

## Selected Topics on Business Informatics Research: Editorial Introduction to Issue 6 of CSIMQ

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Business informatics research bridges management and engineering domains and facilitates communication between scientific and practical applications. The sixth issue of the journal of *Complex Systems Informatics and Modeling Quarterly* contains four publications that present the extended papers from the workshops of the 14th International Conference on Perspectives in Business Informatics Research (BIR 2015) that was organized in Tartu, Estonia, 26-28 August, 2015. The BIR 2015 workshops captured important and novel topics on information logistics and knowledge supply, security and compliance in business processes, and use of ontologies in information systems. Within this context the fifth publication included in this issue complements the topic of the business informatics research with the investigation of a model-driven approach on the gesture-based interaction in information systems.

In the paper “*Big Multidimensional Datasets Visualization Using Neural Networks – Efficient Decision Support*”, Dzemyda *et al.* focus on a method for visualizing large multidimensional datasets through neural networks. Multidimensional data visualization is an essential component of decision-oriented systems. In such systems, it is crucial to quickly and effectively display, interpret and analyse large multidimensional datasets. However, standard visualization methods for multidimensional datasets are not applicable for very large sets of data. The neural network-based strategy proposed in this paper allows the user to train a neural network in only one pass over the training data based on the assumption that large datasets contain several similar entries. The trained neural network is used for a visual representation of the input multidimensional dataset.

Contribution by Bassano *et al.* proposes a consensus-based approach to select the best team compositions to perform given tasks in the context of logistic networks. The paper entitled “*A Consensus-based Approach for Team Allocations: the Case of Logistics in Campania Region*” shows how competencies can be represented through a Knowledge, Skills and Attitude (KSA) model and an ontology-based model. The proposed approach identifies suitable teams starting from these abstract representations of the workers’ competencies and of the competencies required to perform a work order, and from a consensus procedure among workers. The paper presents an application of the approach in a real case study in the context of a logistic network of the Campania region in the southern of Italy.

In the paper “*Architectural Decision Management for Digital Transformation of Products and Services*”, Zimmermann *et al.* investigate an approach supporting decision analytics for adaptive digitalization of products and services in flexible environments. In particular, the contribution provides mechanisms for collaborative architectural engineering and decision support with adaptive case management for agile modifications of business models, information systems and their digital enterprise architecture. The approach is evaluated in the context of a collaborative decision scenario of a virtual insurance company.

Contribution by Stamer *et al.*, entitled “*Information Demand Pattern for Teams*”, proposes a mechanism to support decision makers and knowledge intensive workers in modern organizations. In particular, information demand patterns are introduced to capture organizational knowledge about the information demand of teams. The paper describes a methodical approach to develop information demand patterns for teams, introduces a demand pattern for a steering committee in the context of project management and reflects on the differences between demand patterns for single roles and patterns for a whole team.

In the paper “*gestUI: A Model-driven Method and Tool for Including Gesture-based Interaction in User Interfaces*”, Parra-Gonzales *et al.* propose a model-driven approach and a prototype tool to include gesture-based interaction in desktop information systems. In particular, the proposed approach is based on gestUI, a model-driven development method to capture multi-stroke gestures sketched by the users, transform these gestures into a model and automatically generate (i) a gesture catalogue and (ii) the source code to include gesture-based interaction in information systems’ user interfaces.

The CSIMQ editorial team would like to thank all the authors, who submitted their papers to this issue. We also thank all the reviewers for providing valuable comments and improvement proposals for the submitted papers. English language editing for this issue was done by Jeremy Theaker, Merija Jirgensons, and Henry Scott.