Editorial to the Special Section on the Cloud-Assisted Services

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Industries, businesses and academic organisations face a variety of difficult problems every day. In order to solve them, a whole range of distributed computing technologies and paradigms have evolved in the past decades. Cloud computing is among the more recent approaches. It aims to increase availability, improve redundancy and elasticity, and reduce application operational costs. The main enabling technology for Cloud computing is virtualization. Virtualization abstracts the physical infrastructure and facilitates its seamless use and management. Cloud computing provides all infrastructural resources as services, making use of well-established standards and best practices gained in the domain of the Service-Oriented Architecture (SOA) to allow for global and easy access. In such a way, virtualization provides a greater availability, agility and reduces costs by increasing infrastructure utilization.

The foundation of Cloud computing is solid and it is widely promoted by the Information and Communication Technologies industry. Moreover, various new innovative Cloud computing approaches and applications are emerging on a daily basis. The 2nd International Conference on the Cloud-Assisted ServiceS (CLASS 2013) that took place from October 22-23, 2013 at Bled, Slovenia, was a lively event in which various new Cloud applications and approaches were presented and discussed.

Five of the Conference studies of the highest quality prepared in a journal-paper format and peer-reviewed are presented in this Special Section on the Cloud Assisted Services. The papers discuss the state-of-the-art in specific fields of Cloud computing and address a range of different topics.

The paper "A case study on multi-modal biometrics in the Cloud", authored by Emeršič, Bule, Žganec-Gros, Štruc and Peer, presents two Cloud applications in the area of biometric recognition: a face-recognition service and a fingerprint-recognition service. The results of this work may be increasingly employed in various Web services that need authentication and validation of persons.

The paper "A model for SaaS-application integration, migration and backup with a common data model approach", by Povše and Jurič, presents a data-integration model among various SaaS applications, such as preparation of security copies, migration of data when changing the SaaS provider, and interlinking the data.

The paper "Mobile Cloud for Telemetry Applications", by the authors Suciu, Todoran, Apostu, Puican and Ularu, presents a Cloud-computing application involving mobile phones and IPv6 in the area of telemetry. The paper tackles the networking quality of the service and the possibilities for its virtualization.

The paper "Multiple Cloud monitoring", authored by Vičič and Brodnik, implements a monitoring architecture for applications running across multiple Clouds.

Finally, the paper "A Programming Framework for Porting Engineering Applications to the Cloud", by the authors Južna and Stankovski, proposes a general purpose programming framework to be used by engineers to port their applications to the Cloud with minimal changes in their existing applications. The framework uses the mOSAIC PaaS solution.

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