

AvioSE'22

4th Workshop on Avionics Systems and Software Engineering
February, 22, 2022, Virtual Conference



<https://aviose-workshop.github.io>



Software development in the aerospace domain is driven by demanding fault tolerance, increasing complexity, new application potentials, rising certification effort, and increasing cost pressure. New software development methodologies are required for future applications such as e.g., autonomous air transport, aircrew (workload) reduction, commercial Unmanned Aerial Systems (UAS), and further enhancement of existing functionality. At the same time, there are challenges in communication and navigation in airspace, certification for multi-core processors, artificial intelligence (AI) as well as security of software, hardware, and connectivity. The objective of the workshop is the exchange on new technologies, systems, software, methods and tools with an application in avionics. Desired are presentations within this domain from both academia and industry. Topics of interest, but not limited to these, are:

Development Technologies

Requirements Engineering

Modelling languages and tools

Model-based systems and software engineering

(MBSE)–Transfer of modelling techniques to industrial application and their scalability

Verification via testing and formal methods and their scalability

Cyber-security and safety

Algorithm-based sizing, layout, design, and automation of development and certification artifacts

Product Technologies

Applications of AI (including verification, certification, and explainability)

Autonomous systems (e.g. UAS, Remotely Piloted Aircraft System (RPAS))

Sensors, sensor fusion, and sensor management

Integrated Modular Avionics (IMA) and other avionics platform

Human-Machine-Interface (HMI)

Safety-critical middleware and operating systems



Development Methods

Agile development vs. certification

Interaction with other domains (e.g. electrical engineering, physics, psychology)

Deployment of artificial intelligence for enhancing development processes

Automated and/or digital engineering workflows

Vision Paper

(Short) vision papers on upcoming challenges, technologies or regulation upcoming challenges, technologies or regulations

Accepted papers will be published in dl.gi.de

Dates:
Paper Submission: Dec 3, 2021
Notifications: Jan 7, 2022

Short paper: max. 10 pages
Full paper: max. 20 pages

Virtual Conference
Language: English

Co-located with:



21-25 February 2022, <https://se-2022.de>

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