Editorial

We bring the second issue of the fourteenth volume of the **Progress in Computing Applications** with the following research.

In the opening paper, "**Context-Aware and Resilient System Architecture for Autonomous Vehicles**," the authors proposed a new three-layered system architecture designed to enhance the reliability and safety of autonomous vehicles by dynamically adapting to contextual changes. The architecture of their proposed plan consists of three layers: the context layer, the reconfiguration layer, and the architecture layer. The application placement problem, which involves mapping applications to computing nodes while optimizing for constraints, is explained using two illustrations. They conclude that their work is unique in its application of full-stack context awareness to autonomous systems, drawing inspiration from strategies in aerospace fault management.

In the paper "**A Modular and Secure Software Fusion Platform for Autonomous Driving Systems**," the authors introduce a new next-generation software platform designed to meet the complex safety, performance, and architectural demands of autonomous driving systems, known as Fusion. It blends service-oriented with component-based designs to ensure modularity, scalability, and robustness. It supports a foundational framework for developing safe, efficient, and adaptable autonomous driving applications. They plan to improve the platform's predictability, real-time capabilities, and resilience.

In the paper "**Agent-Based Simulation Platform for Resilient Automotive Systems**," the authors presented an adaptable demonstrator platform designed to simulate distributed agent-based automotive systems, addressing the increasing complexity of software-defined vehicles. It is a distributed, real-time simulation using the SimPy framework, which enables the simulation of task execution and network communication. The experimental results validated the platform by showing strong alignment between simulated and actual network traffic.

In the last paper, "**Agile Requirement Engineering for Scalable Cloud Systems in Automated Vehicle Ecosystems**," the authors developed a cloud-based infrastructure supporting four types of fully automated vehicles. This work introduces a structured methodology that combines agile and classical requirements engineering to accommodate evolving requirements across various use cases. For autonomous vehicles, it is effective in managing complexity and supporting the agile development of a cloud system.

We hope the research presented in this issue supports further research.

Editors