Message from the Chairs

ASYDE 2025

It is our pleasure to present the 7th International Workshop on Automated and Verifiable Software sYstem Development (ASYDE 2025), held in Seoul, South Korea, on November 16th, 2025, as part of the program of the 40th IEEE/ACM International Conference on Automated Software Engineering (ASE 2025). The 7th edition of the ASYDE workshop brought together and consolidated the following previous events: OrChor at IEEE SERVICES'14, SCFI at IEEE SERVICES'15, SCART at SEFM'15, VeryComp at STAF'16, as well as the previous six editions of ASYDE at SEFM'19 to SEFM'22, ASE'23, and ASE'24.

During the last three decades, automation in software development has gone mainstream. Software development teams strive to automate as many software development activities as possible, spanning requirements specification, system modeling, code generation, testing, deployment, verification, release phases, project status reporting, and system maintenance. Automation helps to reduce development time and cost, as well as to concentrate knowledge by bringing quality into every step of the development process.

Realizing high-quality software systems requires producing software that is efficient, error-free, cost-effective, and that satisfies evolving requirements. Thus, one of the most crucial factors impacting software quality concerns not only the automation of the development process but also the ability to verify the outcomes of each process activity and the goodness of the resulting software product as well. This becomes particularly true these days when we are, and will be, increasingly surrounded by a virtually infinite number of software artifacts – often underspecified – that can be composed to build new applications. This situation radically changes the way software will be produced and used: (i) software is increasingly produced according to a certain goal that can change during the system's execution and by integrating existing software; (ii) the focus of software production is then on the ability to perform automated reasoning to achieve software integration and development that can be kept always correct-by-construction via static and dynamic verification. This calls for automated software development methods and techniques, compositional verification theories, integration architectures, as well as automated, flexible, and dynamic composition and development mechanisms.

Despite great interest in automated and verifiable software system development, no common formal aspects and software engineering approaches have been fully established yet. Developing software systems via an automated generation and verification method encompasses a variety of foundational principles and practical aspects, ranging from modeling and analysis issues to model-checking, from model-driven development techniques and code synthesis to run-time management issues, and AI approaches such as machine learning tools and large language models (LLMs). The ASYDE workshop provides a forum for researchers and practitioners to propose and discuss automated software development methods and techniques, compositional verification theories, integration architectures, flexible and dynamic composition, and automated planning mechanisms.

This year, ASYDE attracted 16 submissions, of which 9 papers were accepted and included in these proceedings. The accepted contributions involve 25 authors from 13 institutions, with affiliations in Canada, Egypt, Germany, Japan, Portugal, Romania, Russia, Taiwan, and the United States.

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