

Selected Topics on Business Informatics: Editorial Introduction to Issue 13 of CSIMQ

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Business Informatics is the scientific discipline targeting information processes and related phenomena in their socio-economical business context, including companies, organisations, administrations and society in general. As a field of study, it endeavours to take a systematic and analytic approach in adopting a multi-disciplinary orientation that draws theories and practices from the fields of management science, organisational science, computer science, systems engineering, information systems, information management, social science, and economics information science.

The objective of this thematic issue is to bring attention to actual research on Business Informatics, as being publicized on the 19th IEEE Conference on Business Informatics (CBI 2017), July 24-27, 2017, in Thessaloniki, Greece. The conference created a productive forum for researchers and practitioners from the fields that contribute to the construction, use and maintenance of information systems and the organisational context in which they are embedded. 10 papers were selected by the Program Chairs Prof. Peri Loucopoulos, Prof. Oscar Pastor and Prof. Jelena Zdravkovic to submit extended versions for a possible publication in Issue 13 of CSIMQ, as well as few external candidate submissions were considered.

The thematic issue collection opens with the article entitled “Capacity Management as a Service for Enterprise Standard Software” which integrate knowledge discovery activities into capacity planning used for optimizing component utilization, which the authors adapt to the special characteristics of enterprise applications. Using a real-world example, the authors demonstrate how prediction models that were trained on a large scale of monitoring data enable cost-efficient measurement-based prediction techniques to be used in early design and redesign phases of planned or running applications.

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The second article, “Using Time Clusters for Following Users’ Shifts in Rating Practices” addresses users’ ratings for products. A user’s rating practices change over time, i.e. a user could start as strict and subsequently become lenient or vice versa. In their article, the authors address this issue by using the concept of dynamic averages, by introducing the concept of rating time clusters and presenting a novel algorithm for calculating dynamic user averages and exploiting them in user-user collaborative filtering implementations. The proposed algorithm is able to follow more successfully shifts in users’ rating practices. It has been evaluated using different datasets, and has been found to introduce significant gains in rating prediction accuracy.

“Knocking on Industry’s Door: Needs in Product-Cost Optimization in the Early Product Life Cycle Stages” is the third article aiming to examine the integration of product-costing methodologies into today’s information systems. During a co-innovation workshop at SAP SE, the authors initiated a collaborative research with selected large-scale enterprises from the discrete manufacturing industry. As a result, they proposed an exemplary optimization process with an emphasis on the specific characteristics of the product development stage as well as they identified associated deficits in information system support.

The fourth article “Integration of Individual Processes and Information Demand Patterns: A Conceptual Analysis” analyzes the processes of individuals, arguing that companies typically know little about the underlying individual demand patterns in these processes. Conceptualizing information demand patterns of individuals, according to the authors, allows for using these as foundation to extend the traditional internal information logistic perspective of companies; digital options are then used to align individual and organizational information leading to new product and service offers and new work structures in organizations.

The Issue 13 of CSIMQ closes with the article “Towards a Business Process Modeling Technique for Agile Development of Case Management Systems” that addresses challenges of modern organisation’s needs to adapt its behavior to changes in the business environment by changing its Business Processes (BP) and corresponding Business Process Support (BPS) systems. One way of achieving such adaptability is via separation of the system code from the process description/model, and further separation of different modeling perspectives, for instance, control-flow, human resources, and data perspectives, from each other. Finally, for developing a completely new process, it should be, according to the authors, possible to start with a reduced process model to get a BPS system quickly running, and then continue to develop it in an agile manner.

For this thematic issue we owe thanks to the members of CSIMQ’s Editorial Review Board for providing valuable reviews for the submitted articles. Special thanks go to the Managing Editor of the CSIMQ – Prof. Marite Kirikova for her great support in realizing this thematic issue, as well as to the publicizing team of the CSIMQ journal for their professional help and efficiency. Finally, we are grateful to the authors for submitting the articles reporting their scientifically innovate and passionate work.

To all readers - we hope you will enjoy this issue and use it to conceive novel ideas in the actual topics of Business Informatics.