
Editorial

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Biographical notes: Costin Badica received his MSc and PhD in Computer Science from University of Craiova, Romania in 1990 and 1999, respectively. Since 2006, he is Professor of Computer Science at Faculty of Automatics, Computers and Electronics, Software Engineering Department, University of Craiova, Romania. During 2001–2002, he was a Postdoctoral Fellow within the Department of Computer Science, King's College London, UK. His research covers themes in artificial intelligence, distributed systems and software engineering. He authored more than 100 publications: contributed books, special issues, journal articles, book chapters and conference papers. He initiated Intelligent Distributed Computing symposium series and also was PC member of many international conferences.

Dear Colleagues,

E-business and e-commerce systems utilise digital technologies to mediate intra- and inter-enterprise business transactions. Software agent technologies include standardised frameworks, platforms and methodologies for agent systems development. Intelligent software agents are claimed to be adaptive, intelligent, autonomous and mobile, and when applied to e-business, are expected to be able to address difficult problems including costs reduction and optimisation, profitability and efficiency, interoperability and decision-making. The rich real-world environment of e-business is thus a fertile area for the application and experimentation of intelligent software agents. Difficult research challenges involve the adaptation and application of intelligent software agents to the tight requirements posed by modern e-business.

MASeB'2006, the *1st International Workshop on (Multi-)Agent Systems in E-business: Concepts, Technologies and Applications*, was organised within the framework of *WI/IAT 2006* conferences. The workshop was focused on various topics related to the application of MAS to e-business. From the ten papers that were accepted at *MASeB'2006*, we selected and invited the best three for publication in this special issue. Additionally, three other new papers were submitted by authors who are interested in the topics of *MASeB*. All six submissions went through a blind peer review process and finally only five articles of significant value were accepted for publication in the special issue.

The article 'MECIMPLAN: an agent-based methodology for planning' by José Miguel Castillo, Sascha Ossowski and Luis Pastor presents an agent-based methodology to construct specific intelligent planners that is able to assist in the planning process for any planning environment. In particular, the authors show how their proposed methodology called 'methodology to construct intelligent models for planning

(MECIMPLAN)' can be applied to a strategic planning problem that deals with the future migratory movement in central Europe and to a short-term planning problem for project management.

The article 'A reputation-based model for semi-competitive multi-agent systems' by Barouni Foued, Sehl Mellouli, Daoud Ait-Kadi and Angel Ruiz considers a new model to compute agents' reputation taking into account group information. The model was validated experimentally in a simulated e-marketplace environment using three scenarios: fully cooperative, antagonist and semi-competitive.

The article 'An approach for multi-agent coordination based on semantic approximation' by Yinglong Ma, Shipeng Zhang, Yuancheng Li, Zheng Yi and Shaohua Liu presents an approach that exploits semantic approximation technologies for implementing better multi-agent communication and coordination based on partially shared distributed ontologies. The approach was demonstrated by implementation of the prototype OntoQ system. This system was experimentally evaluated using three datasets and it proved to be effective and of practical value.

The article 'A novel strategy for multi-resource load balancing in agent-based systems' by Leszek Śliwko and Aleksander Zgrzywa presents a new agent-based multi-resource load balancing strategy which can be utilised to assist system designers in their attempts to optimise the structure for complex enterprise architectures. A simulation experiment was performed with the help of 'Java multi-agent system balancer' (JMASB) to compare five different resource balancing strategies, including the one proposed by this paper.

The article 'A multi-agent framework for stock trading' by Shahram Rahimi, Raju Tatikunta, Raheel Ahmad and Bidyut Gupta presents an implemented secure multi-agent environment which models a stock exchange from the initiation of a trading order until its execution and also deals with the security issues involved. In particular, the authors are focused on:

- 1 intelligence of the stock broker agent that is formed using a fuzzy expert system
- 2 implementation issues of different agents, their communication acts and protocols and security framework.

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