

## Editors' Introduction to the Special Issue on “Engineering and Applications of Software Agents”

The aim of this Special Issue is to introduce to the readers a selection of papers from the 3<sup>rd</sup> *Workshop on Applications of Software Agents – WASA 2013* in the area of agent-based modelling and simulation. WASA'2013 was held in Sinaia, Romania, during October 11-13, 2013. The WASA 2013 workshop was organized within the framework of the 17<sup>th</sup> *International Conference on System Theory, Control and Computing – ICSTCC'2013*. The aim of the WASA series of workshops is to contribute to the advancement of technologies and applications of software agents' by bridging the gap between the theory and practice of software agents.

15 papers were accepted for presentation at WASA'2013. Among them, 4 papers were selected, after further extension and additional review, for inclusion in this Special Issue on “Engineering and Applications of Software Agents”.

The article “AgentPlanner – agent-based timetabling system” by Rafal Tkaczyk, Maria Ganzha, and Marcin Paprzycki is in the area of *applications of software agents*. The authors propose an agent-based timetabling system called AgentPlanner. The system was evaluated using real data set of a department at the University of Gdansk. The results were quite encouraging, i.e. AgentPlanner outperformed the state-of-the-art timetabling software based on the genetic algorithms and it was capable of satisfactorily solving the problem of schedule adjustment.

The article “Jason Interpreter, Enterprise Edition” by Dejan Mitrović, Mirjana Ivanović, Rafael H. Bordini, and Costin Bădică is in the area of *engineering of software agents*. This paper presents a framework that integrates Jason – an interpreter that provides a Java implementation of the AgentSpeak programming language with the Enterprise edition of the Java platform. The contribution of the paper is bridging the gap between the agent technology and modern enterprise solutions for distributed software development.

The article “Expressing GMoDS Models into Object-Oriented Models Using the Event-B Language” by Marius Brezovan, Liana Stanescu and Eugen Ganea is in the area of *engineering of software agents*. This paper proposes a generic framework for expressing the Goal Model for Dynamic Systems (GMoDS) goal-based agent-oriented methodology for the specification of multi-agent systems, using Event-B. The mapping was achieved by adding object-oriented modelling support to Event B using the modularization plug-in of the Rodin framework.

The article “HTML5-based mobile agents for Web-of-Things” by Jari-Pekka Voutilainen, Anna-Liisa Mattila, Kari Systä, and Tommi Mikkonen is in the area of *applications of software agents*. This paper proposes a solution based on mobile agents for operating and managing Internet-connected systems composed of gadgets, sensors and actuators. The solution is supported by two proof-of-concept experiments related to agents for

embedded devices interconnected in the Web-of-Things and to the management of agents in the Cloud.

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