WASA 2022
Call for Papers

8th International Workshop on
Automotive System/Software Architecture
In conjunction with 16th European Conference on Software Architecture (ECSA 2022)

With the advent of software and electronics, automotive companies are enabling innovation to improve safety, security, driver experience, and driving automation. Moreover, the complexity and size of software keep growing because of future innovations, such as self-learning algorithms and automated driving, which all lead to the ultimate goal of autonomously driving vehicles. Consequently, the increasing use of software introduced the paradigm shift by requiring automotive companies to develop their systems using architecture and model-based techniques. Although model-based techniques, e.g. MATLAB/Simulink and Stateflow, are being accepted in the automotive industry as standard languages and tools for developing automotive control software, system and software architecture techniques are still far from being widely accepted. This excludes the AUTOSAR standard, which defines the language for designing and configuring automotive software architectures and identifies major architectural components of automotive systems.

This workshop aims to address issues related to the appropriate automotive system/software architecture and engineering techniques, which the automotive industry can accept. Therefore, to bring together researchers and practitioners in automotive system/software architecture and engineering, WASA is being organized with the European Conference on Software Architecture (ECSA), the premier European software architecture conference. Our goal is that the workshop will identify new research directions, roadmaps, challenges and establish long-term collaborations between participants from both academia and industry even after the workshop.

Topics of interest include, but are not limited to:

Automotive system/software architecture:
• Architecture description languages (ADL), • Hardware/software co-design, • design patterns, • communication infrastructure, • centralized/zonal architectures,
• influence of AI on architecture, • security, Over-the-Air-updates, • service-oriented architectures

Automotive software & systems engineering:
• software quality, safety and security, • model-based design, component-based design, • CI/CD, agile processes,• software ecosystems, • hybrid & fully electric vehicles, • cooperative and automated driving, • data analytics, • systems engineering

Assessment, Verification & Validation:
• safety assurance and assessment, • verification & validation techniques, • challenges and solutions for AI-based services, • compliance management of standards or regulations

Submission:

All submissions are expected to be original work not published, or in submission, elsewhere, and will be peer-reviewed by at least three members of the program committee for quality, relevance, and novelty. Papers can be submitted in the following categories:

1. Full research papers (12 pages + 2 extra pages for references) presenting novel research ideas, significant empirical studies, successful industrial applications, or important perspectives.
2. Short research papers (8 pages + 2 extra pages for references) sharing industrial experience, challenges, research or technical problems, case studies, raising new ideas, challenges, ongoing research or early research results, and future trends.

ECSA 2022 will use a two-step process for workshop proceedings. Online proceedings (available before the start of the conference) will include all the accepted papers to the workshops and will be published online on the ECSA 2022 web page (no proceedings). The accepted papers will be accessible only by the ECSA 2022 workshop participants and the format should conform to the Springer LNCS style.

After the conference, we will organize post-proceedings of selected and extended papers that will be published in a Springer LNCS volume (up to 16 pages). Workshop papers submitted for the post-proceedings will undergo through a minor revision cycle where the extensions with respect to the workshop versions will be checked by the reviewers.

September 19/20, 2022 | Prague, Czech Republic (hybrid)

Important Dates (AoE):

- **Paper submission:**
  July 1st, 2022
- **Paper notification:**
  July 29th, 2022
- **Camera-ready submission:**
  August 5th, 2022

SCAN ME

Workshop Organizers:

- **Stefan Kugele (THI, Germany)**
- **Yanja Dajsuren (TU/e, The Netherlands)**

Program Committee:

- Klaus Becker (Viessmann Elektronik GmbH, Germany)
- Lenz Belzner (Technische Hochschule Ingolstadt, Germany)
- Christian Berger (University of Gothenburg, Sweden)
- Reinder J. Bril (Eindhoven University of Technology, The Netherlands)
- Alessio Bucaioni (Mälardalen University, Sweden)
- Darko Durisic (Volvo Car Corporation, Sweden)
- Thomas M. Galla (Elektrobit, Germany)
- Uwe Honekamp (Vector Informatik GmbH, Germany)
- Philipp Obergfelll (BMW Group, Germany)
- Patrizio Pelliccione (Gran Sasso Science Institute, GSSI, Italy)
- S Ramesh (General Motors R&D, USA)
- Miroslaw Staron (Chalmers | University of Gothenburg, Sweden)
- Mark van den Brand (Eindhoven University of Technology, The Netherlands)
- Andreas Vogelsang (University of Cologne, Germany)