-WS.org is a recognized ISSN publication series, ISSN 1613-0073. We believe the proceedings published demonstrate new and innovative solutions and highlight challenging technical problems in each of the SAAM Mobility fields.

To recognize the best submission, an award based on the paper review scores, as assessed by the Technical Program Committee was conferred at the closing session of the conference.

As a final point, we would like to express our thanks, first of all, to the authors of the technical papers, whose work and dedication made it possible to put together a program that we believe is

very exciting and of high technical quality. Next, we would like to thank all the members of the program committee, who provided their expertise and time.

We would also like to thank the invited speakers for their invaluable contributions. Finally, we acknowledge the professional support of the SAAM Mobility 2021 organizing committee for all organizational processes and activities in spite of the logistic difficulties caused by the contemporary pandemic situation.

Conference General Chairs,

Pasi Kuvaja, University of Oulu, Finland

Philippe Krief, Eclipse Foundation, Germany

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