# EDITORIAL

# Launch of New Journal JSEAS

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About 5 years ago, we started an open access journal entitled **Journal of Automotive Software Engineering** (JASE) under the umbrella of the publisher Atlantis Press. We observed that there were no dedicated journals for this specific topic, while of course there were more general journals devoted to software and system engineering that on a regular basis published automotive-related papers. Soon after the launch of JASE, Atlantis Press was acquired by Springer Nature and Springer Nature found that JASE was not matching their portfolio and scale. So, JASE had no future under the Springer Nature umbrella. We were then contacted by Athena International Publishing whether we would like to transfer the journal to them. After consultation with our Editorial Board members, we decided to make this move, but at the same time to reconsider the scope of the journal.

We had already observed that the field of automotive software engineering was indeed not as big as we had hoped, and the number of submissions to JASE had been too low as a result. In addition, recent developments of connected, shared and autonomous vehicles had continued, and sustainability and the climate crisis had moved up in the global agenda. An important aspect in the future of mobility is thus sustainability and autonomous behavior, not only in vehicles but also in other systems, such as robots, trains and industrial automation.

Vehicles and systems in general are a combination of hardware and software. The software in isolation is not interesting, but the relationship between the software and the system creates research challenges and offers opportunities for future developments. These observations were the starting point for broadening the scope of JASE to software engineering for autonomous systems and this is reflected in the title of a new open access journal that we decided to launch entitled **Journal of Software Engineering for Autonomous Systems** (JSEAS).

Some articles were already published in JASE and some papers were in the pipeline. The published articles have been transferred to the Athena International Publishing platform and the papers in the pipeline have been transferred to JSEAS. The Editorial Board has been expanded with practitioners and researchers working in the field of autonomous systems and a few board members decided to step down from the Editorial Board. In consultation with the newly expanded Editorial Board, we have defined a new and broader Aims & Scope for the journal, as follows:

*The **Journal of Software Engineering for Autonomous Systems** is dedicated to distributing research and industrial results in the field of autonomous systems and software engineering, as well as overview papers in this area. With the advent of innovative software, artificial intelligence, cloud-supported analytics and engineering processes, and electronics, companies working on autonomous systems are applying state-of-the-art technologies to improve safety, user experience, effectiveness, efficiency, and the use of vast amounts of data to understand and improve autonomous systems. The increased use of software and data has caused a paradigm shift by requiring these companies to develop their systems while using architecture and model-based techniques.*

*"The scientific community tackles the development of autonomous systems by exploring the use of AI techniques, combined with data-driven engineering, to make the systems more intelligent, robust, and user-friendly. Digital*

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*twins play an important role in the development of autonomous systems as they allow for explorations of new functionality, for simulations based on both historical and real-time data, and the exploration of 'what-if' scenarios. The development of autonomous systems is a collective effort involving multiple disciplines such as electrical and mechanical engineering, industrial engineering, physics, and computer science. Research on the social aspects of collaborative design is also getting more attention. These are just a few topics that this journal aims to cover.*

*The subjects of interest to the Journal of Software Engineering for Autonomous Systems cover the important aspects of the field such as autonomous systems and software architectures, software process, maintenance and quality, safety and security, autonomous and cooperative design and behavior, intelligent data processing, digital twins and data-driven engineering supported by cloud-environments. In addition to this, submissions on the development of, and challenges provided by, forthcoming and future autonomous systems, such as autonomous systems based on AI technology, are also welcomed. The journal aims to be relevant for academia as well as industry.*

Although artificial intelligence is an important ingredient in the autonomous behavior of systems, we want to stress that the software engineering challenges and research questions in developing software for autonomous systems is paramount. We believe that software engineering for autonomous systems is sufficiently different and challenging that it deserves a dedicated journal.

*The Editors-in-Chief of JSEAS*