Guest Editorial Preface

Special Issue of Revised and Extended Papers From the 2nd International Conference on Digitalization, Innovation, and Emerging Technologies

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The turn of the millennium is marked by the rapid evolution of digital technologies. The ubiquitous nature of digitization is one of the key forces driving innovation in a broad range of product and service categories. In order to create a forum for researchers from different fields and to establish a preliminary theoretical framework that can guide future scientific research on digital innovations, we organized an international interdisciplinary research conference entitled "International Conference on Digitalization, Innovation and Emerging Technologies (DIGITECH).), Which held on August 1-4, 2019 in Dusseldorf in Germany.

The design of digital technology, which plays a key role in facilitating digital innovation, has three characteristics: the homogenization of digital data, the programmable digital computing architecture, and the self-referential nature of digital technologies. Thus, the main challenges and opportunities for innovation arise mainly from convergence and digital materiality. First, new research opportunities lie in understanding the different forms and capabilities of ongoing digital convergence. Second, another set of research problem is associated with new entrepreneurial opportunities arising from the integration of digital capabilities into non-digital products and services. Finally, the increased use of digital tools and the interpenetration of digital and physical materiality into work practices offer new sets of challenges and opportunities that need to be carefully considered. The International conference on Digitalization, Innovation and Emerging Technologies (DIGITECH) was able to bring together researchers, academics, engineers and industry leaders recognized for the interdisciplinary and innovative nature of their work, their contributions to theory and practice, their focus on important and timely topics and the quality of their research.

This special issue of the International Journal of Web-Based Learning and Teaching Technologies (IJWLTT) contains four revised and extended papers from the International Conference on Digitalization, Innovation and Emerging Technologies (DIGITECH). This well-established lecture series extends the theory, practice of digitalization and innovation in emerging technologies. It responds to the need to stimulate critical debate and research on the theories, approaches, principles, the location of humanity in this wave of digital transformation worldwide.

The papers in this special issue cover a range of aspects of digitalization, from case studies in digital, innovation and emerging technologies, as well as discussions on innovation applied in smart city. Each of these articles selected for this special issue are the subject of an innovation in the intelligent digital world.

The first paper proposes a novel forwarding strategy based on deep learning that can adaptively route interests/data packets through Ethernet links without relying on the FIB table. He developed an approach and an algorithm that leverage existing intelligent forwarding approaches in order to build an NDN forwarder that can reduce forwarding cost in terms of prefix name lookup and memory

requirement in FIB Simulation results showed that our approach is promising in terms of cross-validation score and prediction in Ethernet LAN scenario.

The Cloud computing, Internet of Things (IoT), intelligence artificial and Big data are four very different technologies that are already discussed separately in the second article" Integration of Cloud, Computing, Big Data, Artificial Intelligence and Internet of Things Review and open research issues ".the author center our attention on the integration of Cloud, IoT, Big Data and artificial intelligence. However, this study requires a detailed analysis of the new paradigm that combines the four technologies, which suggests completely new challenges, and research issues. To bridge this gap, this paper presents a survey on the integration of Cloud, IoT, artificial intelligence and Big Data

In topic digitalization, Soukaina ELHASNAOUI focuses in her work on the digitalization of entreprises., she describes in the third article` Analysis of the role of IT governance on ERP systems implementation´, an information system (ERP) that makes it possible to manage and monitor on a daily basis all the information and operational services of a company. It is able to effectively reduce the cost of products, improve customer service experience and increase business competitiveness. However, the implementation rate of the ERP system is much lower than originally planned and many companies have not achieved the intended objectives.

The growing popularity of online learning has put learning management systems (LMS) at the forefront of learning technologies. The adoption of LMS by students has therefore been a major driving force for online education. However, true adoption must transcend initial use for significant success. this innovative study from the fourth article" Learning Management System Adoption: A Theory of Planned Behavior Approach" utilizes the theory of planned behavior (TPB) to gain new insights on students' short-term versus long-term adoption of LMS. Specifically, Dr. Madison N Ngafeeson examines the determinants of initial use and continuance use through the lens of the TPB. Results obtained from a sample of 248 undergraduate students suggest that, difference in continuing use and initial use decision depends on differences in the influences of personal control perceptions about technology and subjective norms. Protagonists of online education will find these results interesting in that it provides insights for developing intervention strategies that can help in increasing online education adoption regardless of whether the focus is long-term or short-term.

The preservation of natural water and electricity resources is essential for the development of smart cities. indeed, water and electricity are highly dependent and must be analyzed together to improve the energy efficiency. In this topic, the article's Najat Abdeljebbar` Stud of energy efficiency solutions for a smart water heating system´, studies the integration of renewable energy and smart solutions in a water heating system. The existing system uses mainly heat pumps to cover the most of the hot water needs. The purpose of this work is to explore possible solutions to optimize the electricity and the water consumption of the installation.

Finally, we thank all the authors who participated in the special issue of the IJWLTT "Digitalization, Innovation and Emerging Technologies" chaired by Professor Ms. Moussaid Laila. We would like this wealth of articles will help researchers, scientists, engineers and students to enrich their knowledge and to use it well in digital innovations and emerging technologies.

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