

## Selected Topics on Information Systems Engineering: Editorial Introduction to Issue 9 of CSIMQ

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Information systems are developed by people and for people. When properly developed and deployed, they support communication among individuals, organisational units, and organizations themselves. This requires a careful analysis and design process, in which the needs of all stakeholders are taken into account. Due to the socio-technical nature of information systems, research in this area is multi-disciplinary and needs to cope with the complexity of an increasingly globalised world.

This issue of the journal of Complex Systems Informatics and Modeling (CSIMQ) presents papers that discuss selected topics on information systems engineering. The papers are extended versions of selected papers from the CAiSE Forum 2016 held in Ljubljana, Slovenia. The CAiSE Forum is a place within the International Conference on Advanced Information Systems Engineering for disseminating and debating new ideas and tools related to this area. Intended to serve as an interactive platform, the forum aims at the presentation of emerging new topics, demonstration of innovative systems and tools, as well as practical experiences. The authors were requested to craft extended papers reporting additional contributions; each paper was peer-reviewed by three reviewers and the issue editors made a final decision concerning their publication. The issue contains five papers.

The first paper, titled “*An Improved Model Facet Method to Support EA Alignment*”, is a joint endeavour by AeLoS Team and the company Mia-Software, in Nantes. Their work contributes to facilitate the alignment of business and information technology by improving the Facet method for enterprise architectures. They also support it with tools based on the Eclipse EMF framework and apply it to several case studies within the insurance domain.

The second paper aims to reduce the required effort of modeling and monitoring smart environments. It has the title “*Automating the Provisioning and Configuration of Devices in the Internet of Things*”. The authors, from the University of Stuttgart, present a method and system architecture to model sensors, actuators and devices, dynamically bind devices based on their type, access resources from the Internet of Things, and monitor smart environments.

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Colleagues from Queensland University of Technology and Massey University collaborate in the third paper to analyse gambling behavioural patterns of 91 thousand individuals from New Zealand. For this purpose, they integrate a mixture of process mining, data mining and confirmatory statistical techniques. They demonstrate how techniques from various disciplines can be combined in order to gain useful insights. The paper is titled “*Using Data-Driven and Process Mining Techniques for Identifying and Characterizing Problem Gamblers in New Zealand*”.

The fourth paper, “*Metadata Extraction and Management in Data Lakes With GEMMS*”, is authored by three researchers from the Fraunhofer FIT and RWTH Aachen University. They have developed a Generic and Extensible Metadata Management System (GEMMS) for data lakes that aims at the automatic extraction of metadata from a wide variety of data sources. They report on a use case in which they successfully apply their proposal to the life science domain.

The Issue 9 of CSIMQ is closed by a paper that focuses on social and technological innovation in developing countries. The paper titled “*Developing ICT Services in a Low-Resource Development Context*” is authored by three colleagues from Vrije Universiteit Amsterdam. They have carried out socio-technical field action research in West Africa, learning lessons, and collecting best practices. As a result, they propose a framework to develop information technology services in low-resource development contexts that covers the full lifecycle of service innovation.

We are thankful to the reviewers of this special issue, who contributed their time to provide helpful comments and ideas for improvement. We also acknowledge the publisher and editorial board of CSIMQ, who gave us the chance to prepare this issue, and who have carefully laid out the papers. We are grateful to the authors, who have submitted papers reporting their rigorous and passionate work. To all readers, we hope you enjoy this issue.